

NATURALISM, SKEPTICISM AND REASON

IN

HUME'S TREATISE

By

CLIVE NIGEL KEEN, M.A.

A Dissertation

Submitted to the School of Graduate Studies

in Partial Fulfillment of the Requirements

for the Degree

Doctor of Philosophy

McMaster University

September 1975



CLIVE NIGEL KEEN

1976

NATURALISM, SKEPTICISM AND REASON IN HUME'S TREATISE

To Sue,
with far more than just thanks.

DOCTOR OF PHILOSOPHY (1975)
(Philosophy)

McMASTER UNIVERSITY
Hamilton, Ontario

TITLE: Naturalism, Skepticism and Reason in Hume's Treatise

AUTHOR: Clive Nigel Keen, B.A. (Exeter University)

M.A. (McMaster University)

SUPERVISOR: Professor J. Noxon

NUMBER OF PAGES: vii, 272.

ABSTRACT

This dissertation is primarily concerned with a discussion of Humean skepticism. It is divided into two parts:

Part I is concerned with interpretative matters. It is shown that Hume's most characteristic skepticism is to be treated as an intimate part of a system which is concerned with the ramifications of an entirely naturalistic account of man. One of Hume's major concerns, it is argued, is with the production of a naturalistic account of reason, and the skeptical elements of Book I are to be seen entirely as either foundations or by-products of this naturalistic account. It is shown that when they are seen as part and parcel of this naturalistic account of reason, the various levels of Humean skepticism can all be recognized as entirely natural and predictable, not as matters in any respect likely to surprise and baffle the reader who is fully acquainted with Hume's purposes.

During this discussion, remarks are made on alternative interpretations of Hume; on the purpose of philosophy; on the significance to Hume of his empiricist first principles; on the "age of reason"; on the significance of Hume's discussion of the natural beliefs and induction; on his approach to the apodeictic; on his problems with philistinism; on the extension of his analysis of reason in the Dialogues, and on his psychologism.

Part II evaluates the various doctrines uncovered in Part I of the dissertation. It is argued that post-Darwinian thought should embrace much of Hume's naturalistic account of reason, but that the Darwinian framework obviates much of the most objectionable aspects of Hume's defense of his account. The inadequacies of some of Hume's skeptical arguments are made clear, and the strengths of his account are brought into relief. The underlying differences between Hume and his opponents on the nature of reason as a "cosmic" principle are discussed, and Hume is shown to be the victor.

During this discussion, remarks are made on the evolutionary significance of reason; on the nature of the "natural beliefs"—or categorical principles; on the justification of induction; on "natural necessity", the meaning of "brute fact" and the attribution of "rationality" to the non-sentient; on the avoidability of Hume's difficulties with philistinism; on the principle of sufficient reason as the supreme rationalist principle, and on the significance of "system" to explanation.

PREFACE

John Passmore in the Preface to Hume's Intentions asserted that criticism without scholarship is cavilling, and scholarship without criticism pedantry. On this point, as on so few others, I wholeheartedly agree with him. But rather than constantly interweaving evaluation and interpretation, I have elected to keep these aspects separate: the dissertation is divided into two parts, under the labels "Interpretations" and "Evaluations". This has been done largely out of conviction that it is very difficult to give worthwhile criticisms of Hume's philosophy before the wider picture of what he was trying to do has been satisfactorily established. It seems to me that an extraordinary number of criticisms of Hume's arguments fail to strike home precisely because wider interpretative matters have not first been fully covered.

In the first part of the dissertation, I attempt to explain the unity, which it seems to me has not been previously recognised, of certain key elements of Hume's philosophy. It was not subsequently necessary to employ H.H. Price's tactic of discussing what Hume might have said, but didn't quite, in order to move on from exposition to evaluation. I sympathise with Price in acting as he did. Discussing what a man actually said might indeed be a waste of time for all but philosophical eclectics if it turns out that what he said was not interesting in the first place. Fortunately, this is far from true of Hume. What Hume actually said, as

it is uncovered in Part I, provides more than enough material for many an evaluative sequel.

The part of the Canada Council in keeping my body and soul together throughout the period of composition certainly deserves acknowledgement, as does that of the McMaster Benefactors. My readers, Professor N. Brett and Professor S.N. Najm, and especially my supervisor, Professor J. Noxon, also deserve thanks for their sometimes strenuous attempts to improve what follows.

TABLE OF CONTENTS

PART I

CHAPTER 1:	Introduction	1
CHAPTER 2:	Skepticism (1): Preliminaries	14
CHAPTER 3:	Skepticism (2): On the Marriage of Skepticism and Naturalism	47
CHAPTER 4:	Reason (1): Preliminaries	63
CHAPTER 5:	Reason (2): The Naturalistic Analysis of "Theoretical" Reason	76
CHAPTER 6:	Reason (3): Reason and the <u>Dialogues</u>	117
CHAPTER 7:	Naturalism and Psychologism	139

PART II

CHAPTER 8:	Precursory Assessments	169
CHAPTER 9:	On Induction	181
CHAPTER 10:	Reason as a Cosmic Principle	215
CHAPTER 11:	Summary and Conclusions	245
NOTES		251
BIBLIOGRAPHY		265

PART I

INTERPRETATIONS

Presumably all would agree with André Leroy that the question of Hume's skepticism is "the ultimate question". Any serious attempt to answer that question, which has proved to be crucial for evaluating Hume's quality as a philosopher, presupposes intimacy with the details of his work (J. Noxon, Hume's Philosophical Development, p. 13).

CHAPTER 1: INTRODUCTION

I The primary aim of this dissertation is to expound and evaluate Humean skepticism. It is not possible, however, just to plunge into this topic, divorcing it from wider questions about Hume's writings. The attitude taken by a commentator on Humean skepticism is inevitably coloured by his general interpretation of Hume's philosophical writings. If, for instance, we believe Hume to be primarily concerned with delimiting the sphere of possible knowledge, we will almost inevitably say that his skeptical posture expresses merely a "mitigated" skepticism. If, alternatively, we see Hume as primarily a phenomenalist, or a rigorous expositor of the Locke-Berkeley empiricism, we will very probably view his skepticism as the end-product of a too faithful adherence to inadequate axioms. Neither of these approaches however, nor indeed any other of the well-known approaches to Hume's skepticism will be taken in this dissertation. It will be argued, rather, that the skepticism is an essential element of a highly coherent system, to be appreciated only when seen as a primary part of the structure of the Treatise of Human Nature.*

Reference to the "system" of the Treatise already, however, brings us into the arena of hermeneutical controversy. Commentators such as F. Zabeeh will indignantly reply that Hume is a philosopher

*The Selby-Bigge edition, Oxford, 1888, is used throughout.

without a system.¹ To such adversaries it is necessary to say: wait until this dissertation unfolds, and the strands of the system can be shown to be, indeed, elements of a coherent whole. However, some easily-presentable but nevertheless convincing indications can be found of the fact that the Treatise is no mere collocation of individual theses. For instance, when speaking about his work in a letter to Desmaiseaux, Hume implores his correspondent to "look over my SYSTEM of philosophy" (April 16, 1739: emphasis mine). The word "system" also appears on a large number of occasions in the body of that work. Though sometimes the word may be used solely in reference to particular theses, on many other occasions it is not so used. When opening Book III, for instance; Hume asserts that this Book will be seen to advance and corroborate the "system of philosophy" begun in Books I and II.² In the general introduction to the Treatise, also, Hume announces his intention to produce "a complete system of the sciences, built on a foundation almost entirely new".³

There is, however, a great tendency for Hume's commentators to largely overlook the general introduction, though it is in fact of the last importance in understanding Hume's system. Hume's introduction by no means limits itself to just announcing that a system is to be presented: it also gives the keystone of this system, explaining the single goal of the whole Treatise. Hume tells us there that he is going to produce a science of human nature, explaining the major aspects of man: which turn out to be divisible into his understanding, passions, and morals (the latter including his political system). But, of course, it will be said, all commentators know this. Unfortunately,

however, most of them just don't take it sufficiently seriously. The reason for this would seem to be that when philosophers read the Treatise they are naturally interested in it as a work of philosophy, not as an essay into a putative empirical science which never seems to have got off the ground. Hume's division of the Treatise into three neat parts also gives his readers ample opportunity to read only the first. The third book concerns morals—so those who are interested in moral philosophy can read that—and the second book concerns the passions, which would obviously only interest a historian of psychology! This second book, furthermore, will at first sight seem quite impenetrable to the student of philosophy, who is not used to reading supposedly philosophical writings which have nevertheless nothing whatever to do with conceptual analysis. And this is a great pity, because if we do not at least thoroughly appreciate the methods of the second book, then we will easily be misled concerning the purpose of the first. Reading the former alone, we may easily conclude that Hume, qua philosopher, was primarily an epistemologist doing the usual sort of thing that we come to expect of epistemologists. If, however, we are well versed in the second book, and even better, with the third as well, we will come to appreciate that Hume's fundamental intellectual drive, even in the first book, channelled his efforts into the production of an objective account of man, an account based on a novel form of explanation. The fundamental mode of explanation of man offered, throughout the Treatise, involved the unveiling of psychological mechanisms. Throughout the discussion of man's understanding, passions, and morals, we find a constant reference to psychological mechanisms; a constant

attempt to explain man's nature in the type of naturalistic terminology which would satisfy a natural scientist working in any other field. Hume's phenomenalism, copy principle, indeed his skepticism, all largely fade away after Book I has been concluded, but the naturalistic explanation of man carries on unabated. And this primary motivation of the entire Treatise makes Book I what it is: we simply cannot really appreciate it until we see it as one more aspect of a naturalistic account of man.

We have by now left the peripheries of the arena of hermeneutic controversy, having pledged to fight alongside Norman Kemp Smith and his disciples such as Charles Hendel. But in joining their battle, I do not fight under their orders, but rather as an ally with his own purposes in mind. While joining in resistance to the Reid-Green interpretations, while furthering an interpretation of Hume as fundamentally a "naturalist", no agreement exists on the import of this fundamental approach to Hume's Treatise for his skepticism. It will be urged that Kemp Smith's comment that "Hume's philosophy is not fundamentally skeptical... [but] positive and naturalistic"³ shows that he completely misconstrues the nature of Hume's skepticism. Along with Charles Hendel,⁴ he looks upon Hume's skepticism and his "positive and naturalistic doctrines" as entirely opposed, with one developing relatively independently of the other. In this dissertation, however, it will be argued that rather than being opposed, they are intimately tied together, only being fully comprehensible when seen as aspects of a harmonious system.

But perhaps a reiteration of the substantive points so far made is in order: I have already perhaps overstretched myself in producing

anticipations of what is to come. At this stage, the major point to be remembered is that this dissertation is committed to the understanding of Hume's skepticism in the light of his naturalism, which is said to be the keystone of the system found in the Treatise. Furthermore, I have committed myself to the view that skepticism is an essential part of this naturalistic system, a primary part of its structure—and here, the parting of the ways with Kemp Smith can be presaged. This relationship with Kemp Smith deserves to receive further elucidation before we move on. The ways will part so often that it should be made clear exactly in what sense this dissertation should be considered as anchored within the Kemp Smith tradition. It will not take many words to clarify this, since part of the point has already been made.

¶ Prior to Kemp Smith's superlative work on Hume's philosophy, the interpretation offered by Reid in Hume's lifetime, which was taken up again by Green when Hume's writings reemerged from obscurity, dominated Humean commentary. This interpretation was of that highly seductive kind which offers to us poor confused philosophers the pattern underlying the onward march of thought in the history of ideas. Locke-Berkeley-Hume-Kant (or Reid): these represent a dialectical series in the history of ideas. Locke produced the dominant empiricist presuppositions and some of their consequences; Berkeley took up the baton and advanced the position; and Hume completed their work, rigorously and fearlessly following the path laid out by them to places where none else could follow. Then Kant (or Reid, depending on who is telling the story) came along, saw where the fault lay, and thereupon carried philosophy into a new and

higher realm. In this dialectical series, then, Hume's relatively ignominious task is said to be that of the mere churning out of consequences. We are invited to look upon Hume as a sort of logical sausage-machine. The axioms are fed in at one end, the handle is turned, and out of the other end come a string of theorems, connected through the identity of their materials, but by precious little else. Those who succeeded him, so the story goes, thereupon took one look at this string of consequences, immediately recognised it to be contaminated, and were therefore able to locate the offending axioms. The whole product of Hume's endeavours should therefore be thrown out, but Hume is nevertheless still to be honoured! By turning the handle of the sausage-machine with hitherto unequalled precision, the exact source of contamination came to be isolated, and Hume's endeavours thus indirectly allowed philosophy to purify itself, and continue in renewed health. Though we should throw the results of Hume's labours into the trash-can, we keep alive his memory as one whose fall advanced the cause. As his epitaph we offer the condescending eulogy that "he, and he alone, amongst contemporary thinkers, followed logic wherever it led him".⁵

Fortunately for Hume's honour, Kemp Smith has shown that this fable is at best highly superficial. He showed that Hume's work did amount to a system, not a desultory juxtaposition of paradoxes—a system, what is more, which in epistemology offers an alternative to the Kantian doctrine of categories. Kemp Smith showed us that Hume in effect produced the doctrine that our knowledge-system is founded upon a number of "natural beliefs", fundamental beliefs derived, not from rationality, but from our natural instincts and propensities. Hume,

rather than just following in the footsteps of Locke and Berkeley, was animated by a spirit entirely alien to their work.

It will readily be admitted that this dissertation leans heavily on Kemp Smith's refutation of the Reid-Green interpretation. At times it may make his point in different ways, at times it may add to his argument, but it is not intended as in any way a rival to Kemp Smith's work on this basic doctrine. Its point of departure is not merely that of acceptance of the "natural beliefs" interpretation, however, large though that may loom in it. The rest of this introduction will thus be spent on a presentation of the "central conception" which is attributed to Hume in producing the Treatise. No attempt will be made therein to defend the interpretation, or evaluate the view presented: the function of this chapter will be entirely expository.

III Since the logical positivists first claimed Hume as their intellectual ancestor, his opposition to metaphysical speculation has been emphasised: and of course he was indeed opposed to idle a priori speculation. He repeats with vigour the doctrine that our theorizing must be firmly rooted in experience. Nevertheless, neither he nor any other thinker could be entirely devoid of some sort of world-view, and his philosophy cannot be fully appreciated without reference to it. It is not intended to attribute some startling metaphysic to him: only an opposition to the rationalistic-theistic conception of man and his place in nature which dominated Europe in his time, and which represents today one of the two major world-pictures offered to Western man. It will be affirmed that we see Hume producing, in opposition to the

prevailing orthodoxy, an approach to man which is in the widest sense "naturalistic". He wished to further a science of man which accepted his place as just one more part of nature—and when Hume came to apply this to his account of reason, which task constitutes a major part of the Treatise, his approach leaves the mundane level and becomes startlingly original. The original and mundane are nevertheless intertwined, and so this account will proceed simply by presenting Hume's attitude in the face of prevailing orthodoxy.*

The orthodox attitude saw man as a creature of God, a special being put on earth for a purpose; Hume, however, saw man as entirely a product of nature, to be understood entirely as a natural creation. The theistic conception of man saw him as essentially different from the animals, whereas Hume thought that any difference could only be a matter of degree. Wherein lies the difference between man and the animals, according to orthodoxy? Primarily, in the possession of a soul—that part of him which survives death—and reason, the guiding principle of the soul in the face of natural urges which can lead us to ruin. Secondly, man is said to differ from the animals in possessing free-will. On this theistic account, man is not like the animals in having to follow the dictates of nature. He can overrule nature's promptings, following a line of conduct based on rationality. Hume's conception of man and reason undermines this completely, rejecting the notion of an immortal soul, metaphysical freedom of the will, and the approach to reason which could make sense of the religious

*For substantiation of a number of claims concerning "the orthodox", see below, Chapter 4.

viewpoint. To the extent to which man could have metaphysical free will, he could not possibly be a creature of nature. Thus, we find Hume denying this notion, and thereby retaining a conception of man as entirely comprehensible within a natural framework. Then, reason, as he conceives it, is fundamentally just an instinct like any other. It is one of nature's tools, given to man to help him cope with his environment. Far from being something over and beyond our instincts which overrides them, not only is it itself an instinct, but it can only cooperate with the passions in producing action; in itself it is powerless to motivate. Whereas the orthodox saw reason as the basis of morals, being some sort of God-given check on natural impulses, Hume saw morals as being grounded in instinct itself, reason having only the function of clarification in the sphere of morality.

In the sphere of knowledge, whereas on the orthodox view reason is taken to be the basis of our beliefs, Hume saw reason as subservient to natural beliefs, those beliefs foisted upon us by nature. The whole system of knowledge was and is considered by orthodox philosophers as being a rational one, such that, should any aspect be found indefensible, it must be ejected from the system. Hume considered the system of knowledge to be permeated by non-rational, theoretically indefensible aspects which nevertheless could not, and should not, be ejected from the system, being essential to it. Hume asserted that our beliefs need not be rationally based, and could indeed sometimes be actually counter-rational, without the wise man being obliged to reject them.

The orthodox conception of reason was of something capable of transcending experience and mere day-to-day matters, as something

capable of judging all things, its dictates knowing no bounds. It was seen as a model for the universe, inasmuch as the universe and all its parts must be rational, all of reality having to conform to reason. The world, it was thought, must be structured according to reason, must be rational: whatever happens must be comprehensible, to a higher being, if not to us. Hume's conception of reason, on the other hand, could allow it none of these magnificent pretensions. He saw it simply as a man-centred thing, a useful tool given by nature to man as a means for survival. Its whole function centred around helping man deal successfully with a hostile environment. Once we view reason in this light, rationalistic enthusiasm seems quite odd. Once we view reason thus, there seems to be no point in giving it a special status as something sublime and self-justifying, which ought always to be accepted as a final arbiter in all spheres. Reason does not receive any ultimate justification in Hume's conception of things: it is just something which man uses. Reason, from being conceived as a supreme, self-justifying legislator for man, the universe, and God, is suddenly cut down to a fallible, limited, and ultimately unjustifiable tool, one amongst many, for the well-being of man.

The two aspects of Hume's conception, his rejection of traditional religious explanations and his approach to reason are, it will be seen, intimately tied together. Treating them separately would miss much of the spirit of his central conception. The two aspects dovetail in two ways. It is largely because of the naturalistic, non-religious conception of nature that Hume makes his distinctive approach to reason, and there is also some truth in the reciprocal:

once granted that conception of reason, powerful reasons appear for refusing to accept the standard theistic view of the world.

On the former point: only if we conceive of man as a natural object like any other, will we begin to conceive of reason as a purely natural, functional tool. As long as we think of man as something special, something beyond nature, a way is left open to look upon reason, supposedly the defining characteristic of that part of him which is immortal, as being something non-natural; transcendent. Not only does the rationalistic view of reason only seem so very natural because of the religious conception of man, but the rejection of that conception, if carried through far enough, will almost inevitably lead on to reconsideration of that approach to reason. What is reason? As long as we think of it as a faculty given by God to the soul to guide man in the face of adversity and his own animal impulses, we will be slow in asking for its justification. But if the religious standpoint is taken away, what can we say about what reason is? Once having adopted a naturalistic conception of man, a naturalistic conception of reason along Humean lines would seem entirely appropriate.

On the second point: if we tacitly accept the Platonic-Cartesian conception of reason as the "model of the universe", accepting, for instance, that there must be a reason for whatever happens, that all things must be ultimately comprehensible, and so forth, we will easily accept the argument that the appearance of order in the universe gives evidence that it has a rational creator. To start with, since we will see reason as the crowning glory of man, that through which he can go beyond mere nature, it is the first thing that we would

attribute to the Deity. But also, geared, as we would be, to the idea that rationality is somehow intrinsic to the universe, accepting that all things must be rational, we will expect to find its source in something which manifests rationality. However, if we see reason as merely something limited to man, we will be very slow indeed in moving from the apparent order in the universe to the conclusion that it has a rational creator. To put it succinctly: "If [reason], as we may well suppose, be confined merely to this narrow corner, and has even there so limited a sphere of action; with what propriety can we assign it for the original cause of all things? The narrow view of a peasant, who makes his domestic economy the rule for the government of kingdoms, is in comparison a pardonable sophism".*⁶

It is important to realise where the significance of Hume's conception lies. Inasmuch as he rejects the religious hypothesis, he is hardly unusual: every second thinker today would concur with him on that. What is of great importance is that those who would agree with him readily on this point do, even though they don't necessarily recognise it, have a strong tendency to side with his opponents concerning the nature of reason. Don't we tend to suppose that the world must be somehow rational? That is why indeterminism strikes us as so absurd: if something could happen without a cause, then that event would be totally, irrevocably, incomprehensible: and, we suppose, the world just is not, and cannot be, like that.

Why should we, today, make such an assumption concerning the

*Substituting "reason" for "thought", but retaining thereby the meaning of the original.

"rationality" of the universe? Since we are by and large committed to Darwinism, should we not readily accept the Humean attitude to reason? Should we not accept that reason is merely something which has evolved out of lowly animal necessities, something of anthropocentric, rather than cosmic significance? This question will loom large as the dissertation progresses, and will form the main topic of Chapter 10. The next task to be tackled, however, is that of explaining the relationship between Hume's naturalism and his skepticism.

CHAPTER 2: SKEPTICISM (1): PRELIMINARIES

I The major goal of the discussion of skepticism in this part of the dissertation is to indicate the nature of the characteristically Humean skepticism. The intention is to expound, and defend, the view that Hume's skepticism is fundamentally an essential part of a coherent system produced in the Treatise. Some preliminaries to this task must, however, be presented. We must, for instance, give an elucidation of our terms. The basic meaning of the word "skepticism" needs some attention, as does "naturalism", which has been used in several senses in Humean commentaries. After the initial elucidation of these terms has been given, it will be necessary to outline various forms of skepticism, with the intention of pinning down the primary form attributable to Hume. This particular chapter will be concerned rather more with showing what types of skepticism should not be treated as the primary Humean form than with a discussion of that which should. Though the fundamental Humean skepticism will be outlined, the major presentation of its characterization, along with the defense of its attribution to Hume, will be left until the next chapter. This chapter remains basically precursory.

"Naturalism" can quickly be elucidated. It should be quite clear, at least, that this term is not being used in the ethical sense. As used in this work it will have nothing to do with the reduction of allegedly sui generis moral terms to "natural" terminology. Nevertheless, confusion may arise through the reader's supposing the term to be used

in the Warburton-Hendel manner, which refers essentially to a doctrine concerning the immanent nature of the Deity. There is indeed a certain link with this use of the term, since it is being used in a sense which does imply a particular attitude towards religion. If we were not sensitive to the charge of circularity, we might define naturalism as the negation of "supernaturalism". It looks upon all phenomena, we might say, as explicable in the terms used by natural scientists, eschewing all supernaturalist explanations of the type proffered by religious dogmatists.

Perhaps the use of paradigms may make the situation clearer. Typical examples of the "natural" would include the mating and birth of animals, the flowing of water into the sea, the gravitation of planets, and the photosynthesis of plants. On the other hand, paradigm cases of the supernatural, or non-natural, would be: suspension of the laws of nature in miracles, the creation of the universe by an external Deity, and the exercise of metaphysical free will. Naturalists would say that all phenomena can be understood by using explanations of the type offered by scientists of the former group, no genuine phenomena ever being truly explicable by the type of explanation usually applied to the latter. Hume's naturalism, in particular, manifests itself in his thoroughgoing attempt to offer an account of man in terms similar to those applied to the former type of phenomena. It becomes a distinctive naturalist system in his attempt to offer such an account of reason and all its ramifications.

We can now turn to clarification of the term "skepticism". It does not at first look as though we will have much difficulty in producing a general definition of the term, because a denominator common

to all its uses does exist: skepticism, we may say, involves doubt-raising, and it might seem that this feature suffices to define the term. The situation is not quite that simple, however. Certainly, whenever a person indulges in doubt-raising on any particular issue, the label "skeptic" is likely to be attached to him by somebody. Nevertheless, I would suggest that the term should be defined more narrowly. If skepticism is equated with doubt-raising, then any original thinker, engaged in the process of replacing accepted theories with new views, would be considered a skeptic. The process of replacing outmoded views must involve not only the substantiation of the new view, but also the attempt to raise doubts about the tenability of the old view. Now in actual fact, the label "skeptic" is often applied to those who attempt to establish new theories. Those, for instance, who asserted that the earth was round rather than flat were once labelled skeptics. Again, those who try to argue that the universe is entirely comprehensible in naturalistic, rather than theistic terms, are still likely to be described as skeptics: a use of the term specifically accredited by the Oxford English Dictionary. However, though the term "skeptic" is in fact used in this manner, I suggest that it should not be. An unacceptable subjective element is introduced when we use the term thus; its applicability becomes dependent upon whether or not we agree with the thinker in question. I would suggest that the word "skeptic" should only be applied in cases where a thinker indulges in doubt-raising in order to produce suspense of judgment on an issue. If the attempt is made, instead, to raise doubts on a view in order to replace it with another, then the term should not be applicable. This, note, removes

the element of subjective evaluation involved in the question of whether or not Hume's moral theory should be considered skeptical. Those in the rationalist tradition are likely to speak of Hume's argument that morals cannot be derived from reason as skeptical; others will simply say that it is true. Stipulating that "skepticism" be defined as "doubt-raising in order to produce suspense of judgment on an issue" removes this disagreement. We simply observe that Hume raised doubts on the view that moral distinctions are derived from reason in order to help substantiate the view that moral distinctions are derived from sense, and then conclude that his procedure cannot be called skeptical.

Though we may have a servicable definition of the term "skepticism", however, we are not very much closer to understanding exactly what is involved in the proposition "Hume is a skeptic". Many forms of skepticism which in no way depart from the stipulated definition can be found. These various forms result from the fact that the definition is silent on the questions of what types of doubt are raised, what matters are doubted, the degree to which doubts are pressed, and the purpose of this doubting. It will be necessary, then, to pin down various types of skepticism, seeing which can be attributed to Hume, and which approximate most closely to the characteristically Humean skepticism.

Before launching into this task, however, it is worthwhile forestalling those who would like to say that it is unnecessary. There are, incredibly, a few readers of Hume who assert that he was not a skeptic. It might not seem worthwhile taking such an assertion seriously, but since a primary function of this work is to establish the fact that skepticism in the Treatise had a vital part to play in a highly coherent

system, it cannot just be lightheartedly waved aside. As a preliminary to the elucidation of Hume's skepticism, then, a brief outline of the skeptical element of Hume's work will be presented. This will serve not only to indicate the massive extent of skepticism in the Treatise, but will also be of some service in indicating its nature.

II Quite early on in the Treatise we find that Hume tries to prove, via an analysis of terms such as "equality", that geometry is not exact at all, and that "since these ideas are so loose and uncertain, I would fain ask any mathematician what infallible assurance he has, not only of the more intricate and obscure propositions of his science, but of the most vulgar and obvious principles".¹ This opening skeptical flourish is very soon followed by a veritable outburst of skeptically-oriented doctrines. We are told that belief is not the rational thing we thought it was: that we don't believe because of reason and evidence, but because of our psychological make-up.² Then we learn that induction is not rationally defensible, not even based on reason at all, but merely a result of the way we happen to be psychologically constituted.³ Meanwhile, we are told that our belief that every event has a cause, even though this is extremely important to us, also cannot be shown to be rationally defensible.⁴ One of Hume's most significant skeptical arguments is that we can never possibly find an objective link between cause and effect, such that we could see that a particular cause will lead to a particular effect, thereby having a rational foundation for the expectation of the effect upon perception of the cause.⁵

Hume seems to leave us some hope, early in the Treatise, that

we can cling to certainties in algebra and arithmetic, but even this he eventually sets about taking away. In the section entitled "Of Skepticism with Regard to Reason" he attempts to prove that we cannot remain convinced of any certainty, after all. First he tries to prove that "all knowledge resolves itself into probability",⁶ and then he goes so far as to assert that, so long as we stick to reason, we can't even see any proposition as probable. Rational reconsideration of the proposition must weaken our assurance of its truth, "till at last there remain nothing of the original probability however great we may suppose it to have been".⁷ This leads Hume to assert that we "cannot defend...reason by reason".⁸

Without giving us a chance to recover from this, Hume launches into a proof that our belief in external durability, i.e. the belief that objects exist independently of the perceiver, continuing to exist when unperceived, cannot be rationally defended, but in fact ought to be rejected by reason.⁹ He follows this quickly with an argument that no adequate account of perception can be produced, and that no analysis of objects, be it a bundle or substance theory, can be produced.*¹⁰ The distinction of qualities into primary and secondary also leads to directly skeptical conclusions, he asserts, even though it is based on solid reasoning.¹¹ One more skeptical shock is produced when he argues that belief in a continued, unaltered self, is irrational.¹² In the midst of all this, we find Hume exclaiming:

I begun this subject with premising, that we ought to have an implicit faith in our senses...But to be ingenious, I feel myself at present of a quite contrary

*Those who see Hume as endeavouring to produce a consistent phenomenalism will debate this. See, however, the opening sentence of the Treatise, I, IV, V.

sentiment, and am more inclined to repose no faith at all in my senses...What then can we look for from this confusion of groundless and extraordinary opinions but error and falsehood? And how can we justify to ourselves any belief we repose in them? This skeptical doubt, both with respect to reason and the senses, is a malady, which can never be radically cured, but must return upon us at every moment... 'Tis impossible upon any system to defend either our understanding or senses; and we but expose them farther when we endeavour to justify them in that manner.¹³

And then, after filling page after page of Book I with these skeptical assertions, Hume delivers the massively skeptical conclusion. Almost any extract from that section would serve our purpose, but the following must serve as representatives:

My memory of past errors and perplexities, makes me diffident for the future. The wretched condition, weakness, and disorder of the faculties, I must employ in my enquiries, encrease my apprehensions. And the impossibility of amending or correcting these faculties, raises me almost to despair...When I turn my eye inward, I find nothing but doubt and ignorance...After the most accurate and exact of my reasonings, I can give no reason why I should assent to it...the understanding, when it acts alone, and according to its most general principles, entirely subverts itself, and leaves not the lowest degree of evidence in any proposition...We have, therefore, no choice left but betwixt a false reason and none at all...The intense view of these manifold contradictions and imperfections in human reason has so wrought upon me, and heated my brain, that I am ready to reject all belief and reasoning, and can look upon no opinion even as more probable or likely than another.¹⁴

Hume's skepticism does not entirely stop at the end of Book I, but—significantly as we will note later—only reiterations of earlier skeptical points are found in Books II and III. In the Appendix, however, we find Hume explaining further the difficulties concerning personal identity, asserting: If this be not a good general reason for

skepticism, 'tis at least a sufficient one (if I were not already abundantly supplied) for me to entertain a diffidence and modesty in all my decisions".¹⁵ He also shows there that he is quite happy to be entitled a skeptic, telling us "I must plead the privilege of a skeptic".¹⁶

The Enquiries Concerning the Human Understanding and Concerning the Principles of Morals* are not the subject of this work, having a set of problems peculiar to themselves, but it is worth briefly mentioning that in the first Enquiry, skepticism, rather than being reduced like so much else, is in fact crystalized. Hume shows there far less self-consciousness in stating his skeptical principles. It is significant that his sole purpose in mentioning external durability, perception, and substance and bundle theories, is to quickly raise skeptical points. These, he tells us after a very brief examination, are topics "in which the profounder and more philosophical skeptics will always triumph, when they endeavour to introduce an universal doubt into all subjects of human knowledge and enquiry".¹⁷ Such assertions are frequently, and confidently, expressed in the first Enquiry, and this, if the massive extent of skepticism in the Treatise were not already enough, indicates that the skepticism of the earlier work was certainly no mere passing fancy.

III Having clearly indicated the vast extent of skepticism in Hume's Treatise, it must be concluded that those who try to say that Hume was not a skeptic are crushed. More significantly, those who try to minimize and largely overlook the skeptical element in Hume's work should

*L.A. Selby-Bigge (ed.), 2nd edition, repr. Oxford, 1955.

also be somewhat embarrassed. Why, however, should anybody ever have denied that Hume was a skeptic? Part of the answer might lie in the following of Hume's statements:

Should it here be asked me, whether I sincerely assent to this argument [that no proposition is more probable than any other], which I seem to take such pains to inculcate, and whether I be really one of those skeptics, who hold that all is uncertain, and that our judgment is not in any thing possest of any measures of truth and falsehood; I should reply, that this question is entirely superfluous, and that neither I, nor any other person was ever sincerely of that opinion...Whoever has taken pains to refute the cavils of this total skepticism, has really disputed without an antagonist.¹⁸ (emphasis in text)

...it is certain, that no man ever met with any such absurd creature, or conversed with a man, who had no opinion or principle concerning any subject, either of action or speculation.¹⁹

These statements, however, hardly show that Hume is not skeptically inclined: they just indicate that he is not a "Pyrrhonist"—in the sense in which he understood the term. The Pyrrhonian doctrine, according to Hume and others, is the doctrine that we should believe nothing, and quite understandably, Hume rejected this form of skepticism. As he pointed out, nobody can be a skeptic in the sense of believing nothing: dispositions constantly betray one's belief, whatever one may say to the contrary. Richard Popkin has seized on this point, making quite sure that nobody could continue to suppose that Hume was a skeptic of this type,²⁰ pointing out meanwhile that the ancient Pyrrhonians themselves should not be considered to have held such a view. Popkin argued that Pyrrhonism should really be looked upon as the doctrine that argumentation is capable of neutralizing any reasons put forward in favour of a proposition. This is compatible with

continued practical activity: the ancient Pyrrhonians could happily continue to act according to the dictates of tradition and custom, while asserting that on the purely intellectual level, the propositions according to which they acted were not defensible.

Popkin is clearly on the right track in saying that Hume's skepticism is allied to "Pyrrhonism" when this latter doctrine is correctly understood. Hume constantly stressed the point that whatever the grounds for doubt, man will continue to reason and believe because nature dictates that this will be so. His skepticism, then, must be so understood that it is compatible with practical belief. Now what I shall call "dianoetic skepticism" is an extreme skeptical doctrine, superficially very similar to the doctrine that we should believe nothing, but entirely compatible with continued practical activity. "Dianoetic skepticism" may be defined as the doctrine that no proposition ever merits assent on the basis of pure reasoning alone; that, should we stay entirely within the bounds of pure reason, we will never give assent to any proposition whatsoever. This is a highly distinctive, and certainly extreme form of skepticism: and it is the form which I wish to isolate as the most important and fundamental form of Humean skepticism. It is an elaboration of the type of Pyrrhonism Popkin described, but with infinitely more profundity in its ramifications than the means to ataraxia of the ancients. A discussion of those ramifications will take up most of this dissertation: a simple exposition of the type of skepticism, along with the reasons for attributing it to Hume, will engage us in Chapter 3. Before then, however, some other forms of skepticism will be discussed, and a source of confusion concerning Humean skepticism eliminated.

IV Probably one of the main reasons why Humean skepticism has been played down by a number of commentators (such as Kemp Smith) is the assumption that skepticism is inevitably negativistic. The "negativist" is one of those irritating characters who won't stop parroting "you don't really know that" whenever we try to say something constructive. He constantly endeavours to reduce the sum total of knowledge, never to add to it. (The classical Pyrrhonians were of this ilk, which is one reason why it is dangerous to treat Hume as one of their company.) Such a form of skepticism may, indeed, be sometimes of great value, when it is crushing stupid dogma, freeing man from superstition and absurdity: but such an approach is only really of value if it clears the ground for the real work: the construction of positive theories. A persistent negativism is a considerable irritation, and so long as we equate skepticism with negativism, there will be a tendency for those interpreters sympathetic to Hume to play down the skeptical element in his work.

This equation of skepticism with negativism, however, has been a major cause of the failure to really appreciate the system found in the Treatise. Paradoxical though it may seem, we should not presuppose that skepticism involves negativism, but should from the first leave open the possibility that it is, in Hume's system, used first and foremost to make a positive point. This may seem to contradict the general definition of skepticism offered above: a process can only be considered skeptical, according to that definition, if the doubt-raising procedure is not followed by the production of a positive theory replacing that which has been questioned. If Hume "skeptically" attacks something in

order to raise a new positive theory, it might seem that the procedure cannot be called skeptical at all. But this misunderstands the nature of the positive theory Hume offered. Let us consider as an example Hume's assault upon the doctrine of external durability—i.e. the doctrine that bodies exist externally to the minds of perceivers, continuing to exist when unperceived. Hume's skeptical assaults on this theory are indeed followed by something positive: a positive theory concerning the understanding* which takes account of the place of this belief in our knowledge-system in terms of instinctive responses. However, the new theory concerning the understanding is by no means a replacement of the belief in external durability; it is on a quite different level. Had Hume replaced the belief in external durability with a phenomenaliastic analysis of bodies, the term "skeptical" could not be applied to his procedure, but Hume did not do this. He did not replace the belief in external durability by another of the same kind, but left the belief in suspension from the point of view of pure reasoning, and switched his level of discussion to the level of theories concerning the understanding itself.

It is important to remember that Hume is by no means a negativistic thinker. The Treatise, taken as a whole, is certainly not negativistic. As we have previously noted, the skeptical utterances of the Treatise are limited almost entirely to the first Book, the other Books clearly being concerned with the construction of theories about morals and the passions. If we should look upon Hume just as a

*The expression "the understanding" is used in a broad sense to cover all aspects of man's reasoning and the system of knowledge and belief.

negativist, then, we blatantly ignore two thirds of this work. A careful reading of the opening pages of the Treatise, also, shows that though Hume had skepticism very much in mind, he had hopes of finding new knowledge, giving a "complete system of the sciences, built on a foundation almost entirely new, and the only one upon which they can stand with any security".²¹ Clearly, he says, all is not well with philosophy: "there is nothing which is not the subject of debate, and in which men of learning are not of contrary opinions".²² However, he tells us that if we should but understand human nature, an amelioration of the situation might be possible; and therefore, he says, he will try to do just that.

Now all this is highly positive; the whole introduction is anathema to negativism. Is it not reasonable, then, to suppose that there is more to the skeptical assertions found in Book I than the manifestations of a negativistic attitude? What is being suggested in this work is that the skeptical arguments are an integral part of a new positive attitude concerning reason and man's understanding. It will be argued that we should be prepared to look upon them as part of a fundamental reanalysis of reason, including arguments that crucial elements of the understanding are not based on pure reason, but are rather derived from our animal nature, being based upon instinct.

This might, at first, not seem to be very different from straightforward negativism. After giving the new insight into reason and our understanding, it may be said, Hume could only leave us to quietly digest this and lose respect for reason and science. If he did that, then he would indeed be a negativist, indirectly, if not directly. The effect of his work would then just be a slackening of interest in adding to the

sum of human knowledge. Hume does not, however, just leave us to quietly digest the insufficiencies of our capacities. He believed that his work opened up the gateway for a whole new way of studying man. We might see an analogy with the work of Freud here. Freud threw off the restraining view that men's minds work only on the conscious level, and by so doing, opened up the way for a new study: the study of the subconscious mind. Similarly, Hume considered himself to have thrown off restraining views of man, asserting in their place the view that our system of knowledge is to a large extent independent of our rationality. Hume would have considered himself to have offered new paradigms, new basic ways of looking at the subject, these new paradigms giving new guidelines for research. He saw himself as the founder of a new science, the objective study of man, which could explain man's reason, system of knowledge, motivations, and moral beliefs on new grounds, as being dependent on various psychological and emotional grounds, instead of reason itself. We might urge that Hume's way of approaching man leads us to be over-skeptical, despairing of success in any rational activity—but then exactly the same thing could be urged in respect to Freud's work. Inasmuch as Freud showed that many apparently rational activities involved just "rationalization", he, too, could lead us to doubt our capacities. In fact, however, the Freudian approach leads us to further endeavours in pursuit of truth. There should be no reason for Hume's work to affect us differently.

Some, however, may still be unsatisfied. Let us review, they might say, the actual methods supposedly used by Hume to support his new conception of the understanding. We find him almost constantly

arguing that apparently rational beliefs cannot be rational at all, being merely supported by instinctive tendencies; he attacks reason, giving arguments to show that we are not obliged, via reason, to accept its own dictates; he speaks of reason as leading to its own destruction, and of inalienable elements of the knowledge system as mutually destructive. These "negativistic" doctrines might indeed be used with a purpose, as most potent tools helping him to support his main thesis. It may be that through them, he is enabled to push aside the opposing conception of reason, and reason's significance for man, opening the way for his new, naturalistic conception. Nevertheless, we may ask, as did Passmore,²³ how he could possibly hope to found a study of man on such a skeptical basis. It seems to Passmore, as it does to many, that if we start with skeptical doubts, and don't resolve them, then we can never break out of doubt to produce a system of knowledge, or add to the present system. Why, however, should this be so? It is certainly true that we could never give, or expect, any ultimate justification of the positions we assert. But why should this prevent us from trying to add to our store of knowledge? All knowledge may 'really be uncertain, we could admit, but mere uncertainty need not remove belief: the wise man proportions his belief to the evidence, Hume tells us, and if the evidence for our beliefs is sufficiently good, then surely they are sufficiently, even if not completely, justified.

Fundamental attitudes towards the nature of philosophy are perhaps at stake here. There is a tendency among philosophers to suppose that their goal is "true" knowledge, knowledge of the highest calibre. Philosophers tend to think that they aren't going to be satisfied with the half-truths accepted by the ordinary man and man of science; rather,

they are going to penetrate the haze of half-truths and find "genuine" knowledge. Sir Leslie Stephen commented that "the two characteristic instincts of the philosopher are the desire for certainty and the desire for harmony",²⁴ and he is surely correct. Is it not because of such instincts that we find philosophers like Descartes and Russell trying to build their systems of philosophy? The attempt is made to produce a system of knowledge with absolutely sure foundations, a firm edifice being added to this unshakeable substructure: and such attempts strongly capture the imagination of the philosopher.

Now if we suppose that philosophy is essentially concerned with a systematization of our knowledge, aiming at either providing an unshakeable basis of our beliefs, or rejecting that which cannot be supported and raising a new system of knowledge which can, then we will find Hume's approach incomprehensible. But may it not be that such a supposition is mistaken? Should we not, perhaps, just look upon philosophy as concerned with the exploration of fundamental insights about man and the universe? It is exactly that which Hume offered.

This nearly brings us to the end of our discussion of "negativism". The basic point which is being made is that though Hume is indeed a skeptic, his skepticism is not fundamentally negativistic, but is primarily used in aid of the positive programme of Book I: the production of a naturalistic conception of reason and the knowledge-system. It must, however, be added that precisely because this is the programme which Hume set himself, there are occasions on which his skepticism leads him to temporary despair. In the conclusion to the discussion of the understanding, he does feel his doubts getting on top of him. For a while, faced as he is with the full insufficiencies of our knowledge-

system, he can think only of doubts. However, even at that point, he knows that his despair will be short lived. He knows that he will return to study: indeed, he is just pausing for a moment before he launches himself upon naturalistic accounts of morals and the passions. This temporary "negativism", then, is quite separate from the deliberate, calculating assertions of skeptical theses which are manifestations of the primary and most significant Humean skepticism.

V Before moving on to a further discussion of dianoetic skepticism, the remaining alternative interpretations of Hume's skepticism will be discussed. It will be shown that these do not deserve to be treated as Hume's most characteristic skepticism, a procedure which will give, by default, some further strength to the interpretation of his skepticism offered in this work.

Perhaps because of the hostility felt towards skepticism due to its negativistic associations, Hume's interpreters, on realizing that he must be called a skeptic, apparently try to soften the blow of the attribution by so characterizing his skepticism that it appears relatively innocuous. Consider, for example, Basson's (Cavendish's) characterization of Humean skepticism as "fallibilism".

All he [Hume] says is that no method we use, not even when we employ our peculiarly human powers of reflective thought and logical calculation, issues infallibly in true belief.²⁵

Thus, the skeptical Hume is supposed to be just telling us that neither induction nor deduction need lead to certainty: that induction is an uncertain procedure, and mistakes might be made in deduction. But what a flacid, impotent skepticism this is. If this is all that skepticism amounts to, then most of us are skeptics, and "Humean

skepticism" becomes a very tame affair, hardly worth our notice. And of course, Humean skepticism is far more than that. The raging doubts of the conclusion, the proofs that essential elements of our system are not rational, the extraordinary argument concerning the degeneration of probabilities: these are not just produced in support of the feeble doctrine of fallibilism.*

John Laird, in his attempt to characterize Humean skepticism, particularly emphasises suspense of judgment on all ultimate and sublime issues,²⁷ speaking as if this was the most fundamental form of Humean skepticism. This form of skepticism is, certainly, attributable to Hume, as we find in the Treatise, on pages xxi, 13, and 64. But though this form of skepticism, like the last, may indeed be attributable to Hume, it would seem to be no better in describing the fundamental form of Hume's skepticism. Hume's skepticism certainly does not just concern "ultimate" questions, as a brief look at the summary of his skepticism will show. Many philosophers of the empiricist school, furthermore, would accept the stand concerning "ultimate" principles, while finding most of Hume's skepticism quite objectionable.

Characterizations such as the two just considered are clearly not at all strong on their own. Obviously, Hume was far more than a

*Perhaps fallibilism should not be cast aside quite so quickly as a "feeble" doctrine. After all, D.C. Stove, briefly pausing in his endeavours to show that Hume had little of interest to tell us, was gracious enough to praise the doctrine of inductive fallibilism.²⁶ This, however, has the appearance of further damnation by faint praise. Probability theorists might, perhaps, have some grounds for gratitude to Hume for apparently delivering inductive science into their hands via this doctrine, but few philosophers would find such interest in it. There is, at least, certainly no doubt that relative to the skepticism which Hume endeavoured to establish, fallibilism is indeed a feeble doctrine.

fallibilist; equally clearly, he attempted to do more than just show us that we must suspend judgment on "sublime" and "ultimate" questions. But an attempt to give a stronger, more distinctive form of skepticism, by pulling together a number of doctrines such as these, portends a greater likelihood of success. Hume, it may be said, was essentially a "mitigated skeptic". The mitigated skeptic does not just preach fallibilism and the ineffability of sublime questions, he also generally urges caution, modesty of opinion, and intellectual tolerance. Furthermore, he strives to delimit the sphere of useful rational activity, and urges researchers to stay within these bounds. He also produces a doctrine concerning the sphere of knowledge, which leads us to eschew "ultimate" questions.

When we run together all these doctrines under a single title, we do, indeed, find ourselves with a doctrine which might deserve to be called "characteristically Humean". It is by no means a flimsy form of skepticism. Once again, there can be no dispute that Hume was a mitigated skeptic; both the description and the name are taken from Hume's works.²⁸ Some elements of mitigated skepticism are certainly to be found in the Treatise. In the Introduction, for instance, Hume asserts that "we can give no reason for our most general and most refined principles, beside our experience of their reality; which is the reason of the mere vulgar".²⁹ Again, in the conclusion to the first Book we find Hume declaring that it would be a good thing if founders of systems could always limit their aspirations, being much more down-to-earth, and showing a more straightforward, practical spirit. He then declares that his "only hope is, that I may contribute a little to the advancement of

knowledge, by giving in some particulars a different turn to the speculations of philosophers, and pointing out to them more distinctly those subjects, where alone they can expect assurance and conviction"³⁰ (emphasis mine). Finally, in the very last words of the Treatise, he declares "Nothing is more suitable to that [Newtonian] philosophy, than a modest skepticism to a certain degree, and a fair confession of ignorance in subjects, that exceed all human capacity".³¹

It is in the Enquiries, rather than the Treatise, however, that mitigated skepticism is expressed with real conviction. If it were not for the clearly defined, very explicit and extensive assertions of mitigated skepticism in the Enquiries, the few assertions of it in the Treatise would probably be overlooked. All aspects of mitigated skepticism are explored there. The conclusion of the first Enquiry, at Section XII, Part III, is entirely devoted to an eulogy of this brand of skepticism, and remarks expressing an attitude of mitigated skepticism can be found throughout the Book.³²

Since mitigated skepticism is predominantly a feature of the Enquiries, however, it may well be said that it is not our concern: This dissertation is after all concerned with the contents of the Treatise, not with an exposition of the Enquiries. This is not a satisfactory attitude, nevertheless. It might be argued that mitigated skepticism was an implicit skeptical doctrine of the Treatise, but that Hume did not manage to bring the fact forward clearly until he rewrote the work. The mitigated skepticism of the Enquiries might also be seen just as a flowering of the skepticism found in embryonic form in the Treatise. We have to take quite seriously, then, the suggestion that this was the prime skeptical doctrine of the earlier work. It must be remembered that the question we are now set in this context is not whether Hume was a

mitigated skeptic, either in the Treatise or the Enquiries. It will be readily admitted that he was in both. The question is, rather, whether this is the basic form of his skepticism; whether it is the fundamental Humean skepticism we seek. To find an answer to this, we must try to find the basis of Hume's mitigated skepticism. Having done that, we will be in a far better position to appreciate its significance in his work.

Now we might assert that Hume's mitigated skepticism is just based on a general negativistic process of raising extreme doubts. In his stage of mitigated skepticism, then, we would see Hume as putting previously undirected, purposeless skepticism to some good use. This presupposes, however, that this underlying negativism was a more important aspect of Hume's skepticism, the primary form of his skepticism: and we have already tried to reject that. Would it not be rather weak, anyway, just to base mitigated skepticism on a general negativism? It would certainly not be effective to follow page after page of purely negativistic arguments with the assertion that we must therefore be cautious in our reasonings. Rather than supporting his case thereby, he would be in the position of the boy who too often cried "wolf". Responsible assertions of skepticism in a mitigated form, coming after numerous assertions of irresponsible, merely negativistic skepticism, would fall on deaf ears.

The only textual evidence showing that Hume's mitigated skepticism could be based on a general negativism indicates, anyway, that it also has some other basis. Hume says just that mitigated skepticism "may, in part, be the result of this Pyrrhonism [sic], or excessive skepticism"³³ (emphasis mine), thus indicating that we must look elsewhere for the major source of this form of skepticism. Two alternative accounts of the basis of miti-

gated skepticism are not hard to find. We may assert either that it is primarily based directly on Hume's empiricist principles, or we may point to his naturalistic doctrine concerning reason and the knowledge system as its basis. Our decisions on this matter are of fundamental importance to our approach to Hume's skepticism. If we see the mitigated skepticism as based on the naturalistic account—as a side product or moral of that fundamental account—then it will be seen as a skeptical doctrine of secondary significance in comparison to the skeptical procedure intrinsic to the naturalistic doctrine. If, on the other hand, we see it as resulting directly from Hume's empiricist presupposition, then it is a skepticism sui generis—a type of skepticism irreducible to any other, and significant in its own right. If we see it as resulting directly from the empiricist presuppositions, it will very probably be because we stress the significance of those empiricist principles, thereupon seeing the mitigated skepticism as an important fruit of empiricism.

It should be obvious that here, we are finding ourselves back in the realms of the controversies begun by Kemp Smith. Is Hume to be seen fundamentally as an expositor of empiricist presuppositions, one who tirelessly expounds the consequences of empiricism; or is he to be seen as the producer of a new conception of our knowledge-system, the expositor of a naturalistic conception of the knowledge-system? If we take the former view, accepting what Kemp Smith called the "Reid-Green" interpretation, then we will look upon mitigated skepticism as the direct result of empiricist presuppositions. If we accept the interpretation of Hume as a "naturalist", then the way is left open for us to see mitigated skepticism as a moral or side-product of this doctrine, and therefore, as subordinate to a more basic skeptical approach.

To some extent, then, we can sit idly by and let Kemp Smith do the work. By announcing our adherence to his approach we can bask in his protection. Obviously, however, this can only be so to some small extent, and some explanation of why mitigated skepticism should be seen as based upon Hume's naturalism rather than upon his empiricism must be given. In order to see this, however, we must first appreciate the attractiveness of the view that mitigated skepticism is based on empiricism. What exactly is meant when we speak thus? How could mitigated skepticism be a direct result of empiricist presuppositions?

This can be answered in a number of ways. First, we must remember that those who are members of the empiricist school of thought take the empirical sciences as their paradigm sources of knowledge. They come to think of worthwhile knowledge as built up by a careful process of observation and experimentation. Our knowledge, according to them, does not result from dogmatic a priori speculation; it is not a succession of apodeictic truths; rather, it is a collection of facts which experience, largely, has brought us. Thus, some aspects of mitigated skepticism are built into the empiricist approach. In response to rationalistic enthusiasm, the empiricist would be expected to assert such a "skeptical" attitude, pointing out that we ought to be cautious in our opinions, beware of dogmatizing, and be prepared to be instructed about reality by experience. But all this is only at best half the story. There is a much more significant sense in which mitigated skepticism can be seen as a direct result of empiricism. If, as empiricists say, the limits of experience also demarcate the limits of possible knowledge, then it follows that we must draw in the bounds of science. A smaller field of knowledge

would thus be open to us than we might have imagined; we would have to eschew all sorts of intellectual activities we thought were worthwhile. Discovery of truth about the world by purely rational procedures becomes impossible. Such "sciences" as rational cosmology, rational theology and rational psychology must indeed be pseudo-sciences: reason cannot soar above the level of the experiential; nor can it find any truths concerning the world independently of experience.

Mitigated skepticism, thus supported, becomes a doctrine of very great significance to many. It is a basic doctrine of the logical positivists, along with other empiricists and anti-metaphysicians. Even though negative, it is thought by many to be of immense importance in channeling our energies into proper fields, and of very great historical significance in combatting certain erroneous philosophical approaches. Mitigated skepticism, therefore, inasmuch as it is seen to embody this empiricist attitude, will be treated by many as entirely worthy of a great philosopher such as Hume, and mitigated skepticism, so understood, will understandably be treated by them as the major form of Humean skepticism.

It has already been agreed that we need not dispute the fact that Hume was an advocate of mitigated skepticism, and it can likewise be conceded that this mitigated skepticism might have been to some extent based on empiricist presuppositions. Nevertheless, the view that it was primarily based on empiricist presuppositions, like the view that it was Hume's primary skeptical doctrine, will not be conceded. The first point that may be made in defence of this is the fact that we almost never find Hume straightforwardly asserting the doctrine that knowledge is limited.

to the sphere of the experiential. On a few occasions we find statements where something approximating to this doctrine may be read into Hume's asseverations,³⁴ but Hume almost never produces the view in any sort of doctrinaire form, nor does he give it any emphasis. It might be replied, however, that even though the doctrine may not have been expressed in a pat formula, it nevertheless permeates Hume's works, being implicit in the copy principle, which plays such a major part in his epistemology. This, however, brings us straight back to the debate with which Kemp Smith concerned himself: Are we to consider Hume's basic empiricist principles concerning the sources of our knowledge as the unquestionable axioms of a work devoted to the production of their consequences, or should they be treated rather more as useful tools aiding in the production of the naturalistic philosophy? Insofar as Kemp Smith fought for the latter view, this dissertation is in agreement with him.

Though a detailed reiteration of Kemp Smith's argument in this work would not be appropriate,³⁵ some similar or allied defences of his approach can suitably be given in the present context.* For instance, the irony of

*Some further points should not, however, go entirely unnoticed. First, Hume's version of the basic empiricist principle concerning the source of knowledge, the copy principle, met with far less use than some of Hume's interpreters would lead us to believe. In the Treatise, only on the first occasion of its use³⁶ (concerning material substance), was the copy principle used in anything like an automatic fashion, rejecting the notion without any more ado. Even this, however, was supplemented later by further reasons for rejecting the notion. Where the copy principle met with further use (e.g. in connection with the idea of self,³⁷ and in the discussion of objective necessity³⁸), it was used only as part of the assault on the questioned notions, and possibly only to guide us towards a psychological account of the origin of the ideas. Hume's actual attacks in fact lose little force if we ignore the copy principle altogether. Secondly, Hume's treatment of a number of topics showed that in a sense, he went beyond the type of empiricist viewpoint which we expect to be encapsulated in principles such as the copy principle. We often find it said that Hume's treatment of causation, induction, personal identity, perception, and

Hume's supposedly founding mitigated skepticism upon his copy principle can be brought out to support Kemp Smith's view. The point is that if the Reid-Green interpretation is right; if Hume's work was essentially concerned with the exposition of the consequences of empiricist assumptions concerning the source of our knowledge, then he would only be able to express a position of mitigated skepticism if he was thoroughly sure of his axioms. If his primary form of skepticism was mitigated skepticism—part of which is an admonition to be cautious and careful with our principles—then if he was not very careful with his assumptions, he'd provide perhaps the most extreme case of hypocrisy in the history of philosophy. To put the point another way, if Hume was not absolutely sure of his empiricist principles, the Reid-Green interpretation would succeed in making his view look utterly ridiculous. While concluding that much is uncertain,

external durability, provide the reductio ad absurdum of empiricism, by showing that such commonplace beliefs cannot be accommodated within an empiricist framework concerning the sources of knowledge. But would it not be just a little odd for somebody who is essentially concerned with an exposition of a copy principle based empiricism to show so vividly its limitations? If Hume was an evangelical empiricist of this type, he would surely be checked at these points, and be tempted either to sweep his findings under the carpet, like Locke, or reconsider his assumptions. But he did neither. He gleefully stressed those very points which would appear to make such an empiricism most questionable. It looks very likely, then, that Hume did not advocate the copy principle and the type of empiricism usually connected with it, for its own sake, but rather as a tool for the production of analyses which would directly support his own specific ends. When we begin to look at these analyses more carefully, also, we begin to see that Hume just cannot be wholeheartedly an empiricist of the traditional kind. Such an empiricist would not dream of deliberately asserting that we ought to believe a proposition which cannot possibly be defended within the empiricist framework concerning the origins of knowledge. Berkeley, for instance, seeing that external durability cannot possibly be defended within his empiricist viewpoint, had no hesitation in rejecting the view that objects can exist independently of perceivers. Hume, however, while accepting that we cannot defend external durability, accepted that we ought to believe in it. And that was because he did not stay within the usual spirit of empiricism, but thought that our system of knowledge is not, and cannot be, based solely on experience, many of its fundamental elements being in fact based on facts about our psychological constitution.

that we must be very cautious in our theorising, and eschew all dogma; while manifesting acceptance of this doctrine throughout his work by bravely questioning the most deeply rooted of our convictions, Hume is nevertheless supposed to have been a complete slave of his empiricist first principles, so confident of them, that through them his whole work was unfolded. We should, then, take a careful look at the exposition of Hume's supposed first principles. Only if Hume so established them that he could treat them as certain beyond doubt, does the Reid-Green view, and the concomitant interpretation of Hume as primarily a mitigated skeptic, make sense.

The core of Hume's empiricist "presupposition" is his copy principle,* the principle that our ideas are copies of impressions, immediately, if they are simple, or possibly mediately, if they are complex. This is simply Hume's formulation of the principle, commonplace since Locke's theories took root in the British intellect, that the materials of our knowledge are derived from experience. Hume's "proof" of this principle is divided into two parts: first, he has to show that "ideas" are qualitatively identical to impressions, except in terms of vivacity, and secondly, he has to show that all ideas are temporally consequent to their corresponding impressions. The former is supported by an appeal to introspection and the method of challenge. He announces that he always discovers the similarity, and then challenges anybody who disagrees to present a counter-example, asserting that he has no expectation of anybody being able to do so. This extraordinary challenge in fact betrays his confidence that he will be dealing with readers friendly to him on

*Some might argue that adherence to an analytic/synthetic distinction is also an important empiricist assumption made by Hume. See, however, below, Ch. 5, Part IV.

this point: any genuine opponent on the issue of whether all ideas are derived from experience would be entirely unimpressed by it. Nevertheless, it completes his defence of the principle that all ideas are qualitatively similar to impressions: he has no more to say in its defence, and moves straight on to "substantiate" the view that all ideas are temporally consequent to their correspondent impressions. His first argument points out that we teach children ideas by giving the corresponding impressions, and not vice versa. That, of course, doesn't really get us very far, since it can only indicate that in general, where ideas and impressions do in fact correspond, the latter are temporally precedent, which is not really very profound. Hume then goes on to add the point that if a sense organ is unusable, or unused in a particular instance, we cannot have the ideas associated with it. The man blind from birth can have no idea of colour; those who have never tasted a pineapple will not have the idea of its taste, and so forth. This observation, however, gets us no further than the observation concerning the teaching of children. At the very best it only provides a fairly reasonable inductive argument for the fact that ideas of the experiential kind are derived from impressions: and yet the most important question concerns the point of whether all ideas are of that kind. Those who want to talk of "ideas of reason" may quite cheerfully accept that all ideas like those of colour and taste are derived from experience, while at the same time asserting that some ideas are of a totally different kind.

Hume's "proof" of the copy principle, then, could only satisfy those already in general agreement with him on this issue. It certainly does not purport to establish a major doctrinal principle beyond all

doubt, being only of the form suitable to give reasonable confidence in an empirical generalization. But not only does Hume fail to establish the principle beyond doubt: he also presents an insuperable counter-example to it! He states that we would be able to formulate a simple idea of a certain shade of colour without experiencing it, if we were shown a gap in a colour chart of gentle gradations.

This has baffled many a reader. If we suppose that Hume is essentially concerned with producing the consequences of empiricist presuppositions, how on earth could he proceed on the basis of a principle which he knows to have exceptions? No satisfactory answer, based on usual interpretations of the copy principle, has been forthcoming. In order to make Hume's use of the copy principle intelligible, we are obliged to see it in a new light, as a principle of methodological, rather than logical, significance.³⁹ We have to realize that it began life as an empirical generalization, but gained in importance through being used to draw our attentions to "odd" concepts in need of analysis. Once we begin to look upon the copy principle in such ways, however, we move completely away from interpretations of the Reid-Green type. We no longer see Hume as just drawing out the consequences of a rigid assumption.

The fact that Hume does not very carefully substantiate his empiricist principles beyond all doubt, nevertheless, is all that was required to counter the view that Hume's skepticism was primarily of the "mitigated" variety based directly on an all important empiricist presupposition. Only if he had been utterly convinced of that basic principle could he avoid the charge of extreme hypocrisy. Kemp Smith's view,

that the empiricist principle should be seen rather as a very useful tool leading to the naturalistic analysis, also becomes much more probable. Indeed, when we look at the reception Hume's works received in his lifetime, it becomes fairly clear that he did not need to give much support to the copy principle, seen as a principle of persuasion, since his colleagues would quite happily accept it. Reid's response to the Treatise is indicative of this. Reid, in writing to Hume, and, naturally enough, taking the approach referred to as the "Reid-Green" view, stated that Hume's fundamental principles were "commonly received among philosophers", and were ones which he did not think of questioning, until he saw the consequences.⁴⁰ If the copy principle was just part of Hume's programme for advocating his naturalistic account of the understanding, then, his lack of support for it, and admission of exceptions to it, becomes perfectly comprehensible. But the fact that variants of such a principle were "commonly received among philosophers" would hardly justify him in resting the whole burden of his work on this basis.

The approach to mitigated skepticism as directly based on Hume's fundamental empiricist standpoint, then, would seem a weak one. But it is not just for the above reasons that this basis for the view is rejected: the fact is that the interpretation of mitigated skepticism as grounded in the naturalistic doctrine fits the facts more successfully.

VI Hume's stressing of mitigated skepticism is entirely comprehensible when seen as a conclusion to his naturalistic doctrines concerning reason and the understanding. In fact, once we appreciate that naturalistic account, Hume's use of mitigated skepticism as a conclusion becomes

a matter to be expected. The new insight into man's reason refuses to give credence to the view that it is something transcendent and self-justifying. It sees reason just as a tool, given by nature to man as a means for his preservation. There is no question, within this view of reason, of ever justifying reason by reason: man just does reason, because nature has made reasoning instinctive. The place of reason in our knowledge-system is furthermore much more limited than we suppose. Fundamental beliefs do not need to be based upon, or even conform to, reason, but can be instinctively based. Now, granted all this, we must, of course, refuse to give approbation to pretentious uses of reason. We will see it in a new light, as having a particular, limited, function: that of helping man in practical matters. Thus, one moral of the naturalistic account of the understanding will be that reason is a practical faculty. While it is used in its everyday functions, the functions for which it was created, it can be expected to be by and large successful; but we cannot have any reasonable expectation of its being usable in those abstruse and speculative fields having nothing whatever to do with everyday life.

If we accept that Hume offered a naturalistic account of the understanding, then, we will appreciate that it was the major source of his mitigated skepticism. It is certainly understandable that Hume, having raised the naturalistic flag over the territory of the understanding, should conclude with assertions of mitigated skepticism. It would be a stylistic requirement for Hume to end his theoretical discussion with a moral, and the obvious moral of the naturalistic account of the understanding is mitigated skepticism. But the naturalistic account of the

understanding is very intimately tied to the doctrine of dianoetic skepticism, as we will be seeing further in the next chapter. Thus, mitigated skepticism, being based on the naturalistic account of reason, would be a secondary form of skepticism, consequent to the basic dianoetic skepticism.

The interpretation of mitigated skepticism as based upon naturalism, and thus as secondary to dianoetic skepticism, does not just make perfect sense, but it also makes better sense than the interpretation of mitigated skepticism as based directly on empiricist principles. This new interpretation is not faced with the problem of the relation of mitigated skepticism to the other skeptical procedures of the Treatise and Enquiries. The more extreme doubt-raising procedures of these works can be seen as simply part and parcel of the more fundamental skeptical doctrine which is intimately connected with the naturalistic analysis of reason. Those who interpret Hume as primarily a mitigated skeptic, however, will meet, in the matter already noted, with embarrassment concerning the existence in his work of more extreme forms of skepticism. Why should Hume, if he wished primarily to advocate a mitigated skepticism, undermine the persuasiveness of its expression by previously avowing much more extreme skeptical doubts? By crying "wolf" too often he could expect, eventually, to be ignored.

Yet another reason for preferring to treat mitigated skepticism as the moral of Hume's naturalistic account, rather than his primary skeptical doctrine, based directly on empiricist first principles, is the existence of considerable textual evidence to that effect. In the Treatise, the mitigated skepticism of the last few pages of Book I only

appears after a barrage of assertions expounding Hume's naturalistic conception of reason, and the same is doubly true of the Enquiries. In Section XII of the Enquiries, where Hume's mitigated skepticism reaches its zenith, we find no mention of his basic empiricist doctrine, the copy principle, and yet we find a very extensive reiteration of his naturalistic analysis of the understanding. Immediately prior to the expression of mitigated skepticism, we find Hume urging his thesis, central to the naturalistic account of the understanding, that the skeptic is invincible as long as we stick to pure reasoning, but nature nevertheless won't let him suspend judgment. "Nature is always too strong for principles. And though a Pyrrhonian may throw himself or others into a momentary amazement and confusion by his profound reasonings; the first and most trivial event in life will put to flight all his doubts and scruples...Mankind... must act and reason and believe; though they are not able, by their most diligent enquiry, to satisfy themselves concerning the foundation of these operations, or to remove the objections, which may be raised against them."⁴¹

This almost completes the case for accepting the view that mitigated skepticism was a secondary skeptical doctrine, consequent upon the form of skepticism intrinsic to Hume's naturalistic analysis of reason. The case will not be complete, however, until it is shown convincingly that Hume did, indeed, have a distinctive fundamental skepticism which was essential to his naturalistic doctrine. This is the subject of the next chapter.

CHAPTER 3: SKEPTICISM (2): ON THE MARRIAGE OF
SKEPTICISM AND NATURALISM

I Frequently in the last two chapters, skepticism has been referred to as an intrinsic part of Hume's naturalistic doctrine concerning the understanding. The form of skepticism central to Hume's system has been partially characterized as the doctrine that no proposition should be seen as acceptable if we stay entirely within the realms of reason. In this chapter, the intention will be to expand this characterization, both substantiating it and explaining in more depth the marriage of skepticism and naturalism.

It is easy to give an overall picture of why a close relationship between the naturalistic doctrine and diaonetic skepticism should exist. If we can, time and again, show that our most fundamental beliefs cannot be defended by reason; that we believe because it is instinctive, not because it is rationally defensible, and that reason conflicts with itself, then we will have produced explicitly skeptical doctrines which lead us straight towards the naturalistic conception of the understanding. With such ammunition, it is very easy to shatter the Platonic-Cartesian conception of reason, installing in its stead a conception of man's reason and system of knowledge as something built up naturally by man in the face of his environment. Nevertheless, with that new conception of the understanding behind us, other forms of skepticism may follow. Mitigated skepticism will certainly follow,

as we have seen, and the danger of negativism asserting itself will also exist, to strike at us at moments when confidence is low.

Thus, all the major aspects of Hume's skepticism; his primary, dianoetic skepticism; his mitigated skepticism, and his aberrant assertions of negativism, can be seen as tied in closely with his naturalistic doctrine of the understanding. What evidence, however, exists for this interpretation? Probably the main evidence is that when Hume has his tools all together and sets himself to the task of discussing a major philosophical problem, his discussion follows a particular, highly significant pattern, this pattern being the following: First, he brings to our attention a basic, important belief, and then he proceeds to assail the belief with skeptical attacks, showing, in so doing, that there is no possibility of defending that view by reason. Having done that, he shows that we nevertheless do always accept the belief, and that there is no question of rejecting it. After this; he moves to a psychological account of our acceptance of the belief, on occasions even explaining why it must be that our instincts make us believe thus. With sufficient repetition of this pattern, Hume's intentions become obvious: First, we are to look upon man's system of knowledge objectively, taking it for what it is, not expecting it to be, or trying to make it, self-justifying. We should, in other words, have the attitude of an anthropologist rather than an apologist. Secondly, we should look upon our system of knowledge as based largely on instinct, rather than reason. Reason should not be treated as the undisputed Lord of the system of knowledge: it is impotent both in respect to the defense and the rejection

of major elements of the knowledge-system. Thirdly, having seen the limited function of reason even in the organizing of the knowledge-system, we should realize that the counter-naturalistic approach to reason takes a very severe blow, and that the path to a thoroughly naturalistic approach to reason becomes much clearer.

Examples of discussions following this pattern are not hard to find. The discussions of causality, probability, induction, external durability and identity—in other words, the bulk of crucial discussions in the section on ~~the~~ understanding—follow this pattern. Other discussions, too, have marked points of similarity to it.

Consider first the analyses of causation and induction. The belief in question concerning the former is that when A causes B, B has to follow from A.¹ The belief concerning the latter is that it is perfectly justifiable to infer the existence of the effect upon the perception of the cause.² Hume puts a great deal of energy into arguing that these propositions cannot be justified by reason, and these arguments are, it should be realised, skeptically inclined. This assertion may be challenged by some, like Flew,³ who seems to think that Hume's account is just offered as a quite straightforward and final refutation of erroneous lines of thought, but the challenge can easily be shown to be mistaken. Though it may perhaps be possible to glean from Hume's work the necessary constituents of a doctrine which simply aims at refuting erroneous lines of thought, this was certainly not Hume's intention. He thought of the belief that a cause A must be followed by its effect B, along with the concomitant

belief that it is perfectly justifiable, in future cases, to believe that B will follow A, as normal views, not just erroneous views to be rejected. Consider, for example, the following comments:

While he [the skeptic] justly insists, that all our evidence for any matter of fact, which lies beyond the testimony of sense or memory, is derived entirely from the relation of cause and effect; that we have no other idea of this relation than that of two objects, which have been frequently conjoined together; that we have no argument to convince us, that objects, which have, in our experience, been frequently conjoined, will likewise, in other instances, be conjoined in the same manner; and that nothing leads us to this inference but custom or a certain instinct of our nature; which it is indeed difficult to resist, but which, like other instincts, may be fallacious and deceitful[;] While the skeptic insists upon these topics, he shows his force, or rather indeed, his own and our weakness; and seems, for the time at least, to destroy all assurance and conviction.⁴

It is clear, then, that Hume's account of the beliefs concerning the causal connection and induction proceeds according to the first two stages of the pattern outlined above: He shows that the beliefs cannot be defended by reason, but at the same time shows that he does not intend to eject them from the knowledge system. It is equally clear, furthermore, that he moves on to the third stage, giving a psychological account of why we do, in fact, accept the beliefs. Details of this account are given below, in Chapter 7.

The account of probability conforms to the pattern under consideration quite as clearly as the accounts of the beliefs just considered; a fact which is not very surprising, since the doctrine concerning probability is little more than a corollary of the doctrine concerning invariable causation. The belief involved is that if, in the past, Y has

followed X in n out of m occasions, then on the present occurrence of X, there is a probability of n/m that it will occur, such an inference being perfectly justifiable. But Hume finds it possible to "repeat all the same arguments we employed in examining that belief, which arises from causes, and [that we] may prove after the same manner, that a superior number of chances produces our assent neither by demonstration, nor probability".⁵ Thus, he soon goes on to give a psychological account of how belief in the matter arises. He tells us that the mind runs over all the images of the possible events, and finding one type of image to be repeated more often, an image of that type comes to be stronger and more forcible; which, since "belief is the same with the vivacity of the idea"⁶ means that we have a belief in that which is presented by it.

Consider now the account of external durability. Hume, from the start, asserted that there would be no question of rejecting this belief: "'tis in vain to ask, whether there be body or not? That is a point which we must take for granted in all our reasonings".⁷ Nevertheless, he launches into a great array of skeptical arguments concerning this point. He seeks to prove primarily that we cannot rationally defend our tendency to "attribute a continued existence to objects, even when they are not present to the senses, [or to] suppose them to have an existence distinct from the mind and perceptions".⁸

The account in the Treatise is long and tangled, but undoubtedly leads to Hume's asserting that external durability is rationally indefensible.⁹ It is difficult not to notice that the discussion of external durability opens the skeptical Pandora's box, including arguments that

no accounts whatsoever of perception, identity, or objects, can be successful. But this need not be discussed here; it will suffice to note that the whole discussion of external durability involves a plethora of skeptical doubts.

In accordance with the pattern outlined above, we find that a psychological account of our belief in external durability is not long in coming. The "galley theory" is first employed. "The imagination, when set into any train of thinking, is apt to continue, even when its object fails it, and like a galley put into motion by its oars, carries on its course without any new impulse".¹⁰ The point is that "the imagination" observes a certain coherence in distinct perceptions, as, for example, of a dying fire, and recognises that "this coherence is much greater and more uniform, if we suppose the objects to have a continued existence".¹¹ Thus, like a galley in motion, the mind is carried forward by inertia, making the supposition of continuity.

This is not the only psychological tendency at work, however. There is also a tendency to attribute durability, and thus externality, to things, through a confusion with the identity of an uninterrupted, extended, perception. The interrupted perceptions of, for example, a piece of furniture, are very similar to one another. Thus an "easy transition" between the ideas is possible, and "an easy transition or passage of the imagination along the ideas of these different and interrupted perceptions, is almost the same disposition of mind with that in which we consider one constant and uninterrupted perception. 'Tis therefore very natural for us to mistake one for the other".¹² But the

mind also wants to "justify this identity";¹³ it is uncomfortable with the "contradictions" it faces, and so the imagination sets to work to put the mind at ease:

The imagination naturally runs on in this train of thinking. Our perceptions are our only objects: Resembling perceptions are the same, however broken or uninterrupted in their appearance: This appearing interruption is contrary to their identity: The interruption consequently extends not beyond the appearance, and the perception or object really continues to exist, even when absent from us: Our sensible perceptions have, therefore, a continued and uninterrupted existence.¹⁴

It can be seen already, then, that the account of external durability follows very clearly the pattern above mentioned. But in one respect, it follows it with greater significance than do other discussions. It not only insists that the rationally indefensible, but psychologically explicable belief is inalienable, but also explains why. Hume goes to some pains to explain why it is that "nature has not left it to [our] choice, and has...esteemed it an affair of too great importance to be trusted to our uncertain reasonings and speculation".¹⁵ It is necessary for man's functioning to believe in the external durability of objects, Hume tells us. We don't need to suppose that pains and passions are durable, but we do need to believe this of the furniture of the world.

Our passions are found by experience to have a mutual connection with and dependence on each other; but on no occasion is it necessary to suppose, that they have existed and operated, when they were not perceived, in order to preserve the same dependence and connection, of which we have had experience. The case is not the same with relation to external objects. Those require a continued existence, or otherwise lose, in a great measure, the regularity of their operation.¹⁶

Then Hume goes on to show that we simply could not make sense of most of our perceptions if we did not suppose this continuity.

I hear on a sudden a noise as of a door turning upon its hinges; and a little while after see a porter, who advances towards me. This gives occasion to many new reflections and reasonings. First, I never have observed, that this noise could proceed from anything but the motion of a door; and therefore conclude, that the present phaenomenon is a contradiction to all past experience, unless the door, which I remember on t'other side the chamber, be still in being. Again, I have always found, that a human body was possess of a quality, which I call gravity, and which hinders it from mounting in the air, as this porter must have done to arrive at my chamber, unless the stairs I remember be not annihilated by my absense. But this is not all...¹⁷

And so Hume continues, showing that the belief in external durability is inalienable, necessary for man to come to grips with his environment, and based on non-rational factors, being indefensible rationally.

Hume's analysis of identity is subsumed under the main analysis of external durability, but it will have been seen that this, too, follows the pattern above mentioned. It is shown that we believe there to be a genuine identity of bodies, but skeptical attacks on this show it to be rationally indefensible. This is followed by a psychological account of our belief in it. The account of personal identity shows a fairly similar pattern, although there will be controversy over the view that the belief in a simple, unchangeable self is an inalienable one, and that the skeptical attacks are not set up to provide a new, positive account of the true nature of self.* This question will not be discussed in any detail,

*It does seem, however, as though Hume thought of the notion of a simple self as an inalienable one, a "natural belief". See, for instance, T 254, where Hume says: "Our propensity to this mistake [of supposing there to be an unaltered, simple self] is so great...that we fall into it before we are aware; and tho' we incessantly correct ourselves by reflection, and return to a more accurate way of thinking, yet we cannot long sustain our philosophy, or take off this bias from the imagination. Our last resource is to yield to it".

but certainly there is no doubt that Hume offers what most consider paradoxical attacks on the notion of the self, and gives a psychological explanation, again using "galley" theories, of the belief.

II Many more examples of correspondence to the pattern outlined could be offered, but the case has been sufficiently made already. The fact that Hume, on a number of occasions, provides what he supposes to be unanswerable skeptical attacks on beliefs which we cannot cast off, explaining these beliefs just as psychologically necessitated, goes a long way in showing that skeptical analyses provided an important basis for the naturalistic account of the understanding. These patterns, however, provide by no means the only indication of that relationship. For example, if we look at Hume's consideration of the results of Pyrrhonism (as he understood it) in the Enquiry, we find him arguing that all those skeptical doubts in fact show is that we must reappraise our notions of the fundamental basis of our system of knowledge and reasoning:

[Pyrrhonism] can have no other tendency than to show the whimsical condition of mankind, who must act and reason and believe; though they are not able, by their most diligent enquiry, to satisfy themselves concerning the foundation of these operations, or to remove the objections, which may be raised against them.¹⁸

Furthermore, the account of belief indicates the dependence of the naturalistic analysis of the understanding upon skeptical tenets, though, indeed, it shows a lot more besides: it is also, in fact, virtually a distillation of dianoetic skepticism.

That Hume's analysis of belief is dependent upon earlier skeptical discussions is clear when we read it in context. The discussions, for

instance, in the Treatise at I, III, VII, and in the Enquiries at I, V, pt. II, indicate that the earlier discussions of belief about matters of fact and existence were to culminate in the analysis of belief itself.* The whole process, starting from the initial discussions of cause to the analysis of belief continues thus: First, Hume argues that we cannot show that beliefs concerning facts about the future are based on any justifiable rational process. Then, he argues that we can show such beliefs to be explicable in merely psychological terms, as the effects of custom and the association of ideas. Beliefs in future matters of fact, we find, are not due to the promptings of reason, but to the influence of purely psychological factors. Having thus accounted for a particular type of belief, Hume goes on to its extension to belief in general. All belief becomes something to be understood merely as the result of unconscious psychological processes. Thus, the account of belief is very strongly helped on its way by the highly skeptical accounts of causal reasoning. And of course the account of belief is closely tied in with an acceptance of dianoetic skepticism, amounting as we have noted, to a virtual distillation of it. The whole significance of Hume's account of belief lies in the fact that it completely leaves "rationality" or "reasonableness" out.

*E.g.: "Having found, in many instances, that any two kinds of object—flame and heat, snow and cold—have always been conjoined together; if flame or snow be presented anew to the senses, the mind is carried by custom to expect heat or cold, and to believe that such a quality does exist, and will discover itself upon a nearer approach. This belief is the necessary result of placing the mind in such circumstances. It is an operation of the soul, when we are so situated, as unavoidable as to feel the passion of love, when we receive benefits; or hatred, when we meet with injuries. All these operations are a species of natural instincts, which no reasoning or process of the thought and understanding is able to produce or to prevent."¹⁹

Hume prided himself on being the first to give an account of belief, and we might have expected the first person analyzing belief to say something like "belief is the assurance that a proposition is true, based on reasonable evidence". But Hume would have none of this. He particularly wants to emphasise the independence of belief from reason, asserting that, even if reason is not entirely irrelevant to belief, it is by no means essential to it, certainly not deserving a place in a definition of belief. This account is clearly both naturalist and skeptical in the "dianoetic" sense. Hume tells us, first, that we believe primarily because our instincts oblige us to, not primarily as a result of any rational deliberation, and secondly, that there is no question of disavowing the non-rational, instinctively necessitated beliefs, because such beliefs are in fact paradigm cases of belief, not aberrants! While striking some as shockingly and absurdly skeptical, this would strike others as one more move in a naturalistic overhaul of our conception of the understanding.

The fact that the naturalistic analysis of belief is a result of skeptical discussions is shown perhaps even more clearly in the section entitled "Of Skepticism with Regard to Reason" (T 1, IV, 1). This section opens with an attempt to show that no proposition, albeit a mathematical one, can ever be accepted as even probable if we stay within the bounds of reason; in other words, that if we remain purely rational, we will never give credence to any proposition at all.* Now this is clearly a skeptical move: it is an attempt to demonstrate the truth of dianoetic

*See below, Chapter 8, part II, for a full discussion of this question.

skepticism. But Hume does not just assert this position for the sake of it:

My intention...in displaying so carefully the arguments of that fantastic [Pyrrhonist] sect is only to make the reader sensible of the truth of my hypothesis, that all our reasonings concerning causes and effects are derived from nothing but custom; and that belief is more properly an act of the sensitive, than of the cogitative part of our nature.²⁰ (Emphasis in text)

This provides conclusive proof that a major point of Hume's skepticism is to produce a new naturalist account of the system of knowledge and reason. He even puts his points in italics, in an attempt to ensure that we don't overlook them.

III It is doubly clear, then, that skeptical doubts were used to produce the naturalistic doctrine of belief. It should be equally clear, however, that the naturalistic account of belief could occasionally lead beyond the positive theory, to a pained negativism. If belief need not be rational at all; if we just have to believe, irrespective of rationality, perhaps in direct opposition to the strongest asseverations of reason, might we not come even to such straights of skepticism that we lose all faith in our system of knowledge? Naturalistic analyses of the understanding such as that of belief would inevitably begin to weigh heavily on Hume's faith in our reason and knowledge-system, straining him almost beyond the point at which skeptical analyses could be used just as supports of a positive reconstruction of our conception of the understanding, to a point where they would begin to have significance in their own right, leading us to the despair of negativism.

A thoroughly naturalistic account of the understanding in anything like the Humean form would inevitably give us some moments of despair. If we can't defend reason by reason; if we can't defend the most fundamental of our beliefs on rational grounds; then in some moods, the academic may well wonder why he bothers to follow a life of reason. But unless he had been committed to a rationalistic programme such as that of Descartes or Russell, he need not be particularly shaken by his findings concerning the understanding. Even if we can't justify our fundamental beliefs, or our reasoning processes, we still know that they work. We know that when we accept those fundamental beliefs, we are able to deal with our environment with some success, and success is seen to be directly proportionate to our close application of the processes of reasoning. Thus, the naturalist can with reasonable ease shake off his first doubts due to his comprehensive view of the understanding. He might well toy with the idea of those fundamental beliefs, which cannot be defended by reason, being gifts of a benevolent nature perfectly in harmony with the further beliefs resulting from experience and reasoning. He might also think of the aspects of the reasoning process which he cannot defend by reason, as gifts of a benevolent nature which ensures that there is a harmony between the processes of our thoughts and the processes of the actual world. And thus, the naturalist, though feeling some negativistically skeptical qualms as a result of his analyses of the understanding, could be suitably quiescent most of the time. If, however, this picture of harmony between the world and our understanding is shattered, this mood of quiescence will come to seem inappropriate. If we begin to see that the natural beliefs, our fundamental beliefs, cannot harmonise with one another; that the most important part of our reasoning

process depends on utterly trivial properties of the imagination, and that reason conflicts with itself, then the feeling that all is well with the understanding, and that we can sit back trustingly and not fight the inclinations of nature, seems completely inappropriate. And this indeed is the mood we sometimes find precipitated in Hume: "I [had] begun this subject," he tells us, "with premising, that we ought to have an implicit faith in our senses, and that this would be the conclusion. I should draw from the whole of my reasoning".²¹ In other words, it had seemed to him that we could sit back and assert, in a blasé fashion: What does it matter if we can't justify certain fundamental beliefs, or defend our reason by reason—All is still operative; they are in harmony with one another and the workings of nature. But Hume, having emphasized just how very indefensible some of our beliefs are, how very trivial are the foundations of our causal reasonings, and how seriously reason can conflict with itself, felt his doubts getting on top for the time being. He thus continued: "But to be ingenuous, I feel myself at present of a quite contrary sentiment, and am more inclined to repose no faith at all in my senses, or rather imagination, than to place in it such an implicit confidence. I cannot conceive how such trivial qualities of the fancy, conducted by such false suppositions, can ever lead us to any solid and rational system".²²

Even in the near despair of the above, we should note that Hume is careful to emphasise the words "at present". It is, too, by no means the only example of such virtually despairing skepticism. In the conclusion to Book I of the Treatise, we again find that Hume is nearly in despair having reconsidered the skeptical arguments involved in the naturalist account of the understanding. "We have...no choice left but betwixt a false reason and none at all. For my part, I know

not what ought to be done in the present case".²³ And he is almost completely sincere: his bafflement and sense of disillusionment about the understanding is quite genuine. Nevertheless, he does know what is to be done. He knows that he will return both to reasoning and to trust in the fundamental, instinctive beliefs:

Most fortunately it happens, that since reason is incapable of dispelling these clouds, nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind, or by some avocation, and lively impression of my senses, which obliterate all these chimeras.²⁴

Many have read this as a defeatist gesture; a matter of "well, dammit, I can't figure it out" or perhaps a tongue in cheek assertion that we needn't bother ourselves too much, since nobody will take any notice anyway. It seems a flippant gesture, like the earlier recommendation of "carelessness and inattention"²⁵ to remove our doubts about external durability. But it is far more than flippant. Hume is entirely sincere, meaning exactly what he says. Nature stops our skeptical reasonings, and reinforces our instinctive beliefs. Thus, even when skepticism seemed to get on top of him, Hume does not desert his positive, naturalistic principles. He will, he says, continue reasoning and believing because he has to: nature has not left it to his choice. Even in his most negativistically skeptical moods, Hume does not stray far from his positive account of nature of the understanding. In fact, his reaction to the massive doubts he entertained simply reinforced his naturalistic account, even if it may have left him with a less comfortable view of nature, seeing it as an overbearing dictator, rather than the benevolent helper which gives us a harmonious system of knowledge and

belief. We should look closely at Hume's expression when he asserts that he will inevitably go on accepting ordinary beliefs and reasonings:

I must yield to the current of nature, in submitting to my senses and understanding; and in this blind submission I shew most perfectly my skeptical disposition and principles.²⁶ (Emphasis mine)

Hume here tells us that his "skeptical dispositions and principles" are precisely those of accepting ordinary beliefs and reasonings, but not because of any rational grounds, but rather because our ordinary beliefs and reasonings are not the sorts of things which we need to give rational grounds to. The marriage of skepticism and naturalism is reflected brilliantly in this last quotation, and we can now let the case rest, and move on to a further topic.

CHAPTER 4: REASON (1): PRELIMINARIES

I To say that an important figure in the history of ideas must be historically located for full appreciation of his views to be possible is to utter something of a platitude. But it is more than a need to be academically methodical which makes necessary the consideration of Hume's account of reason against a historical background. Hume lived in the "Age of Reason", and the presuppositions of such an age concerning reason would inevitably be of great significance to an author determined to get to the root of man's understanding and motivations. It would be no surprise if the work of such an intensely original author could be understood as a reaction against the most closely cherished presuppositions of his age. Though, however, there may have been a very extensive link in Hume's time between religion and reason—a link so strong that it has been found possible to refer to the world outlook of his time as rationalistic-theistic—this link had not been firm for so very long. The alliance of the age of reason was itself to some extent a reaction against an earlier approach. Thus, in order to appreciate Hume's account of reason in the light of his chronological positioning, we need to begin the story in the era prior to the age of reason, before reason was universally accepted in the genteel world as sovereign.

II In the early days of Locke and Newton, reason had by no means the exalted position unquestioningly accepted by a later generation. Though attitudes naturally changed from place to place and from time to time, it was very common to see reason opposed to faith, tradition, and revelation. If the latter three opposed the dictates of reason, then reason

would be made to bow before them. It was by no means uncommon to find an alliance made between religion and unreason, respected thinkers belittling reason's powers in the face of revelation, faith and tradition.

This attitude was most pronounced in the Catholic world. Erasmus had defended Catholicism by espousing an anti-intellectualism, arguing that reason was too weak a guide, and that faith, along with church tradition, should be our guides. He stressed, in defense of Catholicism, the point that the age-old wisdom of the church is a far better guide than man's fallible reason.¹ Montaigne followed this tradition, but based his approach on a philosophical skepticism rather than on a general anti-intellectualism. He, along with his main disciples, such as Pierre Charron, expounded the arguments of Sextus Empiricus, producing a skepticism upon which fideism was based.²

Though fideism was most strongly associated with Catholicism,³ Catholics providing protection and encouragement for the disciples of Montaigne in the early 17th century,⁴ the attitude was by no means entirely missing in Protestant countries. There, too, it was generally felt that reason, like all man's faculties, had been corrupted in the fall, and that faith and revelation, not reason, were the divine gifts guiding us back to our Maker.⁵

After Newton and Locke had done their work, all this changed. After the initial shock caused by the destruction of the Aristotelian model of science, the scientific achievements of Newton and others gave men great confidence in the powers of reason.⁶ It was not this alone, however, which ushered in the age of reason. Probably a greater factor than the respectability given to reason by scientific achievement

was the new harmony between religion and reason. Locke argued convincingly that there could be no clash between reason and faith.⁷ He argued not only that the articles of faith and reason did not clash, having largely different spheres, but also that reason can support revelation, and can lead to further substantive religious truths. Natural religion gained a great hold on the thought of the age, and virtually all thinkers felt that reason had proved, finally, the most important truths of religion.⁸

This factor was decisive. As some modern philosophers might put it, religious beliefs were at the centre of the conceptual scheme of the age: if reason had seemed to clash with religious belief, then it would suffer, as it had indeed done, at the hands of Montaigne and his disciples. If it could be shown to be an important ally of religious belief, however, it would be exalted greatly. Thus, in the eighteenth century, we find it being said that he who attacks reason attacks religion itself.⁹

It would seem, then, that reason, by producing what were considered valuable truths of science and religion, was elevated in men's minds, and people began to think that the faculty was far less corrupted by the fall from grace than had once been supposed. Possibly another factor in the elevation of reason was the loss of effective authority within the Christian church. Once, important speculative questions could be answered by appeal to church authority; but the fragmentation of the church throughout the Reformation and Counter-Reformation removed the universal authority. Different sects had differing opinions concerning the criteria of truth in speculative matters;

no single body could provide answers to important questions which could satisfy all. In such a situation, it would seem inevitable that eventually, after the permanency of the schism was accepted, the learned world would return to reason, as the only potentially universal basis for agreement.

This last point, of course, is to some extent speculative. But what is quite certain is that by the time Hume began to write, there was little need of any conscious championship of the view that reason was a supreme guide of life: "The supremacy of reason was universally accepted"¹⁰; it was "an unconscious assumption rather than a principle from which they [Hume's contemporaries] reason"¹¹. Reason did not just have the pragmatic sanctions of scientific achievement, but had also been canonized. Time and again, we find in the writings of the eighteenth century remarks concerning the divine nature and origin of reason. Warburton expresses the general attitude when he speaks of the chief similarity between God and man being the possession of reason.¹² The Deists spoke of reason as a God-given faculty, asking rhetorically: "are not the dictates of reason the dictates of God himself?"¹³. Gas-trell was another who spoke of reason being the faculty of guidance given to man by God: "what our reason approves or condemns...we are commanded to do or not to do by God himself who gave us such a nature"¹⁴. This attitude was by no means swept aside as the Deist controversy began to presage a new stage of the cycle, making a new enmity of faith and reason inevitable. Butler did not show the stirrings of doubt, when he spoke of the "faculty of reason, which is the candle of the Lord within us"¹⁵, and even more significantly, Wesley, who led the reaction to

rationalistic theology, did not do so because of any doubts about the validity of reason. Indeed, he advocated "a religion founded on reason and every way agreeable thereto"¹⁶ and declared "It is a fundamental principle with us that to renounce reason is to renounce religion, that religion and reason go hand in hand, and that all irrational religion is false religion"¹⁷. Wesley, like William Law, limited his opposition to reason to the relatively harmless assertion that reason, completely unaided, could not tell us everything necessary about religion. Law spoke for both of them in saying that though reason is "our only possible guide", it leads us to truth by leading us to revelation.¹⁸

In an age when reason was thus strongly allied with religion, it is entirely comprehensible that in the realm of pure philosophy, Platonism should reemerge and flourish, and the Cartesian system develop. Both of these embody the propensity to make reason holy, and the holy rational. To Plato, the very essence of the soul was its rationality. The defining quality of that which survives death, moving into the spiritual realm is, he tells us, its possession of reason. Desire and spirit (the ability to move the body) pass away, being inessential properties, but reason, the pith of our spiritual being, stays. Descartes also builds this conception into the heart of his system. He speaks of two utterly different substances, the material substance and the thinking substance. Our mortal bodies are of the material substance, while our immortal minds are of the thinking substance. But the essence of this immortal mind is its reason; all sorts of things which modern philosophers might predicate of the mind—such as the production of images, the possession of sensation, lower forms of memory, feelings

and emotions—are not predicated of it by Descartes, to whom its rationality was wholly its essence.¹⁹ But thus, rationality is placed beyond the realm of the mere natural, in Descartes' system. That natural realm involves only material substance. Thus, in Descartes' system, rationality is something wholly set apart from the naturalistic, something entirely of the spiritual world. Far from being something comprehensible as a result of natural conditions, it was for Descartes to be connected with the world of religion: the supernaturalistic.

Throughout the confident age of reason, reason was not just given an unshakeable basis in theoretical matters, as "the candle of the Lord within us", but it was considered to be of enormous significance in practical matters. Richard Price, a contemporary of Hume, and William Godwin, some forty years his junior, are just two of the philosophers who thought reason to be the spring of all action in the perfect man, reason having an effect proportionate to one's virtue. Price believed that the passions would be quite superfluous in a society of fully mature and educated people, and that they only exist to keep man, in his weakness, out of harm's way: "the occasion for them arises entirely from our deficiencies and weaknesses: Reason alone, did we possess it in a higher degree, would answer all the needs of them. Thus there would be no need of the parental affection were all parents sufficiently acquainted with the reasons for taking upon them the guidance and support of those whom nature has placed under their care."²⁰ Godwin, if it is possible, held even more outrageous views. In a truly rational age, he tells us, sexual desire would wither away. "Reasonable men then will propagate their species, not because a certain sensible pleasure is annexed to action, but because it is right that the

species should be propagated, and the manner in which they exercise this function will be regulated by the dictates of reason and duty".²¹

The moral theories of such thinkers followed the same unpromising course. Price tells us that an action is seen to be moral or immoral by our rational intuition, which perceives in the action certain immutable fitnesses or contradictions. Morality is purely a matter of perceiving truth; a moral action is one based on recognition of the fact that that action is fitting. An example of a moral action would be taking care of our children because we see it is fitting to do so; if we should take care of our children because of our parental affection, the action would not be meritorious. Intellectual determinations alone are the motivations which entitle a person to praise or blame.²²

Price, and others of his viewpoint, had difficulty in explaining exactly what there was about moral and immoral actions which made them "fitting" or "unfitting". There were supposed to be some relations involved which the intellect could perceive, making the action right or wrong, but exactly what these relations were, and how they could be perceived, was somewhat obscure.²³ Wollaston made a bold effort to complete the system satisfactorily by saying that the significant relation was that of signifying truth or falsehood.²⁴ Every action, he says, effectively informs us of the state of affairs in which it is performed. It signifies truth or falsehood; and if it signifies truth it is "fit", while if it signifies falsehood, it is not fit. Showing gratitude to a benefactor would be a fitting action, since it signifies the true proposition that he is our benefactor; but stealing another's property would be unfitting, and thus immoral, because the action would signify the false proposition that the property is one's own. Thus, Wollaston felt

that he could accomplish the ideal of the rationalist moralists: reduce questions of right and wrong entirely to questions of truth and falsehood, which could be decided upon by our intellectual faculties.

It should be noted that this latter offspring of the age of reason, the tendency to attribute to reason an enormous influence in practical matters, did not hold undisputed sway over the thought of the time. It did not reach the status of an undisputed dogma, like its equivalent in purely intellectual matters, but rather met with opponents from the first. Though the "Rational Intuitionist" school, of which Price was a prominent member, was very influential, it was opposed by another school, that of "Aesthetic Intuitionism", which had Shaftesbury and Hutcheson as its leaders. Shaftesbury had argued that the ideal man is not, and could not be, a pure rational automaton. He, along with Hutcheson, drew Hume's admiration for conceiving of man less as a creature of reason than as an animal moved by passions. Hutcheson had clearly argued that reason cannot be a spring to action,²⁵ and, like Shaftesbury, he argued that morals were derived from a moral sense which "feels" the moral worth of an action. According to this system, a good action is akin to a beautiful object, and a bad action to a hideous one. Whatever merits the details of this system may or may not have, it did point out that feeling, not mere intellectual cognition, was what counted in morals.

Hume certainly did not, therefore, entirely originate the reaction to the elevation of reason in the "age of reason". Others, whom he greatly admired, had preceded him with a reaction to some aspects of it. His originality lay far more in his reevaluation of reason's place in purely intellectual matters, but nevertheless, he did devote a great deal

of attention to the completion of the task begun by Shaftesbury and Hutcheson. Before going on, then, to Hume's discussion of reason within the contemplative sphere, which will require a chapter to itself, it will be very well worth while looking into his discussion of the place of reason in practical life. The rest of this chapter, then, will be devoted to this matter.

III A careful consideration of Hume's writings on morals and passions in the Treatise will disclose that a discussion of the place of reason within them plays a prominent part. Turning first to the discussion of the passions, though it will be found that consideration of the motivating capacities of reason does not appear until Part III, Section III of Book II, once the subject is broached, it is discussed in such a highly provocative manner that it is assured a reception as one of the most explosive sections of the entire Treatise.

Hume begins the section by pointing out that "the greatest part of moral philosophy, ancient and modern" is founded on the opinion that there is a combat between reason and the passions.²⁶ The "preeminence of reason above passions" is greatly stressed, he tells us, and its merits and "divine origin"²⁷ are usually pointed out. But, Hume dramatically avows, this is all wrong. The truth of the matter, he tells us, is that reason is not a motive to any action, and can never oppose the passions in directing the will. His famous and highly polemical assertion that "Reason is, and ought only to be, the slave of the passions, and can never pretend to any other office than to serve and obey them",²⁸ soon follows.

In this highly controversial discussion of reason's place in motivation, Hume makes quite clear his intention to explode the pretensions of his rationalist predecessors and contemporaries. His arguments, nevertheless, are very simple. Reasoning, he first asserts, is concerned with judgment either from demonstration or from probability. But the former, he points out, since it just concerns the world of ideas, not the real world, can never be influential in itself. If we use such reasoning to some end, it is not the reasoning itself which leads us to act, but rather passions combined with causal knowledge. For instance, a merchant does indeed use calculations concerning his debts, but it is not the calculations themselves which lead him to pay a debt, but rather certain passions combined with the causal knowledge of what happens to merchants who don't pay debts.

As to reasonings concerning facts, all of which, Hume says, involve causal relationships, we find that these, too, cannot in themselves motivate. The truth is rather, Hume tells us, that we have certain desires and aversions, and the knowledge concerning causes and effects allows us either to satisfy our desires, or avoid that to which we are averse. The passion, then, provides the original motivation, and the causal reasoning channels the resultant activity in the most appropriate direction. If we should be totally indifferent to a particular causal relation, knowledge of the connection would have no influence upon us at all.

Thus, reason alone gives rise to no volitions, and it immediately follows, Hume tells us, that it cannot prevent a volition: only a contrary impulse can prevent a first impulse, and reason gives rise to no impulses in itself. This completes the first element of Hume's argument

that reason and the passions can never be opposed. Reason does not motivate; only passions do. Thus, far from being the sorts of things which can be opposed, reason can only be a slave of the passions, so guiding our actions that our passions may be most fully satisfied. Hume goes on to provide further substantiation of this position with the argument that since passions can never be true or false, or, therefore, contrary to truth, it makes no sense to speak of a passion as contrary to reason. The domain of reason is that of truth and falsity, and the passions do not enter this domain. Thus, Hume says, a passion can never be in a strict sense unreasonable. We can say, more loosely, that a passion based on a false belief is unreasonable; but in itself, it can never be rational or irrational. "'Tis not contrary to reason to prefer the destruction of the whole world to the scratching of my finger. 'Tis not contrary to reason for me to choose my total ruin, to prevent the least uneasiness of an Indian or person wholly unknown to me".²⁹

Hume recognises that we do normally speak of passions as being reasonable and unreasonable, but he argued that this is based on a confusion with the calm and tranquil passions. We tend to speak of people who act with aversion to evil, who love life, and so forth, as "reasonable", and those who do not, as "unreasonable"; but, says Hume, this is a confusion. Because the calm passions act in a psychologically similar fashion to reason, we tend to equate them; but this is philosophically untenable.

Hume's arguments that morality is not derived from reason is really a continuation of this argument, though it is not until Book III,

the book specifically concerned with morals, that we find it actually being continued. Nevertheless, it occupies a prominent part in that Book, being the first topic mentioned, and taking up the whole of Part I. Hume here sets himself the question of whether reason alone can distinguish moral good and evil, a question which he is able to answer with ease after his earlier discussion of motivation. To put his argument really succinctly: "morals excite passions, and produce or prevent actions. Reason of itself is utterly impotent in this particular. The rules of morality, therefore, are not conclusions of our reason".³⁰

Hume does not rest satisfied with just this argument, however, and makes the important point that moral discourse is of a quite different type to discourse concerning truth. He points out that reason is operative in the sphere of truth, but moral judgments are not concerned with relations of ideas or matters of fact, but something quite different. We can never find any actual vice or merit in pure facts; only when we turn to our reactions to states of affairs can we find virtue and vice entering the question, along with our sentiments of approbation or blame. The moral judgments do not just represent states of affairs in the external world; they have a subjective basis. And thus, statements concerning morals just are not like statements about fact. To put it another way, there is a gap between "is" and "ought" statements. Moral discourse is on a different level from discourse about truth, and thus cannot be judged by reason, whose domain is that of truth and falsehood.³¹

Now whether these arguments are or are not decisive will not be discussed here. It is the meaning, rather than the truth of Hume's discussion which is now at stake. And the important conclusion to be drawn from Hume's discussion is precisely that he did continue the process of giving a new conception of reason in both Books II and III. It becomes very clear that Hume by no means restricted his consideration of the nature of reason to Book I of the Treatise. In fact, it becomes evident that in all three parts of that work, he wished to drive home the point that reason has been exalted beyond the limits of acceptability; that reason is to be reanalyzed, and seen to have a far more limited place in man's life than was generally thought. In the section "Moral Distinctions not Derived from Reason" Hume asserts: "I am not...without hope that the present system of philosophy will acquire new force as it advances, and that our reasonings concerning morals will corroborate what has been said concerning the understanding and the passions".³² Is he not saying, that here again we find, just as we did in discussing the understanding and the passions, that reason is to be seen as a very limited element of man's life?

This is an important point in the interpretation of Hume, but nevertheless Hume's arguments concerning the limitations of reason in morals and the passions may not seem so important today, since they are fairly widely accepted. It is his reaction to the rationalist treatment of reason's place in the understanding that is of far more interest, and will meet with far more opposition. While his rejection of rationalistic practical philosophy does not surprise us today, some aspects of his rejection of rationalistic epistemology will surprise us enormously. Thus, we shall turn to this immediately.

CHAPTER 5: REASON (2): THE NATURALISTIC ACCOUNT OF

"THEORETICAL" REASON

I We have already noted that Hume's contemporaries did not seriously question the claims of reason. Except for the "moral sense" theorists, who only went against the tide of opinion with respect to reason's place in the realm of morals, there was an unconscious acquiescence in the dogma that reason, the faculty shared with God, had an unquestionable authority. An age of coruscating intellectual advance had passed since the fideists¹ could gain much sympathy for renouncing the claims of reason to make room for faith. Nevertheless, in the "age of reason" we find Hume not just going against the tide of opinion by restricting reason's sphere in practical matters, but heretically denouncing its authority in the realm of the theoretical.

This boasted reason of theirs...is not able fully to satisfy itself with regard to its own operations, and must in some measure fall into a kind of implicit faith; even in the most obvious and familiar principles.²

While those modern readers who fully appreciate the grounds for such avowals will be staggered by Hume's originality, it is not hard to see that his contemporaries would have a tendency to shrug it off with a sigh. We can imagine that to them, it would represent intellectual atavism. They had heard the echoes of such assertions, originating in the enthusiasm of a by-gone age, and still mouthed by the odd reactionary: but this was the enlightened eighteenth century, not the fanatical seventeenth. Those who bothered to read Hume in some detail may have

given some thought to the fact that he did not advocate a down-grading of reason for any genuine pious purposes, like his apparent intellectual predecessors; but nevertheless, Hume's attitude towards reason was closer to that of the fideists, in many respects, than to that of his age. His attitude was a rebellion against the spirit of his age, and if he could not move with the times, he could expect to be ignored by the leaders of the times.

The extent of the similarity between Hume's doctrine concerning reason and that of the fideists was indeed not superficial. Almost any reader could see through the superficial gloss of his occasional pseudo-fideist assertions, such as that which concluded the essay "On the Immortality of the Soul",* but beneath this blatantly insincere facade, there were genuine assertions which branded Hume as of the same turn of mind as the fideists. Just as the fideists had filled their writings with arguments from Sextus Empiricus, so did Hume fill his writings with skeptical doctrines. Just as the fideists had argued that many aspects of our knowledge-system are not based on reason, some of the most important elements being based on faith, so did Hume echo these arguments, albeit with a very different type of "faith" in mind.

Thus, any astute thinker who was capable of grasping Hume's system in some detail, but was nevertheless a captive of the spirit of the age, would very probably see Hume's approach to reason not as something new to be explored, but as something old, and stale, which he need not bother

*After devoting the entire essay to showing how utterly indefensible is belief in immortality, Hume's final paragraph reads in its entirety as follows: "Nothing could set in a fuller light the infinite obligations which mankind have to divine revelation, since we find that no other medium could ascertain this great and important truth".

with. We might consider as a parallel the attitude of English philosophers of our age, faced with a repetition of some arguments from Bradley and Bosanquet. Unless they are specifically students of these philosophers, our English contemporaries will not bother to consider their doctrines seriously. They will just treat them as relics of interest to antiquaries. It does not matter that such doctrines may not have been refuted; it is enough that they gradually faded out of sight, their dwindling advocates gradually becoming objects of disrespect, as living anachronisms. So it must have been with Hume's analysis of reason. Thinkers would scarcely bother to meet his arguments; they would be quite content just to let the dust settle on such notions.

There is, nevertheless, a really crucial difference between Hume's analysis of reason and the work of the fideists, from the point of view of modern philosophy. Hume did not give a fresh analysis of reason in order to advance religious purposes, but in pursuance of a naturalistic conception of man and the universe. While we, today, may not bother to stifle a yawn when faced with an advocate of the former programme, we surely will look with some interest at the outcome of the latter. An eighteenth century attempt to give an account of reason entirely in terms of naturalistic explanations--this must be a programme of startling originality, one which has almost never been attempted even in the present age.

In the rest of this chapter, and much of the next, we will be concerned with an exposition and substantiation of the view that Hume had, as a prime aim, the end of producing a fresh analysis of reason based on a naturalistic foundation, exorcising all elements of supernaturalist

attitudes towards it. At the basis of his view, it will be argued, there was a realization that reason simply cannot be considered as something divine and sacrosanct, being a gift of God to the creatures made in his own image. This latter point will be discussed primarily in the next chapter, which deals with Hume's writings on religion; the rest of this chapter is to be concerned essentially with following the account itself, through its many convolutions. But lest it be thought that a few words are not out of place at this point in defense of the view that Hume rejected the notion of reason as a divine gift of the Lord, the reader will be reminded of Hume's writings under the heading "Of the Reason of Animals". At the beginning of the section in the Treatise of this name, we find Hume asserting "no truth appears to me more evident, than that beasts are endowed with thought and reason as well as men". This on its own shows Hume's refusal to take seriously any conception of reason as a special gift from God to man, distinguishing him from the beasts. And to Hume, the fact that animals as well as men reason seemed very important, since he felt that it "furnishes us with a kind of touchstone, by which we may try every system in this species of philosophy".³ Any adequate system must be able to account for the reasoning of animals as well as men, he says, and, towards the end of the section, he expressed the view that we should understand reason as a purely natural, instinctive tendency. He states that reason, ultimately, is "nothing but a wonderful and unintelligible instinct",⁴ of a similar nature to the nest-building of birds; and in the equivalent version of this section in the Enquiries (Section IX) he adds that the function of this natural instinct is the preservation of the reasoner.⁵

Hume certainly did realise that there are many aspects of reasoning, as it is normally conceived, but he seemed to feel that all of them involved, fundamentally, no more than functional tendencies produced by nature for the preservation of the species. If we should ask philosophers today to name various aspects of reasoning, we might be offered the following as candidates: Deduction, induction, intellectual intuition, and the production of "framework hypotheses" or "categorical principles". It will be argued that Hume was aware that some such quadripartite analysis of reasoning could be offered, and that, having recognised the various potential aspects of reason, he wished to show that all of them—whether they are really aspects of reason or not—can be seen as fundamentally based on nothing more than instinctive tendencies of mankind, tendencies which are not themselves "rational", but which nevertheless do serve a purpose in the preservation of mankind.

The reader may find this very difficult to accept. The first point needing defense is the view that Hume was aware of the possibility of some sort of quadripartite analysis of reasoning. It will have to be shown that he did recognise each of the four aspects as potential or actual aspects of reasoning; only when this has been done, is there any point in showing that he went on to argue that each aspect is founded on nothing more than a non-rational, instinctive tendency.

II The assertion that may seem most extraordinary, in speaking of Hume's recognition of a potential quadripartite analysis of reasoning, is the assertion that he was aware that reason might be considered to have the function of producing some type of "categorical principle" or "framework

hypothesis". This may, indeed, seem utterly paradoxical, since it is commonly said that the great reply to Hume offered by Kant, and which is accepted in a modified form even by modern empiricists, was based precisely on the point that a function of reason existed which he did not recognise: the function of making the data of sense cohere in an intelligible system through the organising capacity of fundamental categories or categorial principles. Reference to a fixed set of categories may have given way to discussions of "framework hypotheses", "conceptual frameworks", "paradigm-sets" or what-have-you, but it will still seem to many that in these variations of Kant's fundamental theme, there is a recognition of a function of reason which was quite beyond Hume's ken. However, should Hume have been faced with an advocate of the conceptual framework philosophy, he would by no means have had to respond to his glowing interlocutor with a "my goodness—I never thought of that!" attitude. The truth is rather that he did much of the groundwork of this approach, though in very different terms.

It is not meant, of course, that Hume had elaborated a doctrine, in the post-Kantian manner, according to which reason properly so called manufactured some type of system of framework principles. What is being asserted is that Hume was aware of a special type of proposition, essential to our knowledge-system, which was about the world, not based on experience, and at least commonly thought of as somehow a product or part of reason. The basic propositions which he isolated were recognised both by him and others as essential to our system of knowledge, and at least some of these propositions, like the causal principle, were looked upon by others as "truths of reason". Frequently, these "truths of

reason" were analysed as being directly perceived as true, through a faculty of intellectual intuition. While Hume, then, may not have thought it justifiable to refer to the production of these basic beliefs as one of the functions of reason, he could recognise that any comprehensive account of reason must include an analysis of them.

To move on to the text, we find Hume picking out exactly those beliefs which are in most need of the "framework hypothesis" type of analysis, e.g. the beliefs in external durability, numerical identity through change, and the necessity of every event being caused. The fact that he was entirely aware that such beliefs are required to organize the data of sense is shown in a profound discussion of external durability in the Treatise. This has been partially discussed above (pp. 53-54), but the account is of such considerable importance that it deserves to be quoted fully. After saying that the furniture of the world, unlike sensations, needs to be treated as externally durable⁶, he gives the following series of memorable examples and observations:

I am here seated in my chamber with my face to the fire; and all the objects, that strike my senses, are contained in a few yards around me. My memory, indeed, informs me of the existence of many objects; but then this information extends not beyond their past existence, nor do either my senses or memory give any testimony to the continuance of their being. When therefore I am thus seated, and revolve over these thoughts, I hear on a sudden a noise as of a door opening upon its hinges; and a little after see a porter, who advances towards me. This gives occasion to many new reflections and reasonings. First, I never have observed, that this noise could proceed from anything but the motion of a door; and therefore conclude, that the present phenomenon is a contradiction to all past experience, unless the door, which I remember on t'other side the chamber, be still in being. Again, I have always found, that a human body was possest of a quality, which I call gravity, and which hinders it from mounting in the air,

as this porter must have done to arrive at my chamber, unless the stairs I remember be not annihilated by my absence. But this is not all. I receive a letter, which upon opening it I perceive by the hand-writing and subscription to have come from a friend, who says he is two hundred leagues distant. 'Tis evident I can never account for this phenomenon, conformable to my experience in other instances, without spreading out in my mind the whole sea and continent between us, and supposing the effects and continued existence of posts and ferries, according to my memory and observation. To consider these phenomena of the porter and letter in a certain light, they are contradictions to common experience, and may be regarded as objections to those maxims, which we form concerning the connections of causes and effects. I am accustomed to hear such a sound, and see such an object in motion at the same time. I have not received in this particular instance both these perceptions. These observations are contrary, unless I suppose that the door still remains, and that it was opened without my perceiving it: And this supposition, which was at first entirely arbitrary and hypothetical, acquires a force and evidence by its being the only one, upon which I can reconcile these contradictions. There is scarce a moment of my life, wherein there is not a similar instance presented to me, and I have not occasion to suppose the continued existence of objects, in order to connect their past and present appearances, and give them such an union with each other, as I have found by experience to be suitable to their particular natures and circumstances. Here then I am naturally led to regard the world, as something real and durable, and as preserving its existence, even when it is no longer present to my perception.

It is this section in particular which really makes evident the fact that Hume had worked out, in some detail, the notion of the perceiver bringing principles not derived from experience* to bear upon the data of sense, in order to produce a coherent system. And it at first appears from the above passage, that Hume is very close indeed to those

*The possession of experiences of certain kinds is, of course, necessary for acquiring the principle that objects are externally durable, but this principle is not derived from experience. The imagination sets to work on experiences of certain kinds, and, as a result of the way we are in fact psychologically constituted, leads to organization of those experiences in terms of external durability, as if upon the principle that the objects are externally durable.

empiricist quasi-Kantians (who include W. V. Quine, K. R. Popper, W. H. Walsh, N. R. Hanson, and possibly T. S. Kuhn) many of whom speak of the rational procedure of adopting hypotheses which we can see to be necessary in making the data of sense cohere. Such philosophers say that an essential part of the rational enterprise is using our imaginations to produce fundamental hypotheses concerning the world, and if these hypotheses really do help us to structure our data, it should lead us consciously to adopt them. Though imagination is involved in the process, these philosophers (or at least many of them) see the whole process as very much a rational procedure, with alternative hypotheses—where there can be alternatives—being carefully weighed against one another, and consciously adopted because of definite advantages.

However, it is important to realise that Hume did not in fact think of such a process as being in any genuine respect rational, and certainly not as worthy of commendation. In spite of his argument that we have to adopt the hypothesis of external durability; that no alternative is possible; he still does not think that belief in external durability is at all respectable, theoretically. He puts up with it, because mankind has no alternative but to accept it, but nevertheless, far from granting it even some sort of official sanction, he brands it as false!⁸ His discussion of the peripatetic solution to the problem of identity (in I, IV, III of the Treatise) also produces some further interesting points on the present question. His discussion tends to be rather confusing, since it in fact combines, without clearly differentiating, a critique of the Aristotelian doctrine of substance with an argument that there is a genuine and unavoidable natural belief in identity

through change. Hume, in this discussion, seems to be saying both that belief in identity through change is an acceptable natural belief when taken as an unconsciously foisted natural belief, and also that the Aristotelian doctrine of substance, treated as a consciously formulated validation of that natural belief, is unacceptable. Hume, while indicating that the imagination is led, by various psychological tendencies, to treat objects as identical through change, states that when faced with the enormous divergence of early and later states of an object, "the imagination is apt to feign something unknown and invisible, which it supposes to continue the same under all these variations; and this unintelligible something it calls a substance, or original and first matter."¹⁰ Now in this case, "the imagination" at work is not the imagination of the ordinary man, which leads him to an unreflective acceptance of identity through change. It is the Aristotelian and certainly not the mass of mankind, that entertains the notion of "substance, or original and first matter". Hume, then, at this particular spot, is faced with the deliberate procedure of imaginatively formulating a theory which would allow us to make sense of our data. Without such a theory—assuming for the moment that there is no involuntary process of the imagination entirely separable from it which can substitute for it—we would not be able to so organize our data that we could make intelligible use of it. Thus Hume, in discussing the Aristotelian flight of the imagination, is in effect face to face with a deliberately produced framework principle. And what is his reaction? Not laudation, not commiseration for a worthy but unsuccessful effort, but utter condemnation. Hume heartily mocked the "imaginative leap" taken by the Aristotelians: "We must pardon children [in giving way to their

imagination] because of their age; poets, because they profess to follow implicitly the suggestions of their fancy: But what excuse shall we find to justify our philosophers in so signal a weakness".¹¹ Only when the imagination works in a quite involuntary fashion to produce beliefs does Hume accept that it must be followed. The "permanent, irresistible, and universal" principles of the imagination have to be followed; these "are the foundation of all our thoughts and actions, so that upon their removal human nature must immediately perish and go to ruin";¹² but any further deliberate flights of the imagination are to be condemned, not praised, as far as Hume is concerned.

There may be, no doubt, some room for criticism of Hume here, especially since he thought that further flights of the imagination are not even "so much as useful in the conduct of life".¹³ But that is a matter for Part II. The essential point to be noted at this stage is that, though Hume recognised the part played by the imagination in producing natural beliefs—these being first cousins to categorial principles and second cousins to framework hypotheses—he deprecated all unnecessary applications of imagination, and did not think of imagination's offspring in this instance as being at all rational. While accepting the few totally necessary natural beliefs, he considered them to be based entirely on non-rational lower-order activities which are shared equally with the animals, rather than on some "higher" faculties associated with the divine.

Though Hume's analysis of reason, then, included an analysis of natural beliefs, he in effect excluded the production of framework principles from the sphere of reason. But his treatment of this "potential" aspect of reason shares, as we will see, a number of features with his

treatment of what he considered "genuine" aspects of reason.

III In moving on to consider induction, it might seem that once again, Hume is concerned with rejecting the candidature of a supposed aspect of reason. Kemp Smith, after all, championed the view that Hume considered only deductive reason to be dignifiable with the title of "reason".¹⁴ Indeed, it is commonplace to hear of Hume having tried to show that inductive "reasoning" is not really a legitimate form of reason, by showing up its pretensions in comparison with deductive reasoning.¹⁵ This approach, however, will definitely not be accepted. It will be argued that though Hume may have equivocated somewhat on the point, he certainly did think that inductively based inferences ought to be referred to as genuine examples of reasoning.

A few initial indications of the fact that Hume accepted the status of inductive reason as really being reason, are the following: In a footnote of the Treatise at I, III, IX, he says that the imagination, minus reason, is the faculty of enlivening ideas minus "demonstrative and probable [i.e. inductive] reasonings". Thus, according to this quotation, "reasoning" is equal to "demonstrative and probable reasonings". We also find causal reasoning referred to as a "species of reasoning" on numerous occasions.¹⁶ Hume never shows any sensitivity about juxtaposing the words "causal" and "reasoning"—we never see him using inverted commas or any alternative form of expressing discomfort, in his multifarious uses of the expression "causal reasoning".

Sometimes, it is quite true, Hume does seem to speak as though deductive reasoning alone is to be considered as reasoning. Comments such

as "Reason or science is nothing but the comparing of ideas, and the discovery of their relations"¹⁷ can indeed be found, along with assertions such as "All inferences from experience, therefore, are effects of custom, not of reasoning", and these certainly seem to limit reason to the apodeictic. Nevertheless, we can just as easily find statements in Hume's writings which seem to limit reason entirely to that which is inductively based. It is well known that Hume analyzed just inductive reason as based on custom, and yet he still states "according to my system all reasonings are nothing but the effect of custom"¹⁸ (emphasis mine). Again, in Book II of the Treatise, Hume asserts that the sole function of reason is to explore causal relations, saying "reason is nothing but the discovery of this relation".¹⁹ Consider also the defining characteristic of reason offered in the second Enquiry, that it "discovers objects as they really stand in nature".²⁰ Since Hume states that only inductively based reason discovers objects as they really stand in nature, here, he once again equates reasoning entirely with the inductive.

It would seem, then, that when Hume confined reason to either the inductively based, or the apodeictic, he was merely writing carelessly, and in fact thought of both as aspects of reason. Hume was always very careless about universally quantifying propositions. While saying on one page that it is "custom, to which I attribute all belief and reasoning"²¹ (emphasis mine), he almost immediately afterwards expresses himself with more care, asserting just that "the far greatest part of our reasonings... can be derived from nothing but custom".²² And, while he may indeed have produced on a few occasions statements implying that all reasonings are apodeictic, surely the following assertion will show, once and for all,

that on those occasions he was writing with less than complete care.

We infer a cause immediately from its effect; and this inference is not only a true species of reasoning, but the strongest of all others.²³ (Emphasis mine)

It would appear that Kemp Smith confused Hume's argument that inductive reasoning is based ultimately on the non-rational, with the view that such "reasoning" is not really reasoning at all. It is, indeed, very easy to slide from one view to the other. If we announce that the crucial step in induction is based on custom and habit, rather than reason, it is not at all clear whether we mean that inductive reasoning is based on the non-rational, or that such "reasoning" is not really reasoning at all.* Hume, too, did not particularly concern himself with clearly distinguishing between the two, though there is sufficient textual evidence that he had the former in mind. For example, on page 183 of the Treatise, Hume italicized a comment which avows that inductive reasoning is based on instinct. Again, on page 32 of the Enquiries, Hume says that the question he seeks to answer is "What is the foundation of all our reasonings and conclusions concerning that [causal] relation" (emphasis mine). He wants to consider, then, not whether causal "reasoning" is really reasoning, but just what is its foundation.

It might seem that this is just an unimportant dispute about words: that nothing really hinges on the question of whether Hume thought inductive reasoning to be "really" reasoning, or just what we vulgarly call reasoning. That, however, is very far from the case. If we accept that

*Nevertheless, the first alternative only in effect reiterates the claim, whereas the second goes beyond it, and thus would require further substantiation.

Hume intended the latter, we may very well suppose, what has often been supposed, that Hume was concerned just with showing up causal "reasoning" in a poor light in comparison with deductive reasoning. Then, having accepted the view that Hume was trying to show that inductive "reasoning" is not reasoning at all, we will miss the vital point that the analysis was the central element of the general account of reason, producing a paradigm for its reanalysis, as based on a merely instinctive, rather than an elevated, footing.

Before moving on, it will of course be necessary to go into some details of Hume's account of inductive reasoning, showing that it does indeed conform, in ways not yet discussed, to the pattern attributed above to all Hume's discussions of aspects of reason. It will have to be shown, that is, in what way Hume tried to argue that induction is based on an instinctive tendency of mankind. Fortunately, since most aspects of this discussion are well known, and a further exposition of it will be offered below in Chapter 7, it need not detain us long.

The discussion consists of an account of both ordinary causal reasoning, which is founded on a previous history of constant conjunction, and probable reasoning, which is based on a somewhat variable previous history of conjunction. The type of account offered of both aspects of inductive reasoning is essentially the same, inasmuch as both are analyzed as based fundamentally on psychological tendencies. In the case of ordinary causal reasoning, the inference from present cause to anticipated effect results from the influence of the association of ideas, and the repetition of sequences of perceptions. Our experience of past constant conjunctions leads to an association of the ideas of the cause and effect.

Because of this, the mind inevitably anticipates the effect, when it gains the impression of the cause; it has an expectation which is thoroughgoing and unavoidable. The case is roughly similar with respect to inductive reasonings involving a "probability of causes". In these cases, we will have experienced an event X being followed in a fairly large number of cases by event Y, and in a lesser number of cases by some other effects. This then sets up a psychological mechanism of partial anticipation that Y will occur, when we experience X. The anticipation is not thoroughgoing and unsullied, and thus the belief in the existence of Y is not entire. Where inductions based on a "probability of chances" are involved, beliefs result from an underlying psychological mechanism whereby a number of similar images coalesce to form a single, lively image—which is, because of its liveliness, a belief.

Now the existence of this aspect of Hume's discussion of inductive reasoning, wherein the inferences are grounded in psychological factors, is well known; nevertheless, there is a tendency for it to be passed over by the commentators in favour of the other primary aspect, which shows that inductive reasoning cannot be based on any rational foundation. Nevertheless, the positive part of the account was very important to Hume. He spent a great deal of time on induction, which he declares to be "one of the most sublime questions in philosophy",²⁴ and leaves his attentive readers in no doubt that the whole discussion leads up to the point that inductive reasoning is based on instinctive tendencies. From the first, Hume's discussion of induction is concerned with making the point that induction is based on psychological factors rather than reason; it is a point which figures constantly throughout the discussion, and prominently

in its conclusions. Examples of this are too numerous to require any re-iteration here.²⁵ Both in the Treatise and the Enquiries, also, Hume makes his point that induction is something that man and the animals just have to do, nature obliging it. "All these operations are a species of natural instincts", he tells us, "which no reasoning or process of the thought and understanding is able either to produce or to prevent".²⁶

The point has by now been well made, then, that Hume thought that inductively based beliefs, like natural beliefs, are fundamentally based on instinctive tendencies. But we have to take care not to become confused on this point. Unlike the natural beliefs, inductively derived beliefs are still considered to be the products of reason. It is inductive reason itself, though paradigmatically a form of reason, which is founded on non-rational tendencies: thus inductively-derived beliefs are both based on reason, and at root founded on non-rational factors. We next have the task of showing that Hume's attitude to the apodeictic is by no means dissimilar in this respect.

IV Students of the history of philosophy tend to suppose that Hume's attitude to the apodeictic—i.e. that which involves indisputably certain propositions and what is derivable from them—was very different indeed from his account of factual propositions. In learning of his "attack" on induction, they come to accept that Hume's doctrine was in effect that there are two radically different types of proposition, the contingent on the one hand, and the necessary on the other. Thus far, indeed, this is reasonably accurate. But there is a real danger that the student will come to equate Hume's distinction with a purely logical dichotomy, and

consequently misunderstand the similarities between the accounts of the different types of reasoning. It is very easy to look upon Hume's work as though he asserted that all necessary propositions are analytic,* whereas all factual propositions are contingent and synthetic. We treat Hume, that is, as though he subscribed to an analytic/synthetic distinction which is based on purely logical differentiae. Undergraduate students of Kant in particular tend to dogmatically accept this of Hume. They accept that Kant's basic purpose was to show that the analytic/synthetic dichotomy assumed by Hume did not in fact exhaustively classify all meaningful propositions.

Now I do not at this stage intend to discuss the assumption that a class of propositions exists which Hume had not recognised. It will be clear from the discussion in Section II of this chapter that propositions concerning Hume's natural beliefs were in some respect parallel to Kant's synthetic a priori propositions. What I do intend to question is the assumption, so easily made,²⁷ that Hume's dichotomy rested on purely logical factors. The danger of this assumption is that it can lead us to suppose that Hume's attitude to apodeictic reasoning was that towards, as it were, a sui generis form of reasoning. Once we grant an acceptance of the analytic/synthetic distinction in its modern logical form, we are well on the way to looking upon all demonstrative and "intuitively known" propositions as resting simply on the principles of

*"Analytic" is here used to cover not just propositions of the subject-predicate form in which the predicate "analyzes" the subject, but all propositions, including all tautologies, whose truth would be considered, on the standard modern empiricist viewpoint, to be dependent solely on the meanings of the constituent terms. The analytic/synthetic distinction might, then, be here used in a sense somewhat wider than that to which some readers are used.

logic. Apodeictic reasoning, then, would be seen as something self-contained, which does not need to be based upon any further principles, in the way that inductive reasoning has to be grounded in psychological propensities. I wish to argue, however, that this was by no means Hume's doctrine. The truth, I will argue, is rather that Hume's attitude to the apodeictic, just like his attitude to inductive reasoning, was that a foundation for it existed in psychological factors. Hume thought in terms of psychological, rather than logical or semantic distinctions, and this gives his classification of types of statements a completely different twist from that offered by modern empiricists.

The chief relevant Treatise discussion of the matter is to be found at I, III, I, where Hume talks about seven philosophical relations and their division into two sections. The classifying principle of one section, which includes relations of space and time, causation, and identity, is the principle that all relations in the section involve factual, non-necessary propositions. The other section, which includes relations of resemblance, proportions in quantity and number, contrariety, and degrees in quality, covers the relations which can generate necessary propositions. Now this may look like an introduction to a good solid logical differentiation, but such is not forthcoming. The distinction between the two sections is by no means that in one, the principle of contradiction certifies truth, whereas it is powerless in the other: this type of distinction is not considered at all. The grounds for distinction are rather that in only one section do the relations depend entirely on the ideas involved, such that the relation cannot change as long as the related ideas are unchanged.

We may still, however, feel this to be a logical differentiation, pronouncing it to be a variety of the internal relations/external relations dichotomy, which can itself be very close to the analytic/synthetic distinction. Hume's examples do at first give this view some attractiveness. An example offered of the type of relation depending entirely on the ideas, unaltered as long as the ideas are unaltered, is the relation between three angles and two right angles in a triangle. An example offered of a relation which is not unaltered with unaltered ideas is the relation of distance between two objects. Now this does indeed look like a typical pair of examples produced by somebody wishing to produce a purely logical dichotomy. We may suppose that his point is that one type of relation, but not the other, is necessary, because of the meanings of constituent terms, which are such that the principle of contradiction guarantees the truth of the relational proposition. However, just because we today think constantly in logical and semantic terms, we must not glibly assume that Hume did also. Hume, in fact, thought in terms of "conceivability" where we think of logical possibilities, and thus we find that his dichotomy is actually based on psychological factors. It might be thought that he was too far removed from Cartesianism to think of intuition as a basis for classifying propositions, but this is, in fact, precisely what he does. His necessary/empirical dichotomy turns out to be a distinction between what is intuitively known, or derivable from it demonstratively, and that which is merely factual; and he thinks of this "intuition" as a matter of psychological necessitation: if we have to conceive a proposition in a sufficiently vivacious manner, we have to believe it.

The fact that Hume employs a dichotomy based on psychological rather than logical factors is indicated initially by the next few examples used in his discussion of the seven philosophical relations. He speaks of resemblance as one of the relations yielding certainty, saying that where we have ideas of a certain type, we can be sure, from the mere consideration of them, that there is a resemblance between them. This is, he says, just a matter of immediate awareness. Again, he says that relations of degrees of quality can yield such certainties. If we are aware of ideas which differ greatly in quality, we can be immediately aware of the superiority of one, with respect to that quality. Hume argues similarly both for the relations of contrariety and the relations of quantity and number, but the reader might tend to miss the fact. It is very easy to suppose that really, Hume had some logical differentials in mind when he spoke of certainty as attainable where relations of contrariety, quantity and number are concerned. This, however, just does not seem to have been the case. We probably tend to suppose that it is the case, largely because of preconceived notions about the nature of certainty. Another factor might be that we do think of "ideas" as psychic phenomena, but as something quite different. We think of relations between ideas as relations between logical and semantic entities, and thus quite naturally we think of their relations in logical and semantic terms. But to Hume, ideas were through and through psychic entities, and thus he would inevitably think of their relations as psychological ones. Indeed, in the midst of this discussion of the philosophical relations, Hume goes to some lengths to prevent any tendency to treat ideas in such a way that we might explain their relations in non-mental terms.

We must not, he says, "pretend, that those ideas...are of so refined and spiritual a nature, that they fall not under the conception of the fancy, but must be comprehended by a pure and intellectual view, of which the superior faculties of the soul are alone capable".²⁸ That, he tells us, runs counter to the copy principle, and must therefore be rejected.

It is not just in the section "Of Knowledge" (Treatise I, III, I) that Hume indicates his view that the certain truths are to be analyzed in basically psychological terms, as propositions which are grasped by the mind in a particular manner. At various other points in the Treatise, Hume indicates that he intends to pursue what our contemporaries would call "the reduction of the logical to the psychological". On numerous occasions, he tells us that if we can conceive of something, it is possible, whereas if we cannot conceive of it, it is impossible. For example, in Section I, II, IV, we find the highly Cartesian assertion "Whatever can be conceived by a clear and distinct idea necessarily implies the possibility of existence".²⁹ Again, in a later section, he says "To form a clear idea of any thing, is an undeniable argument for its possibility, and is alone a refutation of any pretended demonstration against it".³⁰ What we might analyze in terms of logical possibility, then, Hume analyzes in terms of psychological conceivability.

Hume makes his point concerning the psychological basis of the certain truths in a particularly interesting manner when, during his discussion of belief, he says:

Wherein consists the difference between believing and disbelieving any proposition? The answer is easy with regard to propositions, that are proved by intuition or demonstration. In that case, the person, who assents, not only conceives the idea according to the proposition, but is necessarily determined to conceive

them in that particular manner, either immediately or by the interposition of other ideas. Whatever is absurd is unintelligible; nor is it possible for the imagination to conceive any thing contrary to a demonstration.³¹

This quotation is interesting, since it does not just indicate that Hume accounts for what we might call "analytic" propositions in psychological terms, but also that he gave a fundamentally similar account of the process of deductive reasoning. When we proceed apodeictically to a particular conclusion, he implies, we are psychologically obliged to grasp the resultant proposition in a particular fashion. That which is proven by a number of intermediate steps, as well as that which we have to accept as certain immediately, is analyzed as something which man just has to accept, because his psychological make-up is what it is.

Hume, then, has accepted a largely Cartesian approach to the apodeictic, but has none of the Cartesian presuppositions which allow him to retain a view of this certain knowledge as more than merely knowledge foisted upon us by our psychological make-up. Descartes had considered reason to be a divine light of the Lord, a guide given to God by man; and thus, the truths known by rational intuition had a divine status as reflecting God's veracity. But Hume has none of this. There is no question, for him, of providing some sort of conclusive external justification of the fact that man has to believe some things as certainties. It is enough for him to give a detached account of the fact that man does have to believe some things as certainties. For him, "belief is some sensation or peculiar manner of conception",³² and, having presented the fact that the mind is completely incapable of grasping some

notions in anything other than this "peculiar manner", he feels he has accounted for the fact that some propositions are set apart by man as absolutely indubitable.

Now all this being so, it follows that Hume's account of intuitive and demonstrative reasoning follows the pattern of analysis offered of inductive reasoning. Hume shows that at root, such reasoning is not based on something self-defending, unassailable, and exalted, but rather something much more mundane: in this case, just a brute fact about man's psychological make-up. Men just do, he holds, have an inevitable, completely unavoidable tendency to look upon some propositions, or relations between propositions, in a particular manner.

It must be admitted that this account of Hume's approach to apodeictic reason is based on readings of the Treatise primarily, and is not strongly supported by the Enquiries. The Enquiries, in fact, tend to support the view that Hume was wedded to an analytic/synthetic distinction of the type dear to the hearts of twentieth century empiricists. Two points make this seem to be the case. First, in the introduction to Section IV, Hume seems to express the dichotomy in very much the same manner as the modern empiricist. The objects of human reason are of two kinds, he says: those which involve relations of ideas, and those which involve matters of fact. Geometry, algebra and arithmetic offer examples of one kind, he says, while ordinary empirical knowledge offers examples of the other. Secondly, Hume apparently goes on to clinch the point that he is now thinking in terms of a logical dichotomy, and that he intends to say that all non-contingent propositions are ones based on the principle of contradiction, with his examples. Several times, he apparently urges that a

proposition must be factual, since its opposite does not imply a contradiction,³³ and, perhaps more significantly, we find Hume saying "the contrary of every matter of fact is still possible; because it can never imply a contradiction".³⁴

Now all this inclines us to suppose that Hume must have changed his mind after writing the Treatise, coming to accept an analytic/synthetic distinction of the modern kind by the time he wrote the Enquiries. The case is, however, very far indeed from being proven. It seems likely, rather, that though in the Enquiries, Hume may indeed have become more aware that some sort of contradiction is always involved in the negation of necessary statements, he did not have the slightest intention of making purely logical considerations the basis of all necessary propositions.

First, it should be realized that until mentioning the contradiction of contrary propositions, Hume did not in fact say anything different from the Treatise discussion of the point, and only the brevity of the discussion makes it look as though he has moved from discussing a psychologically based distinction, to one based on solely logical considerations. When he says that there are two types of proposition, one involving relations of ideas, the other matters of fact, and then goes on to say that mathematical propositions are of the former type, it is extremely easy for those steeped in twentieth century empiricism to suppose that he is discussing a logical dichotomy. In the Treatise, his expansion of the point, in the discussion of the relations of resemblance and degrees of qualities, allows this illusion to be dispelled, showing that he does indeed have a psychological distinction in mind. In abbreviating the discussion, in order to accommodate the tastes of those not entertained by abstruse details, he left out the-

expansion which would allow the misunderstanding to be avoided.

It is the reference to contradictions in the contrary propositions which allows modern readers to acquiesce comfortably in the view that the familiar distinction is again being paraded before them: but a careful commentator should not be lulled into a false sense of security that all is familiar. We should not presuppose that Hume used the word "contradiction" in the sense accepted by twentieth century logical empiricists. The word has been carefully pinned down in our time, referring to a proposition implicitly or explicitly of the form A&-A; but this was by no means the case in Hume's time. Zabeeh points out that in Berkeley's work, we see "contradiction" used fairly indiscriminately as an alternative for "absurd" and "nonsense".³⁵ And in fact, in Hume's Treatise, we find the word frequently used, but loosely, as equivalent to "paradox", "puzzle", "peculiarity" and other allied notions. For example, at one point in the Treatise, Hume speaks of the mind feeling discomfort because it wants to treat bodies as identical through change, but sees that there is a difficulty involved—to avoid which contradiction the mind feigns an unchanging substance.³⁶

Again, if Hume had been consciously presenting the view that all necessary propositions were based on the purely logical principle of contradiction, rather than just manifesting a fairly vague recognition of the importance of contradiction, he would have been producing a very important, revolutionary view: he would have been one of the first to present it. Only Leibniz, who was not then well read in England, would have preceded him in emphatically presenting the view. Thus, we would have expected him to present the view with some considerable care. But we find, in fact, that his discussion of the point is very bare indeed. He does not pin down the meaning of "contradiction", and does not give even one convincing example showing how the necessity of a non-contingent

proposition can be seen to be based on the principle of contradiction. Not once do we find Hume triumphantly showing wherein an implicit contradiction of a proposition lies. Never does he even state in general terms that some proposition must be a necessary truth because if we consider its negation, we will find that it both asserts and denies something at the same time. Instead, whenever the word "contradiction" enters the discussion, a psychological standard is then applied. For example, he expands the statement "The contrary of every matter of fact is still possible; because it can never imply a contradiction", with the comment "and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality".³⁷ Again, he says, "Were it demonstrably false, it would imply a contradiction, and could never be distinctly conceived by the mind"³⁸ (emphasis mine). And yet again, after saying that the principle of the uniformity of nature does not have a contradictory negation, he amplifies by saying:

May I not clearly and distinctly conceive that a body, falling from the clouds, and which, in all other respects, resembles snow, has yet the taste of salt or feeling of fire? Is there any more intelligible proposition, than to affirm, that all the trees will flourish in December and January, and decay in May and June? Now whatever is intelligible, and can be distinctly conceived, implies no contradiction, and can never be proved false by any demonstrative argument or abstract reasoning a priori.³⁹

In these quotations, it seems very much as though the apparently logical standard of necessity, involving contradictions, is equated with a psychological standard, in the Cartesian manner, concerning how a proposition feels. This, it must be added, would also account for the extraordinary brevity of the whole discussion in the Enquiries. As we have

noted, if Hume had been asserting something novel, a cornerstone of his philosophy, it seems that he ought to have taken some pains to expound it. If, however, he was only reiterating an essentially Cartesian doctrine, he could dispense with careful exposition. His account could then be as brief as it in fact is.

More light would inevitably be shed on this matter where Hume explains the necessity of mathematics. If, in fact, he believed that all necessary propositions are based on the principle of contradiction, we would find him showing, for example, how propositions like $2 + 2 = 4$ can be seen as necessary, because their negations can be understood, once we understand the terms entirely, to involve implicit logical contradictions. If on the other hand, he felt that necessity was fundamentally a question of how the mind can grasp a proposition, we would expect him to explain the necessity of mathematical truths by reference to some sort of "clear and distinct" perception. And what, in the Enquiries, do we find? In the opening of Section VII, we find him saying that the superiority of mathematical reasoning to empirical reasoning lies in the fact that the former always involves clear ideas. No mention of logical contradictions is made; only that the mind grasps such ideas with clarity.

A consideration of the approach to necessary propositions in the Enquiries, then, by no means shows that Hume came to base the apodeictic on purely logical considerations. Though a greater awareness of the significance of a vague "contradiction" may have grown, he still based the apodeictic on psychological considerations.

As a last observation on this matter, it is worth pointing out that Hume's contemporaries apparently did not suppose that his necessary/

non-necessary dichotomy amounted to an equation of all necessity with logical necessity. Consider, for example, Beattie's reaction to Hume's proof that the causal axiom is not necessary. He certainly does not attempt to show that there is a logical contradiction in the negation of the causal axiom, nor does he try to argue that Hume is wrong in supposing all necessity to be logical necessity. Such things don't seem to have crossed his mind. Rather, he states that in fact, we cannot conceive of the falsity of the causal principle, since we directly conceive it to be necessarily true. Beattie supposed that the whole question concerned the manner in which the mind conceived the proposition, and his position was that Hume was just wrong in supposing that we don't have to conceive of the causal axiom as a necessary truth.^{40*}

*While first writing this section, the view it contained was put forth with some trepidation; however, recent developments have shown that the view offered ought to be treated as a commonplace. Professor Lewis White Beck, in presenting a paper entitled "The Analytic/Synthetic Distinction Prior to Kant" (forthcoming) felt little need to defend, in detail, the view that Hume thought of all necessary propositions as being based on psychological, rather than logical, factors, though he certainly accepted the view. His reference to a number of recent papers, along with his knowledge of the attitude taken by Hume's contemporaries to necessary statements, made this unnecessary. Crusius, he points out, whose life-span very closely coincides with that of Hume, clearly equates necessary propositions with ones whose negations are psychologically inconceivable. Beck was also aware, as he points elsewhere,⁴¹ that philosophers of the previous generation, such as Tschirnhaus, defined possibility and impossibility in terms of thinkability and unthinkability. Beck's colleagues, furthermore, had explicitly defended this interpretation of Hume in the journals. Chief amongst these is Donald Gotterbarn's paper entitled "Kant, Hume, and Analyticity".⁴² This includes comments such as the following:

Type A relations (which depend solely on the ideas involved) are not distinguished from type B relations (concerning matters of fact) by the adequacy of some logical principle, such as the law of non-contradiction or the principle of identity, to determine the truth of a judgment involving type A relations and by the inadequacy of just these principles to determine the truth or falsity of a judgment involving a B type relation.

(Cont'd)

V. At this point, it remains reasonable to conclude that Hume offered an analysis of reason, in all its manifestations, as based, ultimately, on merely instinctive, natural tendencies, and not on any sublime, fundamentally self-justifying rational grounds. But this immediately gives rise to two problems. First, how could Hume account for the fact that reason does in fact work—that, through the application of reason, we do in fact consistently discover valuable truths about the world. Secondly, how can Hume avoid philistinism. The point is that if reason is not some privileged, self-justifying principle which guarantees the production of

*(Continued from page 104)

The distinction is actually based on our ability to conceive or imagine the relata having or not having various relational properties without having to change the concepts that are being related. This is only a psychological distinction...Nor are the criteria as set forth by Hume for distinguishing between different types of relations based on semantical considerations. These relations are dependent upon, determined by, the nature of mental images. The justification for the certainty of type A relations is psychological.⁴³

W.A. Suchting also devotes much of a recent paper to showing the correctness of such an interpretation,⁴⁴ and R.F. Atkinson devotes the whole of a paper to this end.⁴⁵ Atkinson, furthermore, opens his paper with a quotation from A.-L. Leroy,⁴⁶ showing that yet another author is aware of the falsity of the "orthodox" view.

Une confusion s'est établie, comme un dogme, qui fait de la différence humienne entre relations d'idées et points de fait l'analogie de notre différence présente entre logique et fait.⁴⁷

It is also worth noting that the authors mentioned do not tend to show my scruples concerning the repetition of the Treatise approach to necessity in the Enquiries. Atkinson finds "strong, if not quite conclusive reason for thinking" that the account is the same;⁴⁸ Gotterbarn asserts that "the criteria of certainty for relations of ideas in the Inquiry are the same criteria used for these philosophical relations in the Treatise,"⁴⁹ and Suchting asserts "it may be concluded then that the classification of propositions is essentially the same in the Treatise and the Enquiry".⁵⁰

Of course, appeals to authority have no logical value. Nevertheless, they may at least serve to show that the interpretation offered here deserves to be taken seriously.

truth when correctly applied, there neither seems to be an adequate reason why it should, in fact, generate truth, nor any defence of the view that reason is to be greatly admired, nurtured, and employed to the maximum.

Hume was undoubtedly intrigued with the question of the harmony between the workings of reasoning, and the states of affairs in the world. The fact that man can reason causally, discovering vital propositions which do indeed correspond to actual states of affairs seemed to provide a splendid example of a purposive nature. "Those, who delight in the discovery and contemplations of final causes, have here ample subject to employ their wonder and admiration."⁵¹ Hume recognised that there is, in respect to induction, "a kind of pre-established harmony between the course of nature and the succession of our ideas".⁵² But he is by no means intending to assert that the correspondence is surprising, or that there is some highflying principle in nature which ensures that the system of reason which it presses on man must inevitably lead always to truth. He did not suppose, like Descartes, that that which orders the world and makes us believe certain things could not see its offspring deceived. His view of the matter was far less puristic and much more mundane. It was also more than just a passing notion, as Hume in fact had a very definite theory worked out concerning the question of why the workings of reasoning, and the altering events of the world, should harmonise; a theory based on a functionalist view of reason and a belief in a particular purposive aspect of nature.

Hume recognises, first, that the fundamental instinctive beliefs which underlie our knowledge-system, and the fundamental instinctive tendencies which underlie our inductive reasoning, are absolutely necessary

to man. For instance, it is necessary to accept external durability;⁵³ indeed, all natural beliefs are such that "upon their removal human nature must immediately perish and go to ruin".⁵⁴ Again, the "operation of the mind, by which we infer like effects from like causes...is essential to the subsistence of human creatures".⁵⁵ In fact, it is so essential to man, that "it is not probable, that it could be trusted to the fallacious deductions of our reason, which is slow in its operations, appears not, in any degree, during the first years of infancy; and at best is, in every age and period of human life, extremely liable to error and mistake. It is more conformable to the ordinary wisdom of nature to secure so necessary an act of the mind, by some instinct or mechanical tendency".⁵⁶ This, however, is anticipating a little. The main point to be appreciated at this stage is that Hume saw the basic beliefs of our knowledge-system, and our inductive reasoning, to be essential to man's subsistence. The second point to be appreciated is that Hume believed that nature is such that it always gives to its offspring the bare minimum necessary to survive. Nature, says Philo in the Dialogues (and we may well suppose that he speaks for Hume), does indeed have a purpose and intention, but it is a blind purpose, and a purpose limited to "the preservation alone of individuals and propagation of the species".⁵⁷ It is "a blind nature, impregnated by a great vivifying principle"⁵⁸ which produces nothing more than the necessities required for the subsistence of its offspring. "In short, nature seems to have formed an exact calculation of the necessities of her creatures; and, like a rigid master, has afforded them little more powers or endowments, than what are strictly sufficient to supply those necessities."⁵⁹

The other point necessary to understand Hume's viewpoint concerning the fact that reason "works", is the point that he looked upon reason as a tool, and as the particular tool given by nature to mankind to allow his survival. Some animals are endowed with speed, some with force; man's particular gift is his reason, which makes up for the great lack of other abilities.⁶⁰

It can now be seen why Hume was not at all mystified by the fact that reason, lacking any logical guarantee, should nevertheless produce important beliefs. Though he did indeed write "those who delight in the discovery of final causes, have here ample subject to employ their wonder and admiration"⁶¹ he certainly did not just leave it at that, and is not personally forced into wonder and astonishment at the "preestablished harmony between the course of nature and the succession of our ideas".⁶² He understands that the harmony must be preestablished, inasmuch as only if such a harmony exists could reason be a tool enabling mankind to survive. It is a precondition for the existence of the species. Of course, to complete the account satisfactorily, Hume would have to explain why nature gives its creatures at least the bare minimum necessary to survive. Some degree of mystery would still underlie man's possession of a functional rationality until this explanation is provided.* But there would be no greater puzzle for Hume in this, than there would be in the antelope's possession of functional speed, or the lion's possession of functional strength.

We can now see, then, why Hume thought that reason should "work", but no clear answer has yet emerged to the question of why we should avoid

*This is given, below, in Chapter 9, Part II.

philistinism. Though Hume can indeed account for a general harmony between the products of the understanding and the world, it should be realised that he by no means had any reason to see the harmony as complete, and, in fact, recognised that the harmony was not complete. For example, he felt that the inductive tendency can lead us astray, being a tendency which is "indeed difficult to resist, but which, like other instincts, may be fallacious and deceitful".⁶³ Again, he says that ours is a "false reason", though it is all that we can employ.⁶⁴ Natural beliefs, furthermore, though they may provide the framework upon which the whole of our reasoning is based, are also said to be false. For example, we cannot do without the beliefs in identity through change and external durability, and yet "the fiction of a continued existence...as well as the identity, is really false".⁶⁵ Obviously, then, Hume will have considerable difficulty in providing a philosophical defense of intellectualism. His biographers show us that Hume was a highly cultivated man, developing the air of the literary gentleman, and showing a certain contempt for the "vulgar". Nevertheless, his doctrines seem to make this theoretically indefensible: and we indeed find Hume withdrawing, at times, from intellectualism.

One interesting point at which Hume came face to face with the question of how intellectualism could be defended developed when, after a long skeptical outburst, he introvertedly went into the question of why he, personally, should continue with his researches. The answer to which he was driven was that he continued in his studies because he enjoyed it, and was desirous of fame. His final answer to the question of why he should not leave his studies was "I feel I should be a loser in point of pleasure; and this is the origin of my philosophy".⁶⁶ But Hume certainly

retained the notion of a wide divergence between the "wise" and the "vulgar", and this fact may seem baffling.

Kemp Smith, however, did not find it baffling at all. He accepts exactly that picture of Hume's system which I have just denied. He felt that Hume presented the imagination as something which has the right to be followed, something which man ought to treat with great respect, acting accordingly. Kemp Smith's case is that Hume did not want to bring the knowledge-system into disrepute by offering his new analysis of the understanding, as dependent upon the imagination. Though the natural beliefs and induction rest upon the imagination, he tells us "all this, so far from giving us cause to question the natural beliefs, only serves, when rightly understood, to incline the balance more decisively in their favour. They have nature's sanctions; they only lack that of a falsely assumed sovereign faculty of reason".⁶⁷ "The imagination is rightfully, such in these sections is Hume's teaching--the dominant faculty in the animal and human mind."⁶⁸ Again, "His entire philosophy, both theoretical and practical, is built around the view of nature as having an authority which man has neither the right nor the power to challenge".⁶⁹

Kemp Smith, however, seems to be bridging the is-ought gap in his commentary on this matter. Hume undoubtedly says that it is the case that man follows the dictates of the imagination, and can't help doing so, but there must be considerable doubt on the question of whether he thought we ought to respectfully follow its urgings, dutifully and unquestioningly accepting its right to adjudicate on important questions. Kemp Smith offers a picture of what Hume's doctrine might have been, if he'd had far less of a skeptical streak. He offers a picture of a pleasing doctrine in

which the imagination, and the further aspects of reasoning and the knowledge-system form a harmonious whole, a well balanced system in which the thinking man can cheerfully acquiesce. Benevolent nature will have given us the elementary aspects of our knowledge-system, and the crucial tools for going beyond the present data to new truths, and further applications of our reason will yield further favourable results.

However, Hume's skeptical mind never let him really retain such a view of the understanding, though at times he may indeed have lapsed into a comfortable quietude on the matter. We should bear in mind once more his assertion:

I begun this subject with premising, that we ought to have an implicit faith in our senses [or imagination], and that this would be the conclusion, I should draw from the whole of my reasoning. But to be ingenuous, I feel myself at present of a quite contrary sentiment, and am more inclined to repose no faith at all in my senses, ~~or~~ rather imagination, than to place in it such an implicit confidence. I cannot conceive how such trivial qualities of the fancy, conducted by such false suppositions, can ever lead to any solid and rational system.

Kemp Smith might well argue that the clause "at present" is highly significant here, and that it is only a temporary attitude of Hume's, not one that remains throughout his work. But though Hume does indeed withdraw from such a skeptical position, he tells us that it is only because nature obliged him to, by distracting him and refusing to allow the skeptical position to continue influencing him for long. As long as Hume reasons philosophically on the matter, he does indeed have doubts concerning the foundations of the entire system of knowledge and reasoning, though he recognises that he will inevitably ignore it once he changes the subject. Many indications of the fact that he could not acquiesce,

while theorising, in a comfortable view of a harmonious, truth preserving system based on the imagination, can be found. As we have seen, he rejected the avoidable products of the imagination, such as the belief in substance, with great contempt. He certainly did not treat them with honour, as coming from the same stable as essential beliefs; but rather, once he could show that they had "the opprobrious character of being the offspring of the imagination"⁷¹ scorned them greatly. He had to tolerate the natural beliefs, because they are unavoidable, but he was never comfortable about them, or intellectually reconciled to them. Far from honouring them, he speaks of them, as we have seen, as actually false. Hume also did not have the pleasant conception of the knowledge-system as a harmonious structure, with reasoning and the imagination bolstering, supporting, and maintaining one another, one making up for the deficiencies of the other. Though that may have been the case to a very limited extent in Hume's eyes, it was certainly by no means always the case. In discussing theories of perception, he is led to talk of natural beliefs and reason as enemies!

Nature is obstinate, and will not quit the field, however strongly attacked by reason; and at the same time reason is so clear in the point, that there is no possibility of disguising her. Not being able to reconcile these two enemies, we endeavour to set ourselves at ease...⁷² (emphasis mine).

Whenever Hume goes into this question, we find skeptical tendencies coming to the fore. Instead of comments equivalent to "don't worry—benevolent nature has given us a very fine understanding", we find remarks like "What then can we look for from this confusion of groundless and extraordinary opinions but error and falsehood? And how can we justify to ourselves any belief we repose in them?"⁷³ When discussing the fact that

all reasoning is based on the imagination, he certainly does not say that all is therefore well, because it has nature's sanctions. On the contrary, he says "No wonder a principle so inconstant and fallacious should lead us into errors".⁷⁴ Instead of presenting us with a knowledge-system which is basically harmonious, he presents us with one which is contradictory in its basic postulates. The beliefs in external durability, and causal reasoning, are opposed: "they are directly contrary, nor is it possible for us to reason justly and regularly from causes and effects, and at the same time believe the continued existence of matter".⁷⁵ This contradiction in our knowledge-system is unavoidable, and all we can do is "knowingly embrace a manifest contradiction".⁷⁶

Kemp Smith, then, is quite wrong to suppose that Hume had the attitude that though our understanding is based on the imagination, that is quite all right. The whole tenor of Hume's discussion of the point is one of disgust at the weakness of the understanding. And we can certainly see why he should have had such a feeling. His theory of the nature of the knowledge-system does show why it must be tolerably effective; why it must by and large work, because of its functional nature, but it can show no more. It must, then, leave those who accept the theory with questions and doubts.

We are still left, then, with the question of how Hume could avoid philistinism. And the truth of the matter is, that ultimately he had no answer to it. He could, certainly, offer a number of points distinguishing the wise from the vulgar and the intelligent from the dull, as we find in both the Treatise and Enquiries. In the former, the following differentiae are offered: The wise can find subtle niceties in causation, while "The

vulgar, who take things according to their first appearance, attribute the uncertainty of events to such an uncertainty in the causes, as makes them often fail of their usual influence";⁷⁷ the wise follow general rules, so that we can choose between accidental circumstances and efficacious causes, while the vulgar don't;⁷⁸ and again, the wise accept only the unavoidable promptings of the imagination, while the vulgar accept more.⁷⁹ Moving to the Enquiries, we find a list, comprising nine such features, which can differentiate the intelligent from the dull. In spite of all this, however, the basic question is not answered: There may be a de facto differentiation of the wise from the vulgar, but is there a de jure differentiation? Hume simply never answers this. Had he been faced with a product of the romantic period, who insisted that we should follow the urgings of the passions rather than the intellect, he would not have been able to present a stock answer from his philosophy. This, perhaps, is hardly surprising: he lived in, and was reacting to, the "age of reason", when the genteel were only presented with philistinism from the lower classes, which they could contemptuously ignore. In the age of reason, there was little sensitivity to assaults on reason; it was because of work such as that of Hume that the romantic period, and a less servile approach to reason, could gain ground. It must be remembered, again, that Hume did not concern himself with the type of questions asked by modern epistemologists. He had a curiously detached approach to man's system of knowledge and belief: a fully scientific approach, some might say. He did not approach that system as something to be defended, justified, and improved, but rather as a phenomenon to be studied in its own right. He wanted to describe how in fact it does function, and thus psychological,

rather than logical analyses were appropriate ones.

An analogy with those who academically discuss religion may help to make the point. Such people are likely to be ensconced either in departments of theology, or departments of philosophy—and their approach will differ accordingly. The theologian will consider religion in a sympathetic manner, discussing religious views from within, as it were—defending, justifying, and presenting religious doctrines as rational. His colleague from another department, however, is much more likely to be detached, considering religion dispassionately, looking upon it as an objective phenomenon. He will be attracted by sociological and psychological explanations of why men come to adopt religious beliefs, while to the theologian, these would seem to be inappropriate. The relation of Hume's approach to that of the modern epistemologist is not dissimilar. Hume, in taking his objective, detached approach to reason and the knowledge-system, would not be particularly sensitive to the fact that his account shows it to have endemic weaknesses and contradictions such that it can never be put on a level of security from attack. To those trained in the task of searching out and destroying all rationally indefensible elements of our system of knowledge; whose goal is to give an unshakeable basis to this system, so that the edifice can be built with security, Hume's procedure must seem entirely foreign and baffling. Many would just label his approach as "psychologism", rejecting it offhand as a set of inappropriate answers to philosophical questions. To them and others, his apparent helplessness in the face of philistinism seems sufficient damnation of his views. But whether, in fact, Hume's work is to be rejected as psychologism, and whether a Humean must remain

helpless when faced with philistinism are questions which have to be discussed later in this dissertation.*

*On psychologism, see below, Chapter 7; on philistinism, see below, Chapter 10, Section II.

CHAPTER 6. REASON (3): REASON AND THE DIALOGUES

I This chapter is not to be concerned with the usual question of deciding exactly what Hume really did or did not believe in matters religious. A great deal of work has already been put into this, and the most popular current interpretations are not at any considerable variance with the views here adopted. The reader can be referred to the introductions of Kemp Smith and R. Wollheim to their respective editions of Hume's religious writings.¹ Virtually all writers on the subject today accept that Hume rejected supernaturalism, and this is all that is requisite in the present interpretation. The abundant clarity of the fact that Hume rejected miracles,² metaphysical free-will,³ and immortality of the soul,⁴ as well as the reasonable clarity of the fact that he rejected the existence of a thinking, intelligent, external creator of the universe, are sufficient for the present purposes. It will not be necessary to convict him of atheism; a simple rejection of supernaturalism is enough. This chapter will largely be concerned with opposition to a paper by George Nathan, entitled "Hume's Immanent God," but though Nathan is a pillar of the Hume-is-not-an-infidel school, it will not be necessary to take up cudgels with him over the question of whether Hume accepts the existence of God. Nathan was perfectly correct in pointing out that none of the Dramatis Personae of the Dialogues, Hume's main work on religion, ever deny the existence of the Deity. Philo, who most contemporaries now agree speaks

by and large for Hume, did indeed assert "The question can never be concerning the being, but only the nature of the Deity"⁵. But, lest the reader be misled, it should be pointed out that though the present author is quite willing to accept that Hume, as represented in the Dialogues, assented to the existence of God, this by no means indicates that Hume is "religious" in the usual sense of the term. Both Wollheim and Kemp Smith, who believe Hume to be wholeheartedly opposed to religion, admit that he would give assent to the proposition "God exists". But Hume does not concede anything of any substance thereby. If we look carefully into the Dialogues, and the background of the above quotation, we find that he conceded absolutely nothing to the religionist in assenting to the proposition "God exists". He followed the above quotation almost immediately with the assertion "the original cause of this universe (whatever it be) we call God"⁶. Philo treats "Deity" or "God" as equivalent to "cause of the universe", and "cause of the universe" as equivalent to "source or sources of order in the universe". Thus, of course he can assent to the proposition "God exists". He can thus avoid being labelled as an atheist, a most unsavoury title in his time, simply by accepting that there is a source (or are sources) of order in the universe: hardly a great concession! This could conceivably have caused a little confusion, with his idiosyncratically referring to something like the principle of evolution, or second law of thermodynamics, as God, but since it was felt that no fundamental principle of order could be emphatically pointed out, there was no need for this eccentricity ever to become apparent. In making the verbal compromise with the theists, Philo certainly never committed

himself to any of the cognitive or emotional attitudes generally associated with those who utter the words "God exists".

Even though there is no disagreement with Nathan on the point that Hume admitted the existence of God, it is with opposition to his paper, "Hume's Immanent God",* that this chapter is to be concerned. It will be argued that this paper seriously misconstrued a very important aspect of Hume's Dialogues. It will be argued that Nathan, like many others, including Selby-Bigge, completely missed the important point that Hume's work on religion applied, and extended, his doctrine concerning the nature of reason. Selby-Bigge illustrates the fact that he missed the point with assertions such as "important and interesting as they [the religious discussions] are in themselves, they do not add anything to his general speculative position"⁷. Nathan, however, did not just miss the point: he inverted it, supposing Hume to make exactly the opposite of the point which he actually presented. Before expounding this matter, however, a very brief summary of Nathan's paper will be presented to expedite discussion:

According to Nathan, the battle between Philo and Cleanthes concerns essentially two points: First, the question of whether the author of the universe (or principle of ordering in the universe) is external, or immanent; and secondly, whether rationality and intelligence can be attributed to this being. Nathan tells us that at first, Cleanthes wants to assert both the externality and rationality of the Deity, while Philo opposes him on both counts. During the course of the argument, however, Philo is said to prevail on the question of externality, while being obliged to admit openly that the fact of rationality

* In V.C. Chappell, ed. Hume : A Collection of Critical Essays.

in the creator is well established. Thus, the Dialogues are said to come out finally in support of an immanent, rational, Deity.

It has already been said that we will not come to blows with Nathan on the view that Hume accepts the existence of an immanent Deity, but no quarter will be given to the second opinion, the opinion that the Dialogues effectively substantiate the view that the cause of the universe is rational. It will be urged that Hume not only had no intention whatsoever of producing such a view, but that he wished to show that such views could have no foundation at all. It must be remembered that this is not just a minor difference with Nathan on a small matter of interpretation; rather, it gets to the heart of the whole interpretation offered in this work. This dissertation, it must be remembered, is centred around the view that a prime concern of Hume's whole work is a new account of reason, an account which sees reason as something man-oriented, not as of cosmic significance. If Nathan were correct, and Hume, in his Dialogues, intended to argue that the source of order in the universe is rational, then this dissertation would be desolated. Then, rationality could by no means be seen by Hume as a mere man-oriented thing. It would be a central characteristic of the source of order in the universe, and thus would manifest itself in the universe itself. It is clearly important, then, for Nathan's view to be rejected. But this chapter is by no means to be defensive. If the interpretation of this dissertation concerning Hume's attitude to reason is correct, then we would expect to find, in the Dialogues, further indications of Hume's preoccupation with the status of reason. And it will be shown that this most certainly is the case.

In order to get to grips with Nathan on this question, I shall scrutinize the text, picking out those points relevant to this topic, discussing them with Nathan's position and arguments in mind.

II The discussion between Philo, Cleanthes and Demea does not really come alive, from the point of view of the present discussion, until the argument from design is formulated, in Part II. Nevertheless, some points of interest did emerge before that, which deserve mention. The first is that Philo's discussion opens with an assertion of a particular brand of skepticism, in which it is asserted that reason "furnishes invincible arguments against itself"⁸, and that reason must not be considered capable of an infinite extension, able to grasp all things. This looks very much like part of a general attitude in which reason is downgraded, in accordance with the interpretation of Hume offered in this dissertation. The second point is that, immediately after Philo accepts that he does not intend to question the existence, but only the nature of God, we find him arguing that reason and intelligence-predicates are not attributable to God, and that we only predicate "Wisdom, thought, design, knowledge" of the Deity "because these words are honourable among men, and we have no other language or other conceptions, by which we can express our adoration of him"⁹. From the beginning, then, Philo is opposed to attributing intelligence or reason to that which gives order to the universe.

Cleanthes introduces the argument from design with the following words: "The curious adapting of means to ends, throughout all nature, resembles exactly, though it much exceeds, the production of human

contrivance; of human design, thought, wisdom and intelligence. Since therefore the effects resemble each other, we are led to infer, by all the rules of analogy, that the causes also resemble; and that the Author of nature is somewhat similar to the mind of man".¹⁰

This argument clearly is concerned with the attribution of rationality-predicates to the Deity. To be sure, it does attempt to infer that the Deity is external, as well as a possessor of rationality-predicates, but the question of rationality certainly appears primary, and it is against this that Demea and Philo direct their immediate fire. Demea's immediate, and recurrent reply is that the argument from design is dangerous and impious, because in attributing reason and intelligence to God, it irreligiously supposes that we might be able to comprehend what is mysterious and incomprehensible. Philo's immediate objection to the argument from design is that the analogy between the universe and the work of man is really very weak. To the reply that the economy of final causes in both offers a considerable analogy, he replies that as far as we know, anything might produce an economy of final causes. "Matter may contain the source or spring of order originally within itself, as well as mind does".¹¹

After this relatively pedestrian, though highly relevant start, we find Philo launching himself into exactly the type of argument we would expect from somebody who rejected the Platonic/Cartesian conception of reason, substituting in its place a conception of reason as something limited to man, as a tool for his survival, and with no pretensions as the model of the universe. Can we really, Philo asks, assert that there is a strong analogy between the cause of order in the

universe and the productions of man's intelligence, because, after all, "Thought, design, intelligence, such as we discover in men and other animals, is no more than one of the springs and principles of the universe".¹² Why, to begin with, should we pick out any particular known principle as the source of order in the universe? And, more significantly, "Why select so minute, so weak, so bounded a principle as the reason and design of animals is found to be upon this planet? What peculiar privilege has this little agitation of the brain which we call thought, that we thus make it the model of the whole universe?"¹³

This is delightful expression from the point of view of the present writer, making exactly the point required. And still more follows, driving home the point: "Is there any reasonable ground to conclude, that the inhabitants of other planets possess thought, intelligence, reason, or any thing similar to these faculties in men? When nature has so extremely diversified her manner of operation in this small globe; can we imagine, that she incessantly copies herself throughout so immense a universe? And if thought, as we may well suppose, be confined merely to this narrow corner, and has even there so limited a sphere of action; with what propriety can we assign it for the original cause of all things? The narrow views of a peasant, who makes his domestic economy the rule for the government of kingdoms, is in comparison a pardonable sophism".¹⁴

It might be thought that this alone would crush Nathan's interpretation, if only we see its full significance, and don't pass over it lightly as the insincere babblings of a careless skeptic. Philo is clearly expressing a distinctive attitude towards reason, thinking

within a naturalistic viewpoint concerning reason which would inevitably make the argument from design appear to him as powerless. He refuses to accept that reason has any particular recommendations, any right at all to be treated as a cosmic principle, and thus, no mere example of ordering, or means-end adaptation in the world makes him think that reason ought to be singled out as its source. Nathan must admit that this is a challenge to Cleanthes, and thus, since he thinks that the Dialogues end up with an effective defence of rationality in that which orders the world, he must suppose that the challenge is met in the body of this work. And it seems to be Cleanthes' "illustrations" of Part III that chiefly impressed him. Cleanthes there attempts, via the discussions of a wise voice from the clouds and a reproducing library, to show that the similarity of the universe to a rationally ordered artifact is self-evident, this being apparent to anybody willing to give the matter open-minded consideration.

The first illustration puts across the point that if all mankind at once was to hear an articulate voice from the clouds, conveying profound instructions, we would have no doubt that the source of this sound was a rational, superior being. Cleanthes holds that there is no less reason for us to see that the order of the universe is evidence of its creation by a rational agent. The second illustration supposes that there is a collection of books which reproduces itself. Now if, Cleanthes says, we were to open one of these books, we would not doubt that it had a rational creator. But books are less complex than even the simplest of actual animals, and therefore we should conclude that these, even more, bespeak an intelligent, rational creator.

Pamphilus tells us that Philo shows signs of embarrassment at this point, and infers that he is nonplussed. Nathan believes that he cannot reply to the "illustrations", and is really secretly in agreement with Cleanthes, the silence being a stylistic trick to cover this fact. It would seem far more likely, however, either that Philo's silence was a stylistic trick to prevent Cleanthes from being put in his place once and for all, to the detriment of dramatic interest, or that it was the result of genuine embarrassment brought about by his friend's obtuseness. Cleanthes has completely failed to grasp a point which Philo had just insisted upon. Philo's point was that if we have experience of the cause of a certain thing, then, when we have further experience of something undoubtedly similar, we can legitimately infer a similar cause; but, in the case of something whose causes have never been experienced, and which is not undoubtedly similar to something whose causes have been experienced, we can legitimately infer nothing about the causes. Now in the case of a voice or book, we do have experience of causes. Thus, whenever we hear something that is undoubtedly a voice, or see something which is undoubtedly a book, we can make legitimate pronouncements about their causes. But this tells us nothing about the production of types of things whose causes we have never experienced—such as worlds. The "illustrations", then, beg one of the questions already raised, and thus would strike Philo as irrelevant.

But, even if we suppose that the "illustrations" did have some small power in bringing out the alleged self-evidence of the view that the universe is rationally designed, do we see them changing Philo's approach? By no means. We find him shortly continuing with an

expansion of his point that reason and intelligence are merely man-oriented things, not cosmic principles.

It should also be observed that though Philo was silent immediately after Cleanthes' illustrations, Demea was not, and he did not just reiterate his viewpoint that it is irreligious to attribute rationality and intelligence to the Deity, although he did expound this point a little, saying that the most religious of ancient philosophers "expressly declare, that intellect or understanding is not to be ascribed to the Deity".¹⁵ More significantly, Demea makes some highly relevant points, in effect expounding Philo's position for him. He first asserts that "by representing the Deity as so intelligible, and comprehensible, and so similar to a human mind, we are guilty of the grossest and most narrow partiality, and make ourselves the model of the whole universe".¹⁶ This contains a fundamental message of the naturalistic conception of reason which we shortly see Philo expounding still further; but meanwhile, Demea works upon it, arguing that none of the materials of thought could be "in any respect similar in the human and in the divine intelligence", and neither could the manner of thinking be at all similar: "Our thought is fluctuating, uncertain, fleeting, successive, and compounded; and were we to remove these circumstances, we absolutely annihilate its essence, and it would, in such a case, be an abuse of terms to apply to it the name of thought or reason".¹⁷ This is a remarkably bright point to come from Demea, and one which should certainly have given Nathan, as well as Cleanthes, a great deal to think about. The question of what sense there is in applying the term "rational" to a being which has none of the usual trappings of human thought is an

astute one as it is, but it becomes very significant indeed when that being is said to be immanent, and not a thinking entity at all. This question will be taken up in more detail later.

In Part IV of the Dialogues, we again find Demea working on his point that we can't attribute thought or reason to the Deity, but he tends to stick to theological considerations. Philo steps in again, however, providing more philosophical points, offering the argument that if we suppose the order in the world to be due to a plan in the divine mind, we would only replace a problem concerning how the material world can be ordered with a problem concerning how the ideas in God's mind can be ordered. No advantage is thereby gained, Philo argues, and so we might just as well admit in the first place that the material world has an order of its own. Now in this, Philo is challenging the view that reason is something which doesn't have to be explained, something which we just accept as a final and self-justifying cosmic principle. We feel that if we can show anything to be rationally ordered then we needn't ask any more questions about it, but Philo disputes this: "To say, that the different ideas, which compose the reason of the supreme Being, fall into order, of themselves, and by their own nature, is really to talk without any precise meaning".¹⁸

Philo returns to this point in Part VII. He begins his account there by saying that there is really a much greater analogy between the universe and the products of generation or vegetation than there is between the universe and the products of rational ordering. This being so, "its origin ought rather to be ascribed to generation or vegetation than to reason or design".¹⁹ His opponents express some discomfort

about how vegetation or generation could come about originally: asserting that either of these is the original source of order strikes them as obviously inadequate, because they immediately bring up the question about how such a principle could originally have come about. Philo, however, was more than ready for this objection. Why, he asks, should we accept reason as a final principle, but not vegetation or generation? The cases are no different. Thought and reason are just as much in need of an origin as are vegetation and generation. If preference must be given to either of these principles, Philo says, it should be generation which gains the casting-vote, because we find reason to be dependent upon generation constantly in our everyday experience, whereas we never find generation to depend upon reason.²⁰

These words, generation, reason, mark only certain powers and energies in nature, whose effects are known, but whose essence is incomprehensible; and one of these principles, more than the other, has no privilege for being made a standard for the whole of nature... In this little corner of the world alone, there are four principles, reason, instinct, generation, vegetation, which are similar to each other, and are the causes of similar effects. What a number of other principles may we naturally suppose in the immense extent and variety of the universe... Any one of these four principles mentioned (and a hundred others which lie open to our conjecture) may afford us a theory, by which to judge of the origin of the world; and it is a palpable and egregious partiality, to confine our view entirely to that principle, by which our own minds operate.²¹

If, Philo says, reason were especially known, there might be some point in preferring it, but "reason, in its internal fabric and structure, is really as little known to us as instinct of vegetation".²²

Philo continues to drive his point home by producing an analogy of his own, in order to mock at man's tendency to treat reason as the

fundamental principle of order. He tries to show that this is mere anthropocentricity. Because reason is so important to us, we suppose that it has cosmic significance, even being the principle of order in the universe. This, however, is no less silly than it would be for a race of spiders to suppose that the universe was originally spun, and thus that spinning is the fundamental principle of order in the universe. Just as reason, being so important to man, is anthropocentrically made into the organizing principle of the universe, so spinning, so very important to the spider, would be arachnidacentrically conceived as the spring of the universe. Philo asserts that there is no fundamental difference whatsoever between the two cases.

III This attack largely completes that part of Philo's case against the argument from design which is based on his conception of reason. Since there are still five parts to follow, somebody acquainted with Nathan's interpretation would understandably read on in anticipation of a devastating reply from Cleanthes. But what do we find? Part VIII sees Philo working upon the Epicurean hypothesis with real earnestness, trying to make more palatable a cosmogony which sees blind chance as the main source of the world's order. In Part IX, we find the a priori arguments for the existence of God brought up and briefly rebutted. Then, in Parts X and XI, we discover a discussion of the problem of evil, a discussion which effectively shows that no moral predicates whatsoever ought to be applied to that which orders the universe. Finally, we find that though Part XII is filled with all sorts of curious assertions from Philo, once again no arguments at all are

furnished which undermine Philo's earlier reasoning involving the nature of reason. This being so, the reader might be forgiven for supposing Nathan's interpretation to be exploded. Surely if the Dialogues were to support the view that rationality and intelligence are predicates of the source of order in the universe, then all those powerful arguments supporting the opposite view which Philo had marshalled would have been refuted. And yet we do not even see a significant attempt made to refute them. Nathan, however, might be relatively undisturbed by all this, because he believes that Philo quite simply retracts his professed standpoint, admitting that the argument from design does indeed show that there is rationality and intelligence in the orderer.

Now this is rather hard to believe. Having put up such a splendid fight against the view that rationality and intelligence are attributable to the Deity, why on earth should Philo, having met with no real opposition, having had no counter-arguments to face and not even further "illustrations" to worry about after Part III, suddenly just change his mind completely? Nathan's reply is that he doesn't really change his mind, but was actually in secret agreement all along. What, then, of all Philo's arguments to the contrary? These, we are told, are not to be taken seriously. They were really no more than cavils.

Nathan's reply, however, not only does no justice at all to Philo's arguments involving the nature of reason, but rather absurdly presents Hume as a frivolous waster of his reader's time. Why should he spend so much time in presenting apparently powerful arguments which he nevertheless thinks powerless, but without bothering to explain why? Why should he have spent a considerable part of the Dialogues on arguments which deserve nothing more than to be ignored?

Let us move on to the textual evidence which Nathan provides in support of his position, a position which pivots on the view that Philo secretly accepted the rationality of that which orders the universe. We in fact find Nathan producing several of Philo's assertions which are supposed to substantiate this, the first being "You ascribe, Cleanthes, (and I believe justly) a purpose and intention to nature".²³ However, Philo's professed point all along has been that though there undoubtedly are final causes in nature, it does not follow that these causes are a result of rationality or intelligence. Philo also followed the assertion just quoted with the view that the sole purpose and intention in nature is mere preservation of species. Thus, there is no reason at all to suppose that Philo is accepting, in the above quotation, anything more than the existence of a non-rational and blind principle of ordering.

However, Nathan also refers to Philo's assertion that "the beauty and fitness of final causes strike us with such irresistable force, that all objections appear (what I believe they really are) mere cavils and sophisms".²⁴ This certainly does seem to give some support to Nathan's position, providing him with some grounds for the otherwise incredible view that all Philo's arguments against the attribution of reason and intelligence to the Deity were not presented seriously. Nevertheless, the statement does not unambiguously support Nathan's interpretation. Certainly Philo concedes that the ordering of the universe is exceedingly striking, but there never was any dispute about that anyway. The significant question is whether the quotation unambiguously asserts that all objections to the rationality and intelligence of the Deity are really cavils. And, surely, it by no means does so, it being unclear

whether Philo is just expressing respect for the existence of final causes, or going beyond that and admitting that it implies a rational, intelligent orderer. It might also be argued that Philo, having immediately beforehand won a complete victory on the question of the moral attributes of the Deity, is allowed to make an apparent concession to his opponents, in order to retain dramatic interest. But perhaps, again, it would be best to wait until Part XII has been discussed in order to see Philo's assertion in its true light. We shall move on to that part immediately, since Nathan admits that it is there that the chief support for his interpretation is found.

Part XII does indeed give Nathan some grounds for glee. It seems, at first glance, as though Philo completely retracts virtually all his arguments concerning the Deity. He starts off by asserting that "no one has a deeper sense of religion impressed on his mind, or pays more profound adoration to the divine Being, as he discovers himself to reason, in the inexplicable contrivance and artifice of nature". Even though this only really concedes that he is very impressed with the order of nature, since Philo equates the Deity, or divine being, with the source of order in nature, the tone of the assertion is nevertheless very surprising. And Philo continues by declaring that "A purpose, an intention, or design strikes everywhere the most careless, the most stupid thinker", and that the sciences provide more and more evidence of design, and thus "almost lead us insensibly to acknowledge a first intelligent Author".²⁵

All this has been too much for many an interpreter. Some have even been led to totally ignore Part XII, since they feel that it goes

entirely against the tendency of the rest of the Dialogues. As a rear-guard action, they might point out that nothing would really be altered even if Philo should assert his belief in an intelligent, rational creator until he was in convulsions. It is argument, not assertion, that matters in the Dialogues, since Hume is not necessarily represented at all points by any one character. If Philo should just assert his belief in a supreme, intelligent, rational Deity, while providing strong and unanswered arguments to the contrary, then the overall effects of the Dialogues would still be to damn the belief.

This rearguard action is not, however, entirely satisfactory, and a far better understanding of Part XII is possible. It must be realized that though Philo makes elaborate avowals of his sense of religion, even attributing wisdom, intelligence and rationality to that which orders the universe, he is doing nothing more than getting into the spirit of conciliation, setting the scene for a verbal compromise which could conceivably win over his opponents while in effect giving up nothing of any substance. "I am apt to suspect there enters somewhat of a dispute of words into this controversy, more than is usually imagined", Philo begins, and he continues: "the existence of a Deity is plainly ascertained by reason; and if we make it a question, whether, on account of these analogies, we can properly call him a mind or intelligence, notwithstanding the vast difference, which may reasonably be supposed between him and human minds; what is this but a mere verbal controversy?"²⁶

We do at one point find Philo avowing that the Deity bears considerable resemblance to thought and reason, but before the echoes of

these words have died away, we find him saying that there are no adequate criteria for the degrees of qualities, and the question of the actual degree of resemblance is an empty one, since we have no way of settling it. There should not, anyway, be any dispute over the matter, Philo tells us, because there is an agreement between theist and atheist on the matter! The theist, he says, will admit that there is a vast difference between the characteristics of the Deity and human thought and reason, while the atheist can admit that there is a "remote inconceivable analogy" between them: after all, there is "some remote analogy" between the rotting of a turnip, the generation of an animal, and the structure of thought; and the original source of order in the universe must also bear some remote inconceivable analogy to such particular operations in nature.²⁷

Philo, then, gives away nothing of any real significance in the end. For all his conciliatory gestures he only commits himself to accepting that the Deity can be considered as "rational" and "intelligent" in such weakened senses of the terms that they carry no weight at all. If Philo had not accompanied his "conciliation" with his initial extravagant assertions, the paucity of genuine concession would have been so obvious that Cleanthes could only have charged him with blatant trickery.

IV One might still wonder exactly why Nathan should have thought that Philo was entirely serious in the first half of Part XII; why he should have thought that Philo wanted to show that reason was a fundamental cosmic principle, in spite of those arguments offered to the

contrary. Part of the explanation seems to be that he believed that Hume treated the principles of vegetation, instinct, and generation as themselves "rational", and not to be set apart as quite different principles from rationality. Understandably, Nathan would therefore miss the point of assertions such as that reason has no more right than generation, vegetation, or instinct to be considered the fundamental principle of universal order. But, how could Nathan have thought of generation, etc. as being themselves "rational"? Are not rationality-predicates misused when they are applied to something non-conscious? Nathan obviously does not think so, since he asserts that something can be called rational if it has analogies to that which is produced by reason, in showing ordering and a means-end adaptation. More than that alone, however, must be meant by the term "rational" since much of the debate concerning the argument from design concerns the question of whether things which exhibit ordering and a means-end adaptation thereby exhibit a rational and intelligent ordering. Even if the question should have been answered in the affirmative, the very fact that it should have been asked illustrates that more is involved in the meaning of "rational" than the presence of ordering and a means-end adaptation. I think that what Nathan and some others have in mind when they use "rational" and its cognates as a cosmic principle, is the point that there can be no "brute facts"; that all things must have a sufficient reason for their being. Philosophers in the mood to use the word thus find the notion of a completely causeless, isolated event as quite absurd, feeling that the event would thus be opaque to reason, "irrational", and thus not to be contemplated. Once this mood really grips them, philosophers may

find themselves speaking of "reason permeating the universe", and of the inevitability of a sufficiently intelligent and informed being being able to "see" that everything in the universe must be as it is.

It is against all such conceptions of reason which I believe Hume to have fought a valiant fight. Evidence of this fight in the Treatise and the Enquiry is given elsewhere, but limiting ourselves for the present just to the Dialogues, it should be clearly recognized that arguments are to be found which show that reason is to be treated as a merely man-oriented, rather than cosmic, principle. Nathan, however, strongly believes that this is not the case. Hume, he tells us,²⁸ is perfectly happy to extend the notion of rationality or reason beyond the thinking being: he does not require that the orderer has any consciousness of the order produced. Thus, Nathan presumably infers, a non-thinking thing could be labelled by Hume as rational. Nathan's support for this view is, however, very weak indeed. He supports it by pointing out that in his epistemological work, Hume shows that causal reasoning is in fact just a species of instinct, and operates in us without our conscious support. From this, Nathan infers that Hume does not require rationality to be predicable only of conscious beings, and accepts that "instinct possesses a rationality of its own".²⁹

Nathan's reasoning, however, is not in the least persuasive. Though certain levels of reasoning may be carried on to some extent subconsciously, it does not by any means follow that rationality is therefore predicable of non-thinking beings: just because desires are sometimes subconscious, it does not follow that "desiring" can intelligibly be attributed to the non-conscious. Hume's analysis of causal

reasoning also by no means leads him to the conclusion that "instinct possesses a rationality of its own". In his account of causal reasoning as dependent ultimately on instinct, Hume was not in the least concerned with eulogising instinct: a far more significant part of the enterprise was showing that reason is not all that his contemporaries supposed it to be, not an almighty judge of all, but a far more humble faculty.

Apart from Philo's various arguments concerning the view that reason is just a man-oriented thing, there are several indications in the Dialogues that Hume had no intention whatsoever of extending the notion of rationality beyond thinking beings. Demas, in Part III, had argued that if there is to be no fluctuating, fleeting, successive element to the "mind" of the Deity, it is an abuse of words to apply to it either the term "thought" or "reason", and nobody subsequently refuted that argument. Cleanthes, shortly afterwards, states "A mind, whose acts and sentiments and ideas are not distinct and successive; one, that is wholly simple, and totally immutable; is a mind which has no thought, no reason...or in a word, is no mind at all"³⁰ (emphasis mine). Once again, neither Philo nor his interlocutors ever show that this reasoning is unacceptable. We cannot, then, accept that there is a tacit assumption in Hume's works that "reason" is predicable of the non-conscious.

It can now be concluded that Nathan has no case left to him. But a far more significant note to conclude upon is the point that when it is realized that truth lies in the exact opposite of interpretations such as that of Nathan, a greatly improved understanding not only of

the Dialogues, but of the relation between it and Hume's other major works is made possible. It will more clearly be seen that his naturalistic conception of reason played a very significant part in his philosophical writing, strongly influencing him even when he was not primarily concerned with its exposition in the discussion of man's understanding, passions, and morals.

CHAPTER 7: NATURALISM AND PSYCHOLOGISM

In 1894 T.H. Huxley wrote, "It is assuredly one of Hume's greatest merits that he recognised the fact that philosophy is based on psychology".¹ Modern students of Hume, at least in Britain, tend to find this hilarious, a fact which significantly indicates present day attitudes to the psychology which appears throughout the Treatise. From Bradley onwards, we have been taught that philosophy must be sharply distinguished from psychology, and the word "psychologism", which is really only descriptive of a certain approach, has become so overloaded with pejorative connotations that it is with surprise that the student finds certain philosophers deliberately applying the term to their own approach.² This is, no doubt, largely due to the healthy rejection of the traditional empiricist's treatment of ideas as psychic, rather than semantic entities:³ with the modern clarification of notions concerning meaning, it has become quite evident that the treatment of "ideas" as mental entities was misleading. Nevertheless, the repudiation of psychologism has not been entirely beneficial. By encouraging the philosopher to look upon psychological considerations as the rightful property only of his colleague in the psychology department, a tendency is set up for him to overlook the psychologizing of Hume, treating it as though it is not his concern. Thus, the enormous amount of psychologizing in the Treatise does not always get its due consideration as an integral part of Hume's system.

By skipping over the psychological accounts given in the Treatise, the reader may not even appreciate their extent in that work, though it is, in fact, truly prodigious, as any compiler of an index to the work will appreciate. In fact, in nearly half of the 639 pages of the Treatise explanation in psychological terms is offered. When we look upon Hume as attempting, primarily, to give a naturalistic account of man's knowledge-system, passions, and morals, this is not really surprising. In fact, if we forget our usual presuppositions about what philosophers do, and look upon the work, as we should, as fundamentally a treatise concerning human nature, then we will realise that Hume would tend to approach philosophical topics through psychological considerations, and not vice versa. He looked upon man's knowledge-system objectively, as an anthropologist might look upon the cosmology of an aboriginal tribe. Then, he came to see that irrationality lay not just at the surface of the system, but that in fact, key elements of the knowledge-system were based on non-rational factors. Thus, since his intention was to produce an empirical science of man, he did not concern himself with trying to eject the non-rational from our knowledge-system, trying to produce a new philosophical system with absolutely safe foundations:—he did not, in fact, think that that could be done, but it was not his intention to attempt it anyway. He wanted to understand man's understanding and knowledge-system as he found it, just as he wanted to understand man's political organization, morals, and passions.

II In order to appreciate the type of psychological explanation offered by Hume, we will go first to Book II, the discussion of the

passions, because there, so the critics usually say, we see Hume's psychological mode of explanation used to its fullest. And it certainly is true that such modes of explanation are very extensively used in Book II. In fact, except for the sections concerning free will and motivation, Hume is almost exclusively expounding a kind of "psychological mechanics". He is not at all concerned with giving any sort of conceptual analysis in his discussion of the passions; he doesn't even try to explain what the various passions are, since he feels that we all know what they are anyway. Rather, he concentrates on giving an account of mechanisms which underlie the introduction into our consciousness of various passions. The notion of "facility", i.e. easily made mental transitions, is very important to him. He feels that if he can show that a passion is preceded by a related passion, along with a great facility for transition in its favour, then the existence of that passion is explained. Hume makes much of the fact that here, just as in Book I, he is producing a theory of association: but it is a theory concerning the association of passions, not ideas, and the principles of association are cut down from contiguity, cause and effect, and resemblance, to resemblance alone. The basic postulate about the mind with which Hume therefore works, is the principle that the mind will make transitions from one passion to another on the grounds of their resemblance. Thus, if one is feeling joy, a transition to such related ideas as benevolence, pride, or vanity, will tend to follow.

Armed with this principle of psychological mechanics, along with a few additional ones, Hume works through Book II explaining why particular passions should arise. To the principle of transition through

resemblance, Hume usually adds a principle of transition through relatedness of correspondent ideas: This is the basic notion of the "double relation of impressions and ideas" which is used so often in the Book. The point is that if there is a double impulse towards a passion, one due to the existence of a similar passion, and another due to a related idea, then the tendency to the transition becomes very strong indeed; or, to put it in the usual Humean terms, the transition from present impressions and ideas to the introduced passion is made with great facility. Hume gives a rather complex explanation of the passions of pride, humility, love and hatred on this basis. Pride, for instance, is explained in the following way. First, we observe something, for example a horse, with pleasing qualities, such as beauty. This gives us a feeling of pleasure. Since pleasure is associated by resemblance with the passion of pride, there is a certain tendency for the former to turn into the latter: but it is a fairly weak tendency. Pleasure might equally have become converted into benevolence or vanity. In this case, however, there is also a relation of ideas involved, since the horse, as it happens, belongs to oneself. Thus, on perceiving the horse, the idea of oneself also arises. This sets up another relation with pride, since this passion is associated with the self. Thus, we have an impulse towards the passion of pride from two different directions, and the transition will therefore be made with great facility.

Hume elaborates on this theme, perhaps to tedium, in explaining pride, humility, love and hatred. Fairly similar modes of explanation are also constantly used meanwhile in explaining what the philosopher may look upon as trivia. For example, we find accounts, involving psycholo-

gical mechanisms, of why we should hate a servant for the fault of his master, but not vice versa;⁴ why we should be proud of a long, rich ancestry;⁵ why the second marriage of a mother, but not of a father, should weaken the relation of a child to his parent;⁶ and why we should be more interested in things contiguous than remote.⁷ It is hardly worth our going into detail on such matters, but to give the flavour of such accounts, the discussion of the parent-child relationship will be briefly reviewed. Hume's argument is that this relation is strong when there is a great facility of movement between a son's ideas of himself, and those of his parent. With normal parentage, we are told, there is a strong relation between the idea of self, and idea of parent: the mind moves with facility from the idea of self to that of parent, and returns with just as great a facility. Should one's mother remarry, however, one's ideas move with much greater difficulty from the idea of mother to that of self. Since ideas tend to move from the lesser to the greater, when we think of the mother, the ideas tend to move swiftly to the new head of her family, and thence to the sphere in which we have little place. Thus, though our ideas might move with great facility from self to mother, the idea of mother does not readily reintroduce the idea of self, but leads in quite different directions. On the other hand, when one's father remarries, he remains as the head of the same family, so that our ideas move with no less difficulty from him to self, than prior to remarrying. Thus, the relation to the remarried mother is felt to be weakened, but not the relation to the remarried father.

There are other psychological explanations of more moment to the student of Hume, fortunately. For instance, he mentions a psychological

tendency which plays quite a considerable part in Book I: the tendency to confuse one idea with that which "feels" similar to the mind. It is through this principle that he explains the "confusion" of reason with the calm passions. Both, he says, operate in a steady, non-violent manner, and because of this, the idea of one is readily substituted for the other. Hume's account of the mechanism underlying sympathy is also of significance to the reader of Book I, since the account is said to be parallel to the account of belief. In both cases, he says, we start off by having a certain idea, i.e. entertain a psychic entity devoid of vivacity. The ideas, then, gain in vivacity: in one case, the vivacity makes the idea approximate to an impression, and we get belief; in the other case, the idea of the passion gains in vivacity and turns into the actual impression itself. Thus, sympathy turns the idea of pain into the pain itself.

Enough has by now been seen of the psychologizing of Book II to draw some conclusions concerning it. First, we can recognise the type of procedure Hume used, which amounts to explaining phenomena by reference to psychological mechanisms. Speaking of Hume as offering "mechanisms", it should be noticed, is by no means to use terminology which would be unacceptable to him. In his Dissertation on the Passions, Hume says that he wants to show that "in the production and conduct of the passions, there is a certain regular mechanism, which is as susceptible of as accurate a disquisition as the laws of motion...".⁸ Secondly, we may appreciate that to censure Hume for "psychologism"—meaning thereby an inappropriate psychologizing—would be silly where Book II is concerned. After all, Hume has no pretensions of doing anything other than psychology

there. This is not an unimportant point, since when we appreciate that most of one of the three books of the Treatise is concerned, not with philosophy, but psychology, a new attitude to the Treatise as a whole may well ensue. We may appreciate that Hume's psychologizing was more fundamental, in the system of the Treatise, than his philosophizing. We are again reminded that Hume's intention was to produce, fundamentally, an objective science of man, to which, therefore, psychological modes of explanation are entirely appropriate.

Nevertheless, though as far as Book II is concerned, the charge of inapt psychologism against Hume could have no foundation, the seeds of an allied objection may grow in considering it. This is the objection that Hume uses explanations inappropriate to mankind. Consider, for example, his discussion of why we should care more about that which is contiguous than that which is remote.⁹ The obvious answer given to this by an ordinary man would be that remote events will have far less significance in our lives than contiguous ones. But rather than explain matters on this level—the level of comprehensible human reactions—Hume insists on moving to the level of mechanistic explanations. The idea of self is vivacious, he says, and this vivacity is "passed on" to that which is most closely related to it; the degree of vivacity depending on the degree of relation.

Discomfort concerning this approach is understandable, but since it will grow as we consider the psychologizing of Book I, no further comment concerning it will be made as yet. Before going into the major business of discussing the manifestations of the psychological procedure in Book I, however, a brief consideration of its appearance in Book III

will be produced. Consideration of this, as with Book II, may help us to appreciate the psychologizing of Book I with more "ease and facility".

III Hume's use of psychological mechanisms in Book III is not as extensive, nor so obvious, as in Book II, but nevertheless it has a fairly considerable airing. Its normal use appears in a pattern hauntingly similar to Kant's schematism of the categories. Hume says that reason gives us certain general rules of social organisation with which we must work, but principles of the imagination are then needed to put these principles into a usable form. We see this theme employed three times. On the first occasion, Hume is discussing rules concerning the existence and function of government. Each of these has certain general rules dictated by enlightened self-interest: we must have specific rules concerning stabilization and transfer of property, to avoid chaos and anarchy, and we must have government to effect these rules. The particular rules, however, are products of the imagination. As an example of this "schematism" of principles of enlightened self interest, we will consider Hume's account of the rules of property which stabilize possession. Hume quite emphatically asserts that "these rules are principally fixed by the imagination, or the more frivolous properties of our thought and conception"¹⁰, and he then goes on to make use of certain psychological mechanisms, identical to those found in Book I, to explain these rules. In his account of our acceptance of the rules that property should remain with those who have enjoyed long possession of it, we see him use the tendency to move from an idea to a resembling one; the tendency to "complete unions" by adding further relations; and the

tendency of ideas to flow along paths made by custom. Thus, we allow possession of property to those who have long enjoyed it, because the mind naturally, by long custom, comes to flow easily between the idea of that thing and that particular person. Also, the relation of ownership is similar to the relation of long possession, so we tend to move easily from the ideas of one to the other. On top of that, if we add property right to possession, we get a stronger union, and the mind glories in completing unions.

The mind is apt to ascribe to them any additional relation, in order to complete the union...And as property forms a relation betwixt a person and an object, 'tis natural to find it on some preceding relation; and as property is nothing but a constant possession, secured by the laws of society, 'tis natural to add it to the present possession, which is a relation that resembles it. For this also has its influence. If it be natural to conjoin all sorts of relations, 'tis more so; to conjoin such relations as are resembling, and are related together.¹¹

These themes, along with other principles concerning the movement of the imagination, are frequently employed to account for various rights of ownership, but it is not worth going into them all: we will just mention the fairly typical one concerning the property-right resulting from succession. The imagination plays a large part, Hume says, in producing the rule that the son should receive the property of the deceased parent. The ideas of father and son are closely allied, due to customary association, so the imagination easily flows from one to the other. Also, there is an association based on custom, between the ideas of the parent's property, and the son. Thus, the mind moves with considerable ease between the idea of the father's property, and the

idea of the son. Further, however, comes the tendency to "complete relations". Thus, after the father's death, the mind naturally "increases" the relation of the son to the parent's property.¹²

It is significant that in Book III we also find the principle of "feigning" used, particularly in Hume's account of the psychological mechanisms underlying our rules of property-transference. Transference, he says, has to be accompanied with something that satisfies the imagination, leading us to connect the idea of the object with the new owner: otherwise, he says, we won't feel that any real transference has been effected, and will have difficulty in crediting the new owner with ownership. Sometimes, simply handing over the goods satisfies the imagination.

In order to aid the imagination in conceiving the transference of property, we take the sensible object, and actually transfer its possession to the person, on whom we would bestow the property. The supposed resemblance of the actions, and the presence of this sensible delivery, deceive the mind, and make it fancy, that it conceives the mysterious transition of the property.¹³

When we can't visibly transfer the property itself, the imagination has to be mollified by other symbolic procedures. Thus, the keys of a granary are given to represent the transference of the corn, and the "stone and earth" are given to represent the transference of ownership of a manor. In all this, Hume tells us, we "feign" a mysterious "real transference" of property to satisfy our imagination. The symbolic gestures are used to represent a real transference, without which fiction the imagination would not accept the property-transference. Hume also, it may be noted, uses the idea of the "fiction" in his account of promises. He tells us that we "feign" an act of the mind equivalent

to willing an obligation, in order to satisfy the imagination with respect to promises.¹⁴ Without it, he says, we would have difficulty in looking upon promises as binding.

The psychological accounts so far mentioned represent but a tithe of the psychological mechanics of Book III. We may also discover, for instance, the beginnings of a theory of aesthetics based on psychological tendencies,¹⁵ and explanations of why we don't necessarily act on our known interests.¹⁶ Perhaps, too, the most significant doctrine concerning psychological tendencies in Book III is never actually explicitly mentioned there. He does not go over any such mechanisms with respect to sympathy, but sympathy is both made the cornerstone of his moral philosophy, and is analyzed in terms of psychological mechanisms, in the previous Book. But we won't pursue examples of psychological mechanisms further: enough has been seen to make it clear that their use is extensive in Book III. A fuller exposition of the psychological mechanisms would have greatly accentuated this point, but would also have given rise to somnolence. A further conclusion drawn from consideration of these mechanisms concerns the fact that Hume clearly extends into Book III the procedure of explaining the supposedly rational in terms of principles of the imagination. We might suppose that the actual rules of ownership, property transference, or governmental power transference depend on reason, but, Hume says, it is really just the fancy that decides them.

IV On turning at last to Book I, we may well expect to find at most a limited exposition of the Humean psychological mechanics. After all,

such critics as Selby-Bigge tell us that accounts of this type are largely restricted to Book II, and do not have much significance in the Treatise as a whole. Selby-Bigge certainly does not see that the account of pride, humility, love and hatred are closely connected with accounts of Book I, through the underlying mode of explanation and intention. In words reminiscent of his comments concerning the religious discussions, he says their "bearing on Hume's general system is, it is true, not very great and not at all clear".¹⁷ We have already found that psychological mechanics had a fairly extensive place in Book III, however, and, in fact, when we return to Book I, we find that this mode of explanation plays such an enormous part that the Selby-Bigge attitude becomes incredible. That Book II could ever be designated as the particular home of Hume's psychologizing is extraordinary. Almost no discussion in Book I is completed without substantial recourse to psychological modes of explanation. We find psychological explanations playing a major part in discussions of impressions and ideas, memory, belief, universals, infinity, possibility, probability, necessity, induction, identity, personal identity, substance, theories of perception, the causal axiom, and external durability—amongst others!

Book I makes it quite clear that Hume's psychologizing has two major aspects. On the one hand, we have the procedure of treating impressions, ideas, beliefs and memories entirely as psychic entities, differentiated by psychological qualities; on the other hand, we have the procedure of producing psychological mechanisms which are supposed to underlie our entertaining of ideas in particular groups and successions. These two aspects are then brought together in the body of the

Book, by principles such as the following, in order to explain the content of our system of belief:

[It is] a general maxim in the science of human nature, that when any impression becomes present to us, it not only transports the mind to such ideas as are related to it, but likewise communicates to them a share of its force and vivacity.¹⁸ (emphasis in text).

Armed with "maxims" such as this, plus psychological mechanisms and his account of impressions, ideas, beliefs, and memories in psychological terms, Hume felt that he could explain virtually all of our beliefs. We find that the typical account of a belief involves an impression passing on its vivacity to an idea introduced through psychological mechanisms—which idea is thus converted into a belief. As in Book II, we thus find the rather disconcerting procedure of explaining beliefs in terms of causes, rather than reasons. Faced, for example, with a situation in which a man comes to believe that his ship will probably return to port, having seen 19 out of 20 ships do so previously, Hume will discuss underlying psychological mechanisms. He will not by any means rest satisfied with the comment that experience provides assurance that ships return 95 percent of the time. Instead, he speaks of mechanisms which provide a lively image of a returning ship, and which constitutes because of this vivacity a belief in the event.¹⁹ Disconcerting though this procedure may be, it is the fundamental approach of Hume's psychologizing. Hume wishes to explain man's system of belief, along with the rest of his behaviour, in terms similar to those used by other empirical scientists. We can only give his arguments a hearing, and see if they portend success.

But before discussing the actual psychological mechanisms, we

should consider some details of Hume's account of impressions, ideas, beliefs and memories. It in fact helps enormously, in understanding Hume's treatment of these, if we are acquainted with the materialistic explanations of such phenomena offered by Hobbes and Hartley. Those explanations reduce impressions and ideas to matter in motion: impressions are a sort of vibration set up by the shock of external bodies on the senses, while an idea is the residue of this initial motion—that which is left after the original motions have died down. Now while Hume, unlike Hobbes and Hartley, was not so philosophically unsophisticated as to deliberately say, without any defence, that impressions and ideas actually are just motions, he certainly does use mechanistic explanations at least as a model. This starts to become evident in his treatment of impressions, pure ideas, beliefs, and memories, as simply varying in strength and vivacity.* Impressions, he tells us, have very much force and vivacity, and in a way are irresistible to the mind, having considerable influence in the transactions of the mind. Memories have a little less of this "liveliness", but still so much that they have very considerable influence. Beliefs have less liveliness still, and therefore have correspondingly less influence, the actual influence depending on the particular degree of vivacity, which varies within the bounds peculiar to beliefs. Lastly, pure ideas, the faint images of our fancy, lack this liveliness, and do not have much

*It is here recognised, of course, that Hume does come to move away from this differentiation in terms of pure vivacity, introducing other criteria of, for example, belief and memory. Nevertheless, in the main body of the Treatise, considerable weight is laid on vivacity, with the psychological mechanics of Book I in particular proceeding as if degree of vivacity provided a complete analysis of types of ideas.

influence in our mental life while in that form. Now the model underlying all this certainty seems to be that of matter in motion. Modern readers may use as a parallel the physicist's explanation of heat-transference in an iron bar. The hottest part of an iron bar consists of the most "vivacious" molecules, and these molecules "influence" their neighbours by passing on a share of their motion. The less active molecules, having a smaller store of vivacity, have correspondingly less influence, because they can transfer less motion to their neighbours. Since Hume repeats this theme of communicating vivacity so often in explaining why particular beliefs are gained, the molecule analogy, or a near equivalent, tends to become entrenched in the reader's mind: Until, that is, Hume speaks of the communication being "as by so many pipes or canals",²⁰ when the theme of analogy has to involve energy transference by hydraulics; though the analogy is, a fortiori, mechanistic.

Another general explanation of how beliefs arise, also, presents physicalism with a vengeance. It is not just that Hume's account can be seen to be based on a mechanistic model; rather, we find that Hume actually offers a reductionist account. He argues that often, a belief is a result of vivacity being transferred by mistake from its rightful owner to a resembling idea. He then offers, though he admits that it is conjectural, the following physiological account:

The mind...dispatches the spirits into that region of the brain, in which the idea is placed;* these spirits always excite the idea, when they run precisely into the proper traces, and rummage that cell, which belongs to the idea. But as their motion is seldom direct, and naturally turns a little to the one side or the other;

*Note that here, Hume is so carried away by the physiological explanation that he actually speaks of the idea as a physical entity.

for this reason the animal spirits, falling into the contiguous traces, present other related ideas in lieu of that, which the mind desired at first to survey. This change we are not always sensible of; but continuing still the same train of thought, make use of the related idea, which is presented to us, and employ it in our reasoning, as if it were the same with what we demanded.²¹

In the same section from which this quotation was drawn, Hume asserts that he could easily have given a physical explanation of the associative mechanisms, but neglected the advantage, because he did not want to go against the procedural rule that we should rest content with what experience tells us.²² It is to these associative mechanisms that we must now turn, and it is worth while following Hume's hint and looking more closely at the principles of association without treating them as sacrosanct first principles of an associationist psychology. Hume has indicated that he thought of them as being potentially explicable by a physical hypothesis, and when we look at them more closely, we realize that they are, in fact, reducible to other principles of psychological mechanics offered by Hume. We find that he offered quite a wide variety of principles of psychological mechanics, and, far from the three principles of association being ultimately exalted among these, it appears that some are higher principles, from which the three associative principles can be derived.

The three supposed basic principles of the associationist psychology are the principles that resemblance, cause and effect, and contiguity, are qualities which convey the mind from one idea to another. That is, if we entertain an idea, X, whose object resembles the object of another idea, Y, then on entertaining the idea X, the mind is almost inexorably led to the idea of Y; and similarly with ideas whose objects

are related by cause and effect, and contiguity. Hume enthusiastically draws a parallel between these principles of association and Newton's system of gravitation, congratulating himself on producing principles as significant in the mental world, as Newton's were in the physical. Nevertheless, before long, we find Hume reducing the associative mechanisms involving cause and effect and contiguity to the more fundamental psychological propensity involving custom.

Looking first at the relation of contiguity, we may recall Hume's words "as the senses, in changing their objects, are necessitated to change them regularly, and take them as they lie contiguous to each other, the imagination must by long custom acquire the same method of thinking, and run along the parts of space and time in conceiving its objects".²³ Thus, there is no doubt that he reduced the propensity of idea-transference based on contiguity to custom. But it is also very well known that Hume gives an account of the mind's transference from the idea of cause to that of effect in terms of the custom it has gained of entertaining their ideas in succession. Thus, from the supposed three principles of idea-transference involving cause and effect, resemblance, and contiguity, we are reduced to two principles of idea-transference involving custom and resemblance. We have already seen, in an allied case, that Hume was prepared to offer physical explanations of mental phenomena based on the relation of resemblance, and it is not at all difficult to imagine what type of physical explanation Hume had in mind—but would not put into writing—of the idea-transference based on custom. Hume very probably had in mind the notion of repeated conjunctions of ideas producing a well-trodden path for the "spirits", which connect the cells to which

those ideas belong, to follow. Thus, on one of the cells being excited, the "spirits" would move with great ease and facility to the other cell, exciting that in turn.

Not only are the "three" principles of association reducible to two, and the two principles also potentially reducible to the physical in Hume's system, but a wider principle of psychological mechanics can also be found under which the associative mechanisms can be subsumed. In fact, when we gather together the motley psychological mechanisms found in Book I, we find that virtually all of them can be subsumed under the general principle that the mind's action is always to follow those procedures which give it greatest ease. Thus, "facility" is such an important word in Book I, as, indeed, it is in Book II. If the mind can move from one idea to another with great "ease" and "facility", then it does so: and upon this the transition involving the principles of association is often explicitly based. The close relations of resemblance, cause and effect, and contiguity, allow transference of one idea to its correlate with great "ease" and "facility",²⁴ and thus the mind, which is restless and constantly replaces its ideas, substitutes them according to these lines of "easy" transference.

When we move on to consider the further principles of psychological mechanics in Book I, we find that though they are principles above and beyond those of associationism, they are not actually in competition with the supposed three principles of associationist psychology. The latter are concerned with explaining why ideas enter the mind in certain groups, or, more specifically, why, after entertaining a particular idea, another particular idea should follow it. The motley collection of

further principles, on the other hand, are not concerned with this, but with other supposed psychological phenomena. They include the general tendency to avoid mental discomfort, including the production of "fictions", or the "feigning" of pseudo-objects to this end; the principle of psychological inertia; the propensity to "complete relations" or render unions more entire, and the propensity of the mind to "spread itself" over external objects, externalizing its internal impressions. These principles tend to interweave and to be used in conjunction, and they certainly meet with extensive application. All, however, are based on a sort of law of conservation of mental energy: in other words, the principle that the mind always acts in such a way as to give itself greatest ease.

Obviously, the first principle—that the mind avoids discomfort—is derivable from the general principle that the mind acts in such a way as to secure itself greatest ease. We see it in use, as a general principle, when Hume explains why the mind does not lapse into hopeless skepticism on appreciating the argument in "Of Skepticism with Regard to Reason". The mind, he says, refuses to go through the highly strained and abstruse processes which would make any proposition dubitable, and thus, solely because the mind eschews that which makes it uncomfortable, we continue to give credence to propositions.²⁵ This tendency of the mind to avoid discomfort manifests itself in far more surprising phenomena in the creation of "fictions", or the feigning of pseudo-entities. Like the oyster creating a pearl solely to remove a source of discomfort, so does the mind, according to Hume, create fictions to set itself at ease. One source of mental discomfort is the opposition of reason and the imagination on the question of external durability. One tells us

that we must accept it, the other that we must reject it: thus, we "endeavour to set ourselves at ease as much as possible...by feigning a double existence".²⁶ Again, the mind is made uncomfortable by the imagination leading us to look upon a series of connected perceptions as having unity, while reason shows that it has not. To avoid this discomfort, the mind "is apt to feign something unknown and invisible".²⁷ Our use of a perfect standard of equality, yet again, is due to the production of a "fiction". We really, says Hume, have no right to such a thing: it is a fictitious notion resulting from psychological inertia.

This "psychological inertia" is an oft-used propensity in Book I, being used first in the discussion of geometrical standards. We see that rough standards can always be corrected by finer standards of equality, Hume points out, so that a series of finer and finer standards can be produced. This then creates, so he tells us, a sort of psychological momentum: the mind carries on in the same way of thinking, and gives birth to the fictitious notion of a perfect standard of equality. Once the mind, or imagination, is set into a train of thought, then, it will with great ease continue in that train, finding it easiest, as it were, to follow the patterns to which it had become accustomed. This mental phenomenon of psychological inertia is further used by Hume in helping to explain our belief in external durability.

The imagination, when set into any train of thinking, is apt to continue, even when its object fails it, and like a galley put into motion by its oars, carries on its course without any new impulse...and as the mind is once in the train of observing an uniformity among objects, it naturally continues, till it renders the uniformity as complete as possible.²⁸

Alongside this explanation of external durability in terms of the "galley theory" of psychological inertia, we also find the principle that the mind, in order to give itself ease, will "complete relations" and unions. This is a principle highly reminiscent of that concerning the mind's tendency to create fictions. It seems that the mind is happier, more at ease in its transactions, if it does not have to make transitions along lines of weak relations: and thus it gives the imagination licence to fictitiously create the absent relations. For example, objects as they appear to the senses present to the mind an incomplete picture of coherence, and, rather than putting up with hesitant transitions, the mind completes this coherence in order to work with a nice strong relation. In another case, we find Hume offering a similar explanation of why causal theorists of perception suppose objects to be similar to their perceptions. It is, he tells us, because of our "strong propensity to complete every union by joining new relations to those which we have before observed betwixt any ideas".²⁹

This brings us to the last principle of noological proclivity found in Book I: the propensity of the mind to "spread itself" onto external objects. Such a principle might have been used as a general explanation of man's anthropocentricity, but in fact Hume used it to explain just our externalization of the notion of necessity³⁰ and our treatment of some secondary qualities as spatially located along with their connected primary qualities. Having habitually experienced particular smells and tastes with the other properties of a fruit, Hume tells us, we erroneously transfer the conjunction into the objective realm, adding spatiality to tastes and smells.³¹

The general survey of the principles of psychological mechanisms used in Book I is now complete. Some examples of their application have been produced, and it is beginning to become clear that psychological mechanics plays a very substantial part in Book I. No example of its really systematic and determined use has yet been offered, however, and yet this is necessary to appreciate the fact that such applications are not just accretions of Hume's system, but represent a major part of its structure. The clearest and most significant example of such use is found in the account of induction, and this account, therefore, will be examined as representative of the type of psychological explanation found in Book I.

The number of psychological principles and analyses used directly or indirectly in the general account of induction is in fact prodigious, and would require very extensive disentanglement, but the following, which play a major role in the account, deserve enumeration:

1. The analysis of impressions as psychic entities with a great store of vivacity;
2. The analysis of ideas as qualitatively similar to impressions, but devoid of their vivacity;
3. The principle that impressions are followed, always, by their ideas; i.e. that the idea of A is entertained immediately after the impression of A is gained;³²
4. The analysis of beliefs as psychic entities qualitatively similar to pure ideas and impressions, but with an intermediate degree of vivacity;

5. The principle that vivacity can be "passed on" from one perception to another;

6. The principle that the mind will continue to do what it is accustomed to do;

7. The principle that where an idea of a cause enters the mind, a tendency is set up whereby the idea is succeeded by the idea of the effect;

8. The principle that the mind tends to "spread itself" onto external objects, treating as objective that which is really subjective.

Utilizing these analyses and principles, Hume explains why, upon seeing a cause A, we come to anticipate the existence of the effect B, and believe that the event must occur. The first element of this process, Hume says, is our gaining an impression of the cause A, which is then followed by its correlate, the idea of A (principle no. 3). Previously, impressions of B have entered the mind subsequently to impressions of A, and a custom has thus been set up of associating the ideas, conjoining them in the mind (no. 6). Thus, in this instance, the idea of A leads the idea of B into the mind (no. 7—instantiation of 6). This means that we, having already entertained the idea of A, come to entertain the idea of B. The impression of A meanwhile radiates its vivacity upon all that is closely related to it (nos. 1, 5), and so the idea of B comes to absorb some of this vivacity. This, however, means that we are entertaining a lively idea of B, which is precisely what believing B amounts to (no. 4). Nevertheless, we suppose that B must follow A; that necessity, rather than mere contingent fact is involved. This, however, is just an instance of the mind's tendency to "spread itself" (no. 8), tending to

objectify that which is really subjective. Though necessity exists only in ourselves, in the felt determination of the mind to move from the idea of A to that of B, we assume that something corresponds to it in the external world.

As long as we bear in mind the fact that such forms of explanation are the rule, rather than the exception, in Book I, we will retain an accurate picture of Hume's psychologizing in that Book: further examples of its use, numerous though they may be, can thus be bypassed. This puts us in the position of being able to return to questions which faced us earlier, concerning the acceptability of Hume's psychologizing.

V It will be appreciated that the defence offered against the charge of inappropriate psychologism with respect to Books II and III cannot be repeated with respect to Book I. It was rather pointless rejecting most of the accounts of Books II and III on that ground, since Hume was usually only aiming at doing psychology there, anyway. In Book I, however, crucial philosophical questions are being tackled when the psychological mechanisms come into the picture. Is he not, then, to be censured for using inappropriate modes of explanation? The answer must be that in some ways he is, but in many other ways he is not. His treatment of ideas as psychic, rather than semantic entities, for instance, certainly does mean that on a number of occasions, his mode of procedure is inappropriate. It leads him often to treat questions concerning the meaning and nature of a concept entirely as though they are just questions concerning the existence of a psychic entity. Thus, for him, the crucial question in the debate concerning universals involves whether psychic entities of a certain sort can

exist.³³ Again, the conceptual question concerning whether we can have ideas of something infinitely large or infinitely small is tackled by him as a matter of mental fact. We can't have an idea of something infinitely large, he tells us, because in order to create an infinitely large mental entity we would need an infinite capacity; on the other hand, he urges, we can conceive of an infinitely small thing, because the idea of an ink spot moved to a great distance is such a mental entity.³⁴ Yet again, Hume's tendency to reduce logical questions to those of psychology is largely due to his treatment of ideas as psychic entities. Directly because of it, questions concerning the compatibility of concepts are converted into questions concerning the psychological compatibilities of mental entities.

Another highly damaging objection to Hume's psychologizing is based on a rejection of his account of belief. Probably no one today takes seriously his analysis of belief as a mental entity with a certain degree of liveliness; or, therefore, the allied accounts of particular beliefs as resulting from vivacity being passed on to them. This inevitably very seriously weakens the persuasiveness of much of Hume's psychologizing. Nevertheless, the type of psychological approach offered by Hume may still be perfectly acceptable: elements of man's system of belief may still be correctly analyzable in psychological terms. The point is that Hume does not just pick on fundamental beliefs and without more ado explain them as a result of psychological mechanisms. The typical account, rather, involves consideration of a belief which he has earmarked as based on non-rational factors. Before the psychological discussion begins, Hume has already very thoroughly shown the absence

of a basis in reason. Consider, for example, the accounts of external durability, identity, and induction. In each case, he shows that no rational basis can be found, and only after proving this to his satisfaction, does he launch into his psychological account. And what could be more appropriate? The whole procedure, rather than being irrelevant to the philosopher, is very pertinent indeed. Having shown that such beliefs are not based on reason, the account would be incomplete without indicating on what they are based. And if Hume could thereupon prove that important elements of the knowledge system are based purely on psychological mechanisms, he would have proved something highly significant to the philosopher. Of course, if the first part of Hume's account—the argument that beliefs are not rationally based—is not accepted, then we will have little interest in the second part of the account, concerning their alleged psychological basis. But that is a quite different matter.

This matter perhaps deserves some emphasis, since it involves the central point of the joint functioning of the psychological and logical aspects of Book I of the Treatise. The joint functioning and purpose of the two types of explanation reflects, according to this dissertation, the most characteristic doctrine of Hume's epistemology. To many, however, the approaches seem at best tied together fairly loosely. Consider, for example, the following comments:

Hume the philosophical analyst and Hume the "experimental" psychologist are not really very compatible throughout most of Book I of the Treatise. It is true that they sometimes collaborate, the analyst detecting an error (the imputation of necessary connection to causally related events, for instance), the psychologist explaining it (in this case by the natural disposition of men to project features and qualities of their inner experiences on to the external world). But each has his own work to do and goes about it independently of the other...³⁵

Assertions such as this manifest a tendency to overlook the purpose of Hume's use of the two types of explanation. It is not just that they sometimes collaborate: one would be largely pointless without the other. The whole point of the logical analysis is that it leads to the psychological analysis, the latter being largely irrelevant in the absence of the former. Hume, as this dissertation has been trying to emphasise, wishes to show that many vital aspects of the understanding are not based on reason, but on arational, instinctive factors. This, it has been argued, should be looked upon as part of Hume's most distinctive epistemological standpoint. But in the substantiation of this standpoint, Hume obviously has two tasks to carry out. First, he has to prove that the pertinent aspects of the understanding are not based on reason, and then, and only then, can he go on to show that they are actually based on certain psychological factors.

Since the two modes of analysis are intimately connected in the production of Hume's most characteristic epistemological doctrine—which Hume spends most of Book I substantiating—it would seem at best highly misleading to refer to them as such that they merely "sometimes collaborate". When we understand Hume's purposes, the two modes of analysis can be seen not just as entirely compatible, but as equal partners in the production of his central doctrine concerning the understanding.

VI Though we may not be able to secure a decisive objection to Hume's procedure on the grounds of inappropriate usage of psychological explanations, we may still, it may be said, convict him of the more general charge of offering explanations inappropriate to the subject. Hume, it may be

said, treats man inappropriately as a barrel-organ—as a mechanism pre-programmed to react to stimuli in a particular fashion. Or, to be more accurate, we may say that he treats man like Pavlov's salivating dogs. Custom, which plays such a crucial role in Hume's psychological explanation is, after all, just a matter of conditioned reflex. It is as a result of environmental conditioning, Hume in effect says, that we respond to particular impressions with the inductive inference. Galling though Hume's approach in this respect may be, however, it is not at all clear that at least in some cases, it may not be entirely appropriate. We are today well used to the fact that some elements of our behaviour are explicable in psychological terms, rather than in terms of rationality, so might it not be that at least some important aspects of our knowledge-system are similarly explicable? Once the thin end of the wedge has been introduced, we cannot be sure how deeply it may be driven.

VII So far in this chapter, use of the word "naturalism" has been largely avoided: The relation between Hume's naturalism and his psychologizing should, however, have become increasingly clear. His psychologizing is, in some respects, the key to his naturalism, being the procedure expressing the naturalistic attitude. What, after all, does the naturalistic approach to man amount to? It is just a matter of looking upon man as fundamentally similar to the rest of nature, and using accounts of man which treat him as just one more aspect of nature. Now in Hume's time, such an approach would almost inevitably manifest itself in the procedure of giving accounts of man in mechanistic terms. The type of approach taken by Newton would be the paradigm employed.

Today, most of us at least certainly do see man as one more aspect of the natural world: as a product of nature, rather than something set apart. Nevertheless, we recognise that mechanistic explanations of the animate are not always appropriate. Just because we agree that man is part of nature, indeed in every respect a product of nature, it does not mean that modes of explanation suitable to the inanimate may be appropriate to man. Thus, the general mechanistic pattern of Hume's explanation, just as much as the fine details of such accounts, may leave us wholly unconvinced. Nevertheless, even if the actual constructive elements of Hume's system are to be totally rejected, it does not mean that the general direction of his approach might not be perfectly satisfactory. In his epistemological discussions, Hume only expounded his psychological mechanics after giving powerful arguments to prove that the inductive inference and many other important elements of our knowledge-system cannot be based on reason. These arguments are very important to us as philosophers, and Hume's injunction to treat them as "foisted upon us by nature" deserves to be taken seriously. Modes of explanation other than that of psychological mechanics are available to explore those avenues which Hume opened to us. This is where the basic theory of modern naturalism comes into the picture: the theory of evolution. We may explain the natural beliefs and the inductive inference as having inevitably evolved as organisms became more advanced, being necessary to ensure the survival of such species. We may argue that man has to accept these beliefs and inferences as essential elements of his knowledge-system, since practical life necessitates it.

This, then, gives us part of the programme for part II of this dissertation. We must see if it is feasible to expound a variation of Hume's

programme, accepting that some inalienable aspects of the knowledge-system are not based on rational factors, subsequently giving naturalistic explanations of these aspects.

PART II

EVALUATIONS

No fact can be real or existing and no statement true unless it has a sufficient reason why it should be thus and not otherwise (Leibniz, Monadology, Section 32, tr. G.R. Montgomery).

Reason and logic cry out in pain no doubt; but we have long since learned not to bother overmuch with reason and logic. Logic was formerly visualized as something outside us, something existing independantly which, if we were willing, could take us by the hand and lead us into the paths of truth. We now suspect that it is something the mind has created to conceal its timidity and keep up its courage, a hocus-pocus designed to give formal validity to conclusions we are willing to accept if everybody else in our set will too (C.L.Becker, The Heavenly City of the Eighteenth-Century Philosophers, p.25)..

CHAPTER 8: PRECURSORY ASSESSMENTS

I Hume's doctrine concerning reason and the knowledge-system is a mixture of the brilliant and the exceptionable. In this, the second part of the dissertation, an attempt will be made to disentangle these elements, isolating the important insights while separating out and rejecting the objectionable. An attempt will be made, not just to give an evaluation of the doctrines concerning the understanding unfolded in Part I of this dissertation, but to provide some reconstruction of the primary insights, salvaging and reformulating the valuable elements while exorcising the dubious. This approach may, however, come to seem self-defeating. After all, it is the skeptical aspect of Hume's work which is often the most objectionable, and yet Part I of this dissertation has largely been devoted to showing that the skeptical aspect of Hume's work was intimately tied up with the positive doctrines concerning the understanding. An attempt to reformulate Hume's primary doctrine concerning reason and the knowledge-system, while exorcising much of the skeptical element, might thus seem utterly perverse.

Before tackling this objection, we shall consider, as an example, one of those Humean skeptical arguments which seems destined to form part of the detritus of philosophy. This example involves a skeptical doctrine which is both highly suspect and yet presented by Hume as a support for his major naturalistic thesis concerning the understanding. Using this example, it will be possible to further one of the purposes of this part of the dissertation—the presentation of straightforward critique—while illustrating

the significance of the potential paradox underlying any critical reconstruction of Hume's naturalistic thesis. We will return to the resolution of this paradox after discussing this example.

II Treatise I, IV, I.

Hume's argument in the section entitled "Of Skepticism with Regard to Reason" is the major support for his universalization of the proposition that statements cannot merit assent as long as we stay within the bounds of reason. He seeks, in this section, to show that if we are guided by reason alone, we will have to admit that all knowledge degenerates into probability, while all probability inevitably evaporates under the probings of reason. On the basis of this, Hume in effect seeks to substantiate dianoetic skepticism; he tries to show, in other words, that no proposition whatsoever, however certain it may appear at first, ought to be given credence by a purely rational being. The highly dubious proof of this programme is as follows:

First, Hume states that however clear and certain rules of reasoning may be, we only apply them fallibly. - Man can and does make mistakes. But because of this, we are told, we should never speak of possessing knowledge: we should only speak of some propositions having a very high probability factor. Even in a very simple calculation, it is possible that we should have made an error, and thus, instead of speaking of its conclusion as knowledge, we should attribute to it a probability value, though perhaps to the order of 0.999. Now we might want to reply that it is only necessary to recheck the calculation several times, and gain the corroboration of others, in order to convert the probability into knowledge. But Hume's answer would seem to be that even then we do not have knowledge: All we will actually have achieved

is giving a much higher probability value to the proposition, a value, say, of 0.99999. At this point, we might want to say that this is knowledge, but Hume forestalls this objection. He tells us that "knowledge and probability are of such contrary and disagreeing natures, that they cannot well run insensibly into each other."¹

Having thus shown to his satisfaction that knowledge degenerates into probability, Hume proceeds to show that however high the probability of a proposition may at first seem, it evaporates under the process of rational reexamination. His argument boils down to the following. Suppose, first, that we have a proposition, X, considered highly probable, and to which we come to award a probability value of 0.97. Having once awarded this value we should, however, remember that our calculation of the probability may have been incorrect, since we are fallible. After further calculation, we may agree that the probability of the original calculation being correct is 0.97. This means, Hume then tells us, that the original estimate concerning the probability of X is questionable, and ought to be revised. We should, he says, multiply the probabilities together, and award X the resultant probability, which comes to 0.941. But, "having adjusted these two together, we are obliged by our reason to add a new doubt derived from the possibility of error in the estimation we make of the truth and fidelity of our faculties."² The calculation concerning the original calculation may itself be incorrect, and thus should only be accepted as probable. Assume, once more, that the probability of its being correct is 0.97. This will mean that we must further adjust our estimate concerning X, through multiplication with that factor, gaining a new estimate of 0.913. Yet this probability "must itself be weakened by a fourth doubt of the same kind" concerning the most recent calculation,

"and so on in infinitum; till at last there remain nothing of the original probability, however great we may suppose it to have been, and however small the diminution by every new uncertainty. No finite object can subsist under a decrease repeated in infinitum".³

This argument may indeed look like very thinly disguised sophistry. One almost wonders if Hume is trying to pull the wool over the eyes of his readers, and is secretly laughing into his sleeve. But the argument, like the ontological argument, resists instant destruction, and is capable of giving its scrutineer uneasy moments. Both parts of the argument are, nevertheless, invalid. The first part, concerning the reduction of knowledge to probability, is just a reformulation of the old chestnut concerning knowledge and certainty. The history of philosophy is full of paradoxes derived from the supposition that the word "knowledge" is inapplicable whenever there is any possibility of error. But we need not be sidetracked into this debate. The argument is clearly fallacious and is not of specific interest to scholars of Hume. We shall instead turn directly to the second part of Hume's argument which is much more original, and does not have its refutation in every other text-book of epistemology.

The basic fallacy of Hume's argument concerning the "evaporation" of probability lies in his assertion that we have to multiply together the probabilities of the original and subsequent propositions. Hume offers no reason why we should do so, and there seems to be none. The result of the multiplication represents just the probability attributable to both the original proposition and the new propositions being correct at once—which is entirely separable from the matter of what probability factor should be attributed to X. The original estimate of probability is in no way dependant upon the

secondary calculations concerning the fallibility of estimates. There is certainly no reason why the mere recognition of a possible error in our calculations should lead us to actually alter the estimate concerning the probability. When scientists recognise the possibility of their having made some error, they certainly don't change their conclusions—why should they?—but use symbols to express the likely limits of error. Our estimator of probability should, at the most, proceed similarly, and, bearing in mind his average error, assert that the probability of X is 0.97 (+ (e.g.) 0.015). On what basis would recognition of a possible error lead us to actually reduce the probability? Only, surely, if it was found that on average we attributed too high a probability to propositions. It is just as likely, however, that our researches would show that our calculations tended to err on the low side. Then, rational reconsideration of our calculation would lead us to raise the estimate of the probability of X. It is most likely that on average, the error in calculation is weighted neither on the low nor the high side; ordinary fallibility in calculation will, over a sufficiently large number of cases, result in an equal number of underrated and overrated probability values. Thus, there are no statistical reasons, based on normal human fallibilities, why we should adjust the original estimate of X in a downward direction. Only if we found that we had a curious psychological or intellectual debilitating factor which led to a constant overestimation would we need to take this step.

An attempt might nevertheless be made to retain the essence of Hume's argument in the following manner. Having taken account of our fallibility, we may not actually change our estimate of the probability of X, but we have to recognise, nevertheless, the limits of its accuracy. As we have seen, we

might come to speak of the probability of X as $0.97(\pm 0.015)$, rather than just as 0.97. But then, the argument would run, as we go through the process of reevaluating our calculations, the limits of accuracy will be seen to grow wider and wider. Since we may have been mistaken in our calculations concerning the limits of accuracy, these limits themselves have to be reconsidered, and will grow wider and wider as reexamination continues. This response, however, commits once again the fundamental fallacy underlying Hume's argument. Once again, it is erroneously supposed that there is a snowballing resulting from conjoining probabilities. But there is no snowballing. The results of rational reconsideration decrease very rapidly in significance. The series involved would in fact be of the form: 0.97, $0.97(\pm 0.015)$, $0.97(\pm 0.015)(\pm 0.015)$, $0.97((\pm 0.015)(\pm 0.015))(\pm 0.015)$, etc.

Each new reevaluation evaluates only the limits of accuracy of the preceding calculation concerning limits of accuracy, and thus the estimate of ± 0.015 itself only gains its own limits of accuracy. 0.015 is a very small number. 0.015 of 0.015 is very much less significant still. Thus, though there may indeed be an infinite series of reevaluations, resulting in an ever-widening reevaluation of accuracy, the growth continues at an ever-diminishing rate, and was never of practical significance from the first. Hume was wrong to say that "however small the diminution by every new uncertainty[,] No finite object can subsist under a decrease repeated in infinitum". It can't. There is nothing vicious about the infinite series.

III Having seen the destruction of Hume's argument in "On Skepticism with Regard to Reason", we can return to the question concerning the consequences

of rejecting many of Hume's skeptical doctrines. The purpose of the skeptical argument in I, IV, I, we must remember, was to help substantiate the naturalistic account of reason. With the aid of that argument, Hume felt he was in a position to assert that no proposition is ultimately defensible rationally, and that it is only because of our psychological constitution that we accept any proposition as credible. It is only, he says, due to the psychological discomfort which results from reevaluation, that we do not come to lose all credence in propositions. Many of the characteristic themes of the naturalistic account of the understanding follow the skeptical argument in I, IV, I. The view that instinct rather than reason is the source of our beliefs is considered to be reinforced: Hume feels able to derive the conclusion that "belief is more properly an act of the sensitive, than of the cogitative part of our natures"⁴, and indeed that "reasoning and belief is some sensation of peculiar manner of conception, which 'tis impossible for mere ideas and reflections to destroy"⁵.

In destroying the skeptical argument of I, IV, I, then, we effectively remove one of the props of his naturalistic doctrine concerning the understanding. The argument, in fact, provided Hume's only explicit support for the view that no proposition whatsoever can be accepted if we stay entirely within the realms of rationality; and that, which we have entitled dianoetic skepticism, was a really major aspect of the support for his naturalistic account. Once we reject the argument of I, IV, I, Hume leaves us with no reason to suppose that the analytic and deductive cannot survive doubts, these proving, therefore, to be a major exception to dianoetic skepticism. The analytic and deductive, at least, would seem to remain completely acceptable when we remain within reason alone; we apparently do not need to go beyond it to psychological

matters in order to retain our beliefs concerning them. Now it might be said that Hume has at least one last card to play here, preventing this conclusion: he could bring into the light of day the assumption that he seemed to be making concerning the basis of all analyticity and demonstrability in pure psychology. It may be remembered (see above, pp. 92-104) that there is reason to suppose that Hume treated logical necessity as reducible to the psychological compatibility of ideas. But, if Hume did indeed play this card openly, it would certainly not worry the modern reader. Since Hume's time, a comprehensive theory of the analytic and deductive has been worked out by empiricists, which certainly makes no appeal to basic psychological facts about the compatibility of ideas. Whatever its defects, this theory is undoubtedly a very marked improvement upon crude psychologistic theories. Hume's last card fails to win the trick, then, and an important exception to dianoetic skepticism must be accepted. The universality of that form of skepticism, which would have followed from the argument of I, IV, I on its own had it been valid, must instead be rejected, and a pillar of Hume's naturalistic doctrine is removed.

It should be very clear, then, that there is something paradoxical about offering refutations of Hume's skeptical arguments while avowing the intention of reaffirming his major insights concerning reason and the knowledge system. It is not, moreover, as though this is the last skeptical argument which will be rejected. Later, refutations of the view that natural beliefs and induction are counter-rational will also be presented. However, we should remember that in giving birth to the naturalistic conception of the understanding, Hume's needs were very different from ours. He would not be faced with an audience sympathetic to the naturalistic cause. Thus, in

clearing the ground for the conception of reason and the knowledge-system as developing out of purely natural factors, being fundamental tools aiding in man's survival, he would be forced to extremes, making use of all the arguments he could bring to bear. His pages would inevitably bristle with highly skeptical arguments as he struggled to push aside the supernaturalistic approach to reason to make room for his own. The universality of dianoetic skepticism, the counter-rationality of the natural beliefs and induction—these are the types of weapon which would most appeal to him. How different, though, are the needs of today's naturalist. Living in a post-Darwinian and post-Freudian age, most of us accept the basic naturalistic attitude almost automatically. When social scientists, for instance, briefly turn their attention to reason, it is quite natural for them to say:

Reasoning is usually included today with other activities of the organism, such as swallowing and perceiving, that have evolved over the centuries in the struggle for existence.⁶

When this attitude is adopted from the beginning, because of the modern attitude towards man and his place in nature, a terrific burden is removed from the expositor of a naturalistic conception of reason. He is no longer pushed to extremes in proving that the naturalistic approach to reason must be correct; he is only obliged to fill in details of the basic naturalistic theory, indicating the fecundity of this approach where our understanding is concerned. Thus, though in evaluating Hume's doctrine concerning reason and the knowledge-system we might reject many of his skeptical theses, his overall conception will not stand or fall as a result. We will begin from a position sympathetic to his doctrine, and when he produces insights which help to explain, for example, which aspects of our understanding evolved from a preconscious level, the fecundity of the

approach will become apparent.

In pointing out that in the present age, a naturalistic approach to the understanding should be taken almost automatically, it is not by any means meant that the Humean naturalism is reduced to mere commonplace. Though, given appropriate circumstances, most philosophers would assent to the proposition that reason and basic elements of the knowledge-system developed out of lower states in man's evolutionary history, this has had very little influence upon epistemological theories. The salient features of Hume's general naturalism, though they would probably not be rejected by the epistemologist, rarely seem to enter his consciousness, and so, of course, he takes little note of their ramifications. A brief resumé of Hume's naturalistic approach to reason is required, however, to make this clearer. The main aspects of the approach can be summarised in the following propositions:

1) Reason is not to be treated as something special and sublime—a faculty shared with the deity, for instance—through which we are transported beyond the realms of the purely natural. It is a man-oriented thing, something which has been developed by natural influences, as a tool aiding in the survival of mankind.

2) Reason has far less influence upon man's behaviour than has traditionally been supposed. Instincts are a much more fundamental and widespread influence. Indeed:

3) Reason is actually impotent on its own: it cannot motivate.

4) Reason's place in our system of knowledge and belief has also been misconstrued. It is not the case that every belief which has a right to remain within the system must pass the scrutiny of reason, and be shown

as based upon, or in complete conformity with, reason. In fact:

5) No belief whatsoever can subsist if we stay entirely within the realm of reason, heeding all its dictates. Furthermore:

6) Crucial elements of the system of knowledge and belief are not based upon, or conformable to, reason. These elements include the natural beliefs and induction.

Some of these statements will be automatically accepted by the post-Darwinian and post-Freudian, if he should but turn his mind to them. The first statement should certainly meet with his assent, even though he may previously have unconsciously looked upon reason in a quite different light, never having considered the question before. The second statement will undoubtedly meet with his approval. It is because of Freud's work that the truth of this is manifest, but Hume should receive much praise for having derived this tenet during the very birth-pangs of psychology: it is not an unimportant fruit of the naturalistic analysis of reason. The third proposition is an enforcement of the second, and provides the source of a very significant debate in moral philosophy. We cannot go into this question, which alone provides material for a doctoral dissertation, but it is worth pointing out that many, including the present author, have been largely convinced by Hume's reasonings on the matter.

It is when we reach the fourth statement, however, that the great significance of Hume's naturalistic doctrine becomes manifest. Many of the attitudes of the epistemologist, indeed much of his whole approach, must change if it is accepted. He is not obliged to accept it because of the fifth statement: that can be rejected, as we have seen. The sixth statement, on the other hand, has to be taken far more seriously as a support for

the fourth. It is here that the pith of Hume's naturalism lies. In the form in which Hume presents it, wherein inductive reason is said to be rationally indefensible and the inalienable natural beliefs counter-rational, the doctrine is very highly explosive. If the epistemologist felt it necessary to accept the counter-rationality of inalienable aspects of our knowledge-system, much of his purpose would be removed. He would not be able to continue with his usual business of substantiating or replacing many of our fundamental assumptions but could only, like Hume, hope to offer a natural history of our understanding. We will be arguing, in fact, that Hume's extreme doctrine is not acceptable, but in so doing, we will only be toning it down. The acceptable, weaker form of the doctrine states that induction and the natural beliefs can be seen as foisted on us by nature; and, though they are not actually counter-rational, we have to go beyond reason itself, appealing to man's nature as a creature of action, to understand the legitimacy of their place in the knowledge system. This is less of a thunderbolt to the epistemologist, and does not entirely undermine his usual procedure, but it is nevertheless a doctrine of considerable power, with ramifications throughout epistemology and metaphysics. But these are matters for the penultimate and final chapters. The next chapter will largely concern the above statement number 6.

CHAPTER 9: ON INDUCTION

I This chapter, which is primarily concerned with a consideration of the view that crucial elements of the knowledge-system are not based upon, or conformable to, reason, will largely be restricted to a discussion of this point with respect to induction. This restriction is due partly to the fact that Hume's discussion of induction is the most important single account supporting his reanalysis of reason, but this is not all. There is, furthermore, a significant sense in which most of the other primary discussions substantiating his naturalistic account of the understanding can be subsumed under a discussion of induction. The problems he met with concerning the justification of induction embody the problems also underlying any justification of beliefs in, for example, external durability, substance, and personal identity. Unifying all these problems—and other present day problems such as the use of terms like "neutrino"—is the central difficulty concerned with the justification of any non-demonstrative proposition which makes some "leap" beyond the experiential. Induction involves the general process of making inferences beyond that which is experienced, moving to conclusions which contain more than pure experience can warrant. The problems underlying the use of terms such as "neutrino" as well as notions such as external durability and substance, revolve around the fact that these are particular cases of supposedly empirical notions which yet go beyond the limits of the experiential. The attitude we take towards Hume's account of induction, then, will very probably carry along with it attitudes pertinent to his other major analyses involving the

natural beliefs.

Before getting down to details of a critique of Hume's analysis of induction, however, it is worth while padding out Hume's doctrine in the light of modern knowledge. One of the evident weaknesses of Hume's account of induction and the natural beliefs is that, while he cheerfully speaks of them as "foisted" on us by nature, he has not worked out an overall account concerning this "foisting" which could explain why, and how, it occurs. To Hume's contemporaries, the whole notion of nature benevolently forcing on man the necessary elements of our system of knowledge must have looked rather dubious. Without a convincing naturalistic account of why this should occur, there is at the very least a grave danger of lapsing into a teleological metaphysic, if not into sheer incomprehensibility. Of course Hume did live before Charles Darwin, and thus we should forgive his inability to give a well-padded elaboration of his ideas concerning nature's foistings in naturalistic terms. Nevertheless, it is very likely that he was thinking, albeit in a vague and indeterminate manner, along evolutionary lines. He was a contemporary and acquaintance of G.L. Buffon, and was the senior by only a few years of both Lamarck and Erasmus Darwin. The French had a fairly well established school of evolutionary thought in his time—it was even thought necessary to invoke the great power of Linnaeus to quell them. Evolutionary ideas had been in the air and on the increase for some while before his time*, and Hume

*"There is reason to suspect that even in the seventeenth century such [evolutionary] views were becoming considerably more widespread than would be judged from published works. The doctrine of special creation was then so firmly established as dogma that publication to the contrary was not merely unpopular but also dangerous. The idea of evolution was clearly in the air early in the eighteenth century, and then writer after writer made overt statements definitely evolutionary in tone."¹

demonstrated in Part VIII of his Dialogues, that it had had some impact on his thinking. The Dialogues are even quoted, in some works on the history of evolution, as a significant contribution to evolutionary thought. Thus, placing Hume's doctrine of induction and the natural beliefs in an evolutionary context certainly does not take it into an alien realm. Rather, it produces just the elaboration of his account which would have been forthcoming had he lived in a post-Darwinian age. In the following few pages, then, an attempt will be made to give a brief sketch of how primary elements of reason could have resulted from the principles of natural selection. This will not only help to complete the account which Hume gave of induction, but will also go some way towards showing that in some respects, it is an eminently respectable doctrine.

II A useful means of approaching the question of how elements of the understanding can develop under the influence of natural selection involves consideration of animals we would consider devoid of reason, which act solely on unconditioned reflex. We might take as an example the common fly. We have probably all noticed how a fly, in trying to leave one's room, will perpetually attempt to fly through the pane of glass of the window. Remaining almost static, and in contact with the glass, it will gyrate frantically in a constant endeavour to move forwards. It instinctively flies towards the light, but constantly fails to achieve its objective: its instincts simply cannot deal with the situation. As we all know, the fly is usually soon found dead at the base of the window; its lack of ability to deal with the problem is obviously a feature militating against its

survival. Thus, if some improvement could be made to the insect which enabled it to overcome the problem, the resultant differential survival rate would ensure that the improvement was retained by the species.

In what way, however, could this improvement be effected? One way would be to build new instincts into the insect which told it what to do under such circumstances. Its genetic pre-programming could be expanded so that it could deal successfully with the situation. But the problem with such genetic pre-programming is that it can never deal with genuinely new conditions. Pre-programming can only deal with pre-existing problems, not with new ones. What is thus needed in these circumstances is the means of overriding the instincts and proceeding on some further principles.

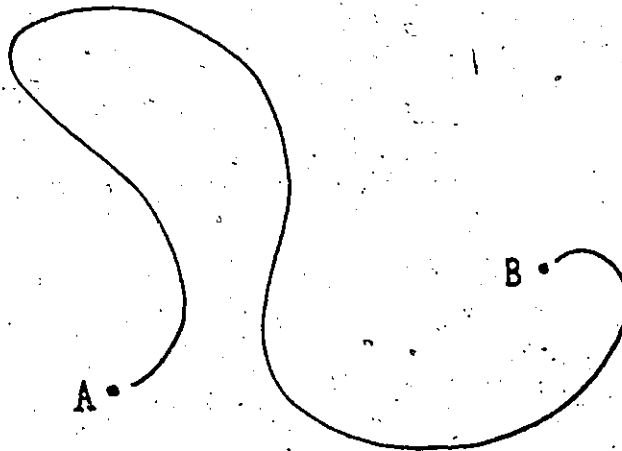
The ability to by-pass or override the dictates of pure instinct when they are unsuccessful is quite essential to this improvement. The fly, we have observed, does not cease its attempts to fly through the pane of glass, in spite of the failure of its efforts. If it could override the instinct, and act differently, it might find an alternative, successful line of action. Even random action would be better than continuing its efforts to proceed forwards when in contact with the glass. Random peregrinations of the room may find it in the vicinity of the door or ventilator, and thus with the ability to escape. Some more positive principle of action would, however, be more useful still.

Further observations of beings such as the fly will indicate the requisite improvement. My office seemed full of them as I began to write this section. In the hope of avoiding their incessant buzzing, or perhaps for more humanitarian reasons, I opened the sash window at the bottom, thus

giving an intelligent fly the means of escape. Very few flies, however, seemed capable of finding their way out. It involved moving away from the source of light for a short time, to move around the bottom of the sash, and this the flies seemed completely unwilling to do. They seemed capable only of continuing their frantic efforts to drive through the glass, and it was only after falling exhausted on to the window sill that their subsequent movement towards the light allowed them to escape. Now should these flies, once having escaped, have found themselves back into the room, and once more wishing to leave it, they would almost certainly revert to their useless attempts to pass through the glass. This, however, need not have been the case. If a means of overriding the instincts could be built into the insects, along with the predisposition to repeat successful procedures, they would have no difficulty in avoiding such potentially destructive situations in future. The insects would then proceed as if upon the principle "act according to the dictates of genetic pre-programming, except when these are ineffective—then, ignore the pre-programming and act in the manner which experience has shown to be effective". If this principle of action were built into the being, it would in effect act according to simple induction on the occasions on which it overrides its unconditioned reflexes. The ability to learn from experience would add to its store of principles of action.

We do, of course, find that animals more complex than the house-fly have exactly the trait just described. The water shrew, for instance, depends heavily on procedures approximating to simple induction. It has been observed, for example, that the routes this animal takes in its

marshy environment almost exactly recapitulate its earlier successful routes. ² If placed in a location new to it, the water shrew will at first move almost at random. Placed at A, and desiring to be at B, it will move in an almost random fashion until it finds itself at B. The route it finally takes may well have the appearance of the figure on the right.



But, having once taken this successful route, the water shrew will on future occasions duplicate it almost exactly. Placed once again at A, it will without hesitation take the same tortuous route to B. In spite of the meandering it has to make, however, it proceeds along the path with very great rapidity.

The water shrew will, then, proceed as if by simple induction—aided, it may be noted, by an amazing memory. It exactly recapitulates earlier successful procedures. The "programming" of the shrew does not just involve responses built into it prior to experience; added to this is the principle of acting in manners which have been found to be effective. However, though this means of solving problems is valuable to some extent in aiding the survival of the animal, it certainly does not solve all its problems, as further experiments with the water shrew have amusingly shown. ³ If, for example, we should place a large brick somewhere on the shrew's route, and then place the shrew at A, it will be found to rush headlong into the brick. Incredible though it may seem,

the water shrew manifests such faith in simple induction that it very largely ignores the information it receives from the senses concerning its familiar route.

The water shrew is a hardy beast, and survives periodic collisions with unexpected objects. Nevertheless, instinctively acting as if according to a simple induction obviously does not solve all the problems it has to face. A response is required which is even less automatic than acting according to simple induction. What is needed is the ability to act as if according to a more complex principle: the principle that if all relevant things are equal, or supposed such, steps found to be successful should be repeated. It needs, then to act as if according to the more sophisticated principle of induction that, all relevant conditions being equal, the same will happen in the future as in the past.* The water shrew, should it have been furnished by nature with such a principle of action, would not faithfully continue on its usual path after observing the presence of the brick. It would override its simple induction, and cancel its precipitous rush.

It may be noted that in the progression from acting according to pure instinct, to incorporating principles of action involving inductive tendencies, there is also a progression towards autonomy, away from the purely automatic. At the lowest level, action is guided by purely instinctive responses, these responses being common to all members of the species. At further levels, however, not only is a degree of autonomy provided by.

*This distinction between "simple" and "sophisticated" induction is parallel to the distinction between "L.H.S." and "R.H.S." induction discussed below, in section V onwards.

the ability to override automatic responses, but the actions are guided by principles whose details may be unique to particular members of the species. In spite of this apparent movement away from automatic responses, however, the general principles on which the operations guiding the animal's actions are based, need be applied no less automatically than the principles guiding the most lowly beast. The general tendency to "act inductively" need be seen as no less "foisted" on organisms by nature than the fly's instinctive tendency to avoid that which gives it discomfort.

This means of accounting for the advent of induction in terms of "foisting" resulting from evolutionary tendencies could also, it may be noted, easily be used to account for the introduction of other major elements of reason. It is obvious that the greater a creature's ability to correlate the data of its various senses with the principles of action available to it, the greater will be its success in the struggle for survival. For example, if the flies noted above had been able to take note of the draught coming from the base of the window, and connect this with the known presence of winds in the areas they wish to be in, they might have easily discovered the correct means of escaping. The greater the ability to successfully correlate elements of the welter of available data, the greater is the ability to find, in the known data, that which will be of use. In performing this sifting and correlating, creatures will in effect act as if upon principles of deduction. There is no inevitable need for this deduction to be carried out consciously: there is no reason why at least fairly simple procedures of this kind could not be carried out by an organism without its giving conscious attention.

to it. Awareness of such manipulations, and conscious attention to it, may just effect an improvement in the efficiency of this process of sifting and correlating.

It is no more difficult to explain how any natural beliefs could have come about through the forces of natural selection. For example, the conviction that every event has a cause* is a very useful spur to action in man, encouraging him to look for causes, which he might thus be able to control—and that has definite value in the struggle for survival. Even if it were false that every event has a cause, belief in it would still be very valuable, since it would prevent the apathy caused by being faced with events which could, at any point, be completely uncontrollable. Again, as Hume pointed out, the belief in the continued existence of objects when unperceived is essential to purposive action, and it is easy to see, therefore, that natural selection would have ensured that creatures sufficiently advanced to require it would be invested with the belief.

III Now the types of evolutionary sketch offered, portraying major elements of reason as resulting from straightforward evolutionary tendencies, may not be completely convincing in all their details: the housefly may have far more capacity to learn from experience than has been attributed to it, and the source of information concerning water shrews may not be entirely accurate. Nevertheless, some such account must, surely, be accepted. There must be a bridge between animality and rationality; there must be an intermediate stage between

*It is not clear whether Hume does, in fact, treat the belief in the causal axiom as a natural belief, but it is a remarkably good candidate for analysis in such terms.

full blown, self-reflective rationality and the level of acting according to pure unconditioned reflex. General suppositions concerning evolution militate against the notion of faculties such as reason emerging fully developed in the space of a few generations. A long, gradual development is much more in line with the standard paradigms of evolutionary thought, in spite of the recognition of the de Vriesian factor. Thus, there surely must be a "pre-conscious" reason, a point at which creatures act upon forms of reasoning without a conscious awareness of what they are doing, or attempts to "correct" their reasoning.

Nevertheless, this may all be accepted without producing any conviction that man's present day system of reason and knowledge inevitably involves any fundamental beliefs or principles which are themselves extra-rational, being founded on a purely non-rational basis. It may still be held that the system of reason and knowledge, whatever its origins may have been, can either be purged of its pre-reflective elements, or these elements can themselves be defended and justified. Thus, returning specifically to Hume's approach to induction, we find that two major approaches have usually been taken.* One accepts the invalidity of induction, and excludes it from science and rational human endeavour; the other attempts to justify or "vindicate" induction, showing that the rational man need have no qualms about the fact that he makes use of inductive procedures. To evaluate Hume's view that induction inevitably involves a non-rational element, then, we must consider these alternatives. Before getting down to this, however, two points need to be

*Some, such as the early Wittgenstein⁴ and F.P. Ramsey apparently accept Hume's position, but this is not often recognised or repeated.

cleared up: First, the question involved is not whether induction is rational. Secondly, we must not presuppose that a univocal account of induction can be offered.

To begin with the first point, it is important to remember that Hume was not concerned with saying that induction is irrational—he accepted, as we saw above (pp. 87-90) that it is paradigmatically rational. His position, rather, was that when we come to look closely at induction, we find that it is fundamentally grounded in non-rational factors. Philosophers such as A.J. Ayer⁵ and P.F. Strawson⁶, however, have supposed that the problem is simply to show the rationality of induction. Thus, after showing, easily enough, that we do indeed take induction as a paradigmatically rational procedure, they suppose that "the problem of induction" has been dissolved, and can largely be forgotten.* This, however, simply does not touch the problem which Hume really raised concerning induction. This problem is: must we accept that ultimately, the basis of that element of

*It is worth noting that a fairly similar approach has sometimes been used concerning the natural beliefs. W.H. Walsh, for example, presents Hume's natural beliefs, along with Kant's categories and categorial principles as involving "ultimate concepts by which we estimate reality", and argues that we just should not concern ourselves with the "respectability" of their basis: "It is accordingly better to refuse the dilemma with which we have tormented ourselves throughout the discussion; to emphasise the unique status of categories among our concepts and of categorial principles [or natural beliefs] among our judgements, and to point out that...it would involve the destruction of all organised knowledge if removed." This, however, is no less mere "cosmetic" philosophy than the Strawson-Ayer approach to induction. It simply evades the question, with the pretence that it doesn't matter any more, since the fundamental natural beliefs are necessary elements of the knowledge system. This response, no less than the Strawson-Ayer approach to "the" problem of induction avoids the point. The uniqueness of the natural beliefs, and the inevitability of retaining them as a framework of our system of knowledge is not at issue. Their source, and thus respectability, is.

reason called inductive reason, is a purely non-rational fact about the way nature has, in fact, created us? The rationale of induction is at stake, rather than its rationality. In other words, we don't want to know just that language is such that the label "rational" is correctly applied to induction; we want to gain an understanding of induction which will remove any sense of discomfort surrounding it. A rationale of induction would show why it "works", and why we should continue to use it without embarrassment. No presentation of linguistic facts showing that induction is paradigmatic of what we call "reasoning" is of any pertinence to that: reference to it presents only cosmetic philosophy, which briefly fools us into thinking that there can be nothing unattractive about induction.

Confusing though the misidentification of "Hume's problem" may have been, however, it has not been so stultifying as the assumption, made by virtually all writers on the question, that the answer to the problem would be univocal. It will be argued, against this, that there are at least two major types of genuine induction, and on top of that, something else similar to induction—and that different accounts can justifiably be given of each. If this is in fact the case, it becomes quite understandable that no authoritative answer to "the problem of induction" would emerge. The rationale given of each type of induction or neo-induction, taken in isolation, might be quite different from the others, and this being so, the work of a writer taking one type of induction as his model will almost inevitably seem to be following false trails to one who has taken another type of induction as his model. Not only will there be a failure of communication between different authors on the subject, each of whom may be doing perfectly good

work on the type of induction they concern themselves with, but the objective critic, looking at the results of their work, will understandably feel that each type of answer is inadequate: no rationale given of a particular type of induction can be an answer to "the" problem of induction; it will inevitably be inadequate as an answer to "the" problem, since it concerns only one of its aspects.

IV Popper's solution⁸ to "the" problem of induction will be discussed first, since it allows us to kill three birds with one stone. It will introduce the distinction between the three types of induction or neo-induction, allow an exposition of a perfectly adequate general analysis of neo-induction, and will lead us to a rejection of one of the two basic alternatives to Hume's doctrine concerning induction: this alternative being that induction can, and should, be ejected from our system of knowledge and reason, thus allowing this system to remain "pure".

Popper appears to use as his model of supposed induction certain enumerations used in science. He seems to look primarily at "inductions" apparently of the form:

H_2 is such that $\frac{PV}{t} = C.$

O_2 is such that $\frac{PV}{t} = C.$

H_2S is such that $\frac{PV}{t} = C.$

N_2O is such that $\frac{PV}{t} = C.$

.....

Therefore, all gases are such that $\frac{PV}{t} = C.$

Popper argues that in such cases there really is no inductive

inference at all. We don't derive the "conclusion" from the "premisses"; rather, the "conclusion" is set up as a hypothesis which is of value in accounting for the known facts. This hypothesis, he tells us, remains purely conjectural: it is incapable of any verification, only of falsification. It is retained just so long as it helps account for our data, and is in permanent danger of being replaced by a better conjecture. Popper then sets this up as a general account of all "induction". His account of "neo-induction" is really an account of "non-induction". So-called inductions, he tells us, should never be treated as involving inferences from facts. Rather, man and the higher animals continuously produce hypotheses to account for known facts, some of these hypotheses surviving the tests of time. We thus act on these hypotheses, since they are the best available to us.

This account almost certainly does give a correct account of some so-called inductions. Take, for example, the case of an empirical scientist who finds that a falling body falls 4 feet after half a second, 16 feet after 1 second, 64 feet after 2 seconds, and 256 feet after 4 seconds. Now we might want to say that the scientist inductively infers, from his data, that $s = 16t^2$. But the production of this statement does not, in fact, have the character of an induction. It is unnatural to speak of it as a conclusion derived from the data. It is far more natural to speak of it as a generalization used to account for the data. If this example is found unconvincing, we might consider some highly advanced scientific "inductions" which produce general assertions concerning the behaviour of unobservable entities such as electrons and atoms. These statements cannot possibly be derived inductively from the experience of repetitions,

for the simple reason that we can have no experience of the non-observable entities. They must, then, take on rather the character of hypotheses explaining known facts.

Popper's solution of "the" problem of induction is particularly intriguing to those who accept that our system of knowledge is essentially a bundle of framework hypotheses—a vast interconnected series of hypotheses of varying levels of generality which make sense of the welter of data available to us. If Popper were right, and so-called inductive inferences are to be analyzed in the way he suggested, then the "framework hypothesis" pervades the whole system of knowledge concerning future and unexperienced past existences. Nevertheless, however much one may sympathize with the direction in which the account leads us, and however successfully it may account for certain alleged inductions, it is not in fact adequate as a general account of induction. There are some genuine inductions, in spite of Popper.

It is not hard to see that people do, in fact, make some enumerative inductions. Consider, for instance, the case of a naturalist trying to prove to a skeptical pundit that all adult herring gulls have a red spot on the lower mandible. On first spotting a herring gull, and finding it to have this characteristic, the pundit may only be persuaded that some herring gulls are so describable. As the number of positive sightings increases, however, the naturalist will feel more and more assured that he has proved his point, and the pundit will feel less and less skeptical on the point. After a sufficiently large number of sightings, the pundit will admit that he should, after all, accept the generalization. But note that if asked why he believed this, he will emphatically refer

to his observations. He will say that he believes it because of his observations; because he has seen it instantiated in a large number of particular cases. He would not dream of saying that he accepts it as a working hypothesis since it has survived many attempts at falsification.

It might be replied, though not by Popper, that even if we do in fact proceed inductively, we need not do so, since every case of induction could be replaced by Popperian non-induction, thus allowing our system of knowledge to remain "pure". It could be said, then, that though we do in fact proceed inductively, we ought not to do so, but should avoid contamination by assiduously using only the method of non-induction. Against this, however, it will be argued that at least in the case of the second type of induction—which may be referred to as "laboratory induction"—both science and ordinary thinking are incurably inductive. We are utterly convinced that if, for instance, a sample of pure hydrogen has performed in a certain way under laboratory conditions, other samples of pure hydrogen will always behave similarly in the future under the same conditions. We do not by any means use this as a temporary conjecture, which we remain willing to withdraw on the possible occasion of its falsification. Our attitude towards this is not that which is appropriate to a negotiable assumption, but rather that towards an unshakeable basis of empirical knowledge.

Why it should be that we do make laboratory inductions, feeling absolutely certain about them, will be considered later. At this stage, it is necessary just to note that we most definitely do suppose that if we perform an experiment under exactly the same conditions as in the past,

exactly the same results will occur. When we have, apparently, made sure that all the conditions relevant to the event have been reproduced, and the event still has not materialized, we would stake our lives on the fact that some further relevant condition exists which we have missed. Any doctrine concerning induction which does not account for this major fact could not be adequate.

V The two different types of genuine induction which have just been introduced—enumerative induction and laboratory induction for want of better names—require further characterization, since they are said to represent two major types of induction, for which separate rationales can be given. There are not, however, just two clear-cut, mutually exclusive classes of induction under these headings. Pure enumerative and laboratory inductions represent, rather, the two poles of a continuum: any particular induction may be comprised of elements of both types of induction. Pure enumerative induction can be pictured as comprising the left hand pole of the continuum, while laboratory induction comprises its right hand pole. Individual inductions could be located anywhere between these poles, the location depending on how closely the inference corresponds to the ideals. Polar inductions, it should be remembered, might seem to be caricatures of everyday inductions, but this is not surprising, since they are extremes. This should be borne in mind in the following characterization of polar inductions, which must precede a discussion of the different types of rationale appropriate to each.

The major feature distinguishing the two extreme types of induction

is the complete absence at one pole (the left hand pole) of knowledge concerning relevant conditions, while at the other, complete knowledge concerning relevant conditions is supposed. A pure enumerative induction will base the inference on nothing other than repetitions of events. Such inductions can be expressed in forms such as the following:

At t_1 , A was followed by B.

At t_2 , A was followed by B.

At t_3 , A was followed by B.

⋮

at t_n , A was followed by B.

.....

Therefore, at t_{n+1} , A will be followed by B.

For an induction to count as a left hand side polar induction (a "pure L.H.S. induction") no knowledge other than the fact of repetition is involved. An example of such an induction might be:

This shop opened at 9 o'clock on Monday/Tuesday/Wednesday/Thursday/
Friday/Saturday,
.....

Therefore, this shop will open at 9 o'clock on Sunday.

This induction does not use any knowledge concerning the conditions under which shops open. It makes no use of any relevant data concerning the type of shop, and social conditions in its locality, but bases the inference solely on the fact of repetition.

It should be noted that this type of induction does exist, in spite of Popper and the fact that in their pure form, such inductions are probably very rare indeed. We do not have to look upon the polar inductions

as asymptotic, with particular inductions just approximating to the extremes to a greater or lesser extent. Nevertheless, examples of polar inductions do tend to be a little strained, and it is not easy to find a convincing example of a complete ignorance-induction: one which involves nothing more than the recognition of repetition. Consider, however, the example of a naturalist on a field trip who finds that every fieldfare he has observed has a single loose feather at the base of the wing. Now it would not be particularly odd if the naturalist should assert, on the basis of his observations, that all fieldfares have a loose secondary feather. Such an induction might not cause an elevation of the naturalist in the eyes of the ornithological community, but to somebody ignorant of birds, his inference seems entirely reasonable.

In actual fact, of course, the cognoscenti would expect a very different induction from the naturalist. He would be expected to know that in general, when birds are in moult—the moult occurring at a predictable time of year—the feather-shedding tends to proceed in a set order. Depending to some extent on the species, it is known that the primary feathers and tail feathers begin to moult first, followed by a progressive shedding of the body feathers. It is also known that in most song birds the flight feathers are replaced in a very precise order.⁹ Being aware of this, a rather more intelligent induction than "all fieldfares have a single loose secondary feather" would be something like "all British fieldfares will be moulting a secondary feather at the base of the wing at the present time". This induction, involving as it does some knowledge of feather-shedding in general, is an induction locateable some way to the right of the left hand pole. It is in many ways far more respectable,

more "scientific", than the earlier induction, and is more in line with what we would expect of a diligent field observer. Nevertheless, the mere fact of repetition is still a major element in this inference. In this rather more elaborate example, the fact of repetition bears much of the burden of the inference, as the entire burden of the inference fell on it in the cruder example.

It is even harder to give a convincing real-life example of a pure R.H.S. induction than of a pure L.H.S. induction, because, for significant reasons to be explored shortly, scientists simply don't bother to explicitly make such low-keyed inductions. But as an example of what a pure R.H.S. induction would look like if it were consciously made, consider the following example of an experiment concerning the combustion of hydrogen. An experimenter first adds pure hydrogen to a container of pure oxygen, in such a manner that only the two gases are present in the container. Next, he passes an electric arc through the container to ignite the mixture. He then notes that the container subsequently contains water. On the basis of this, he feels justified in asserting that under the conditions he has prepared for the experiment—which he will list—the ignition of pure hydrogen in pure oxygen produces water. He has observed that a particular sample of hydrogen ignited in oxygen under specified conditions produces water, and infers that "hydrogen", i.e. hydrogen in general, will act similarly in such circumstances. Now though this inferential step may not be consciously made under actual experimental conditions, it is, nevertheless, certainly inductive. It moves from an instance of a particular happening to a statement concerning what will always be found to occur if a similar experiment is conducted. Note that our imagined experimenter does make the crucial assumption

that he has pinned down all the relevant conditions for the experiment, and he may, of course, be mistaken. But, so long as he assumes that all conditions are pinned down, he would feel no need to check the experiment— unless, of course, he just wanted to check that he had not made any mistakes in setting up the experiment. Repetitions of the experiment for reasons other than checking mistakes would only be deemed necessary if there were grounds for supposing that conditions other than those already accounted for are in fact relevant. For example, an astrologer might proclaim that the ignition of hydrogen in oxygen does not produce water under all those conditions listed if Venus is at its perihelion. Should the experimenter wish to check this, he would simply repeat the experiment when Venus was at its perihelion, and thereby come to a decision about whether the position of Venus is a relevant factor in this experiment. The pure R.H.S. induction, then, is quite different from the L.H.S. induction in that it does not require the repetition which is necessary for faith in an induction locatable further to the left of the continuum.

Some remarks on the hypothetico-deductive method involving verification are appropriate as a codicil to this section. This theory concerning induction has not been mentioned so far, on the grounds that Popper's theory supersedes it as a viable theoretical account of the logic underlying induction (rather than the actual procedures used by scientists). The present context helps explain why. It may be said that if the experiment described above were made by an experimental scientist, it would not be with the intention of producing an induction based on the result of the experiment, but rather with the intention of verifying a hypothesis. This is, I think, a perfectly accurate description

of many an actual experimenters intentions, but it leads to a highly misleading account of the logic of the situation. This account is likely to be as follows:

The experimenter starts off with a hypothesis, and performs an experiment to verify the hypothesis. Since the experiment is positive—in this case hydrogen does burn to form water, as the hypothesis asserted—the hypothesis is verified. Now since we proceed from hypothesis to experiment, not vice versa, there is no point in repeating the experiment. If we are engaged in deriving generalizations from experience, then we need repetitions, no doubt, but when proceeding in the inverse manner this repetition is inappropriate. In actual fact, there is no generalization from experience, no genuine induction, and thus no need for repetitions.

This account is remarkably true to many of the actual procedures of the experimental scientist, since it not only describes his intentions, but overlooks exactly the inference which the working scientist overlooks. A genuine generalization from the single experiment is unnoticed by both the scientist and the advocate of the hypothetico-deductive method. The point is that the experiment only serves as a verification of the hypothesis involved if it is taken to have demonstrated something general, not something particular. The hypothesis states that hydrogen burns in oxygen to form water—not in isolated cases, but always (under certain specified conditions, of course). The experiment on its own, however, only shows that in one isolated case, a particular sample of hydrogen has burnt in oxygen to form water. Only when we make an induction on the basis of the experiment can the hypothesis be considered verified. This induction is, in fact, made unconsciously. Having seen that a particular sample of hydrogen burns in oxygen under certain specified conditions to form water, we immediately accept that all other samples of hydrogen will burn

in oxygen under those conditions to form water. We give no thought to this induction—it seems so obviously sound as long as we don't try to explain why, that it goes unnoticed. This induction is, nevertheless, an essential and unavoidable part of the verification procedure, and has to be brought into the open and understood. Referring to the hypothetico-deductive procedure in conjunction with verification does not, then, by-pass any of the central problems concerning induction. While providing a more true-to-life account of the procedures actually used by scientists, it is no less plagued by the problem of how generalization from particulars can be justified than the original model of the inductive procedure.

VI At this point, it may be fairly obvious why any attempt to provide a univocal rationale for induction inevitably leads us off on a wild goose chase. The sorts of explanation likely to be given for the two types of induction would seem, prima facie, to be very different indeed. The two types of induction are certainly very different in respect to their credibility. A pure R.H.S. induction gives us complete conviction concerning the truth of its conclusions, whereas a pure L.H.S. induction gives us at best only a willingness to assent to the proposition induced if nothing better can be offered. A pure R.H.S. induction, such as "every sample of H_2 will perform in the same way as the one just described under exactly similar circumstances" is so rock-solid, so ineluctable, that working scientists don't bother to make such inductions explicit. Having described what happens to a particular sample of hydrogen under certain specific conditions, they prognosticate immediately about what

happens to hydrogen under those conditions. No need is felt to make the inference explicit, adding phrases such as "all samples of hydrogen will..."—which perhaps helps to explain why philosophers working on induction usually take inductions to the left of the continuum as their paradigm, though the R.H.S. type of inference certainly is inductive, and is constantly being made.

This willingness to give complete credence to R.H.S. inductions needs to be explained—there certainly is a problem involved in showing why we consider them to be perfectly sound. But the explanation given of this will almost inevitably be quite different from accounts explaining the power of the L.H.S. inference. Inferences of the bare form "it has happened severally in the past so it will always happen" obviously leave us with a great deal less than complete confidence in the conclusion.

The types of explanation which we are initially tempted to offer of the two kinds of induction certainly proceed on quite different lines. There is, for instance, a strong temptation to explain the power of the L.H.S. induction by the use of induction itself, on the grounds that it has worked in the past, so it can be expected to work again. Such an approach does seem to be roughly on the right lines, though problems concerning circularity are obviously not far away. But there is no temptation to approach the R.H.S. induction thus. If we are asked to say why we suppose that all samples of hydrogen will perform as did that particular sample, if placed under exactly the same circumstances, we are not tempted to say that such inductions have worked in the past. We feel, rather, that principles going beyond mere pragmatics are

involved. There is a tendency to feel that it must concern some ultimate, "metaphysical" principle: we feel like rhetorically asking how one sample of pure hydrogen could possibly behave differently from another if it is put in exactly the same circumstances. This serves to bring out the fact that the R.H.S. induction is intimately connected with principles such as "the principle of universal causation" whereas the L.H.S. induction is not. The value of moving from mere repetition of uniformities to an anticipation of a continuation of this uniformity is independent of the law of universal causation. It would still be useful to make enumeration-inductions even if indeterminism were true. But the R.H.S. induction would be very seriously affected by recognition of the truth of indeterminism. Why, if it is true, should we be convinced that one sample of hydrogen must perform in exactly the same way as another under exactly the same conditions? If some events are causeless; if some happenings are not the result of any factor which we can isolate as a relevant condition, then we simply cannot be assured that different samples of hydrogen will perform in the same fashion under exactly similar circumstances.

So far, then, it would seem that everything counts against a univocal rationale of induction. It may still seem that "the principle of uniformity of nature" might provide such a univocal account, since the credibility of both types of induction might seem to be based upon an appeal to it, but when we get down to details, we find that the type of "principle of uniformity" corresponding to each is quite different. The principle of uniformity appropriate to the R.H.S. induction, which, added to it, will make the inference deductively valid, and thus entirely credible, would be: "if, under conditions X, A follows B, then A will always

follow B under exactly those conditions". This principle, though it cannot be proven true, will be accepted by virtually any non-philosopher as an indisputable truth. But now consider the types of principle of uniformity appropriate to the L.H.S. induction, which could be used to underscore the inference. If they were used to validate the induction, they would have to be of some such form as "nature repeats itself *vir-batim*" which is patently false, or "if nature has shown regularities in the past, these regularities will continue in the future", which is again false: nature is full of surprises to those aware of but a few of her secrets. No form of the "law of uniformity of nature", in fact, can possibly validate the L.H.S. induction, and yet bear any semblance to truth, precisely because any form of this principle will need to mention conditions underlying the event, if it is to pass our scrutiny as possibly true—but the L.H.S. induction cannot make use of such a principle, because, ex hypothesi, it does not refer to any conditions, but only to repetitions.

Thus, the "law of uniformity" which could underscore the L.H.S. induction could at best only concern limited tendencies, being of some form such as "regularities tend to be preserved". Principles of uniformity of this type, of course, cannot possibly validate inductions, though they may serve as a "vindication" of L.H.S. inductions.

VII It will be noted that those who take the induction by pure enumeration as their paradigm have given up the attempt to validate induction, reserving their efforts, rather, to showing that the results of such inductions have a certain degree of probability. This is hardly surprising.

The pure L.H.S. induction really is a sorry creature, a product virtually of pure ignorance, with conclusions liable at any time to be falsified for reasons which are not understood. It is only because we are used to dressing up enumeration-inductions in our imaginations, thinking in terms of examples locatable further to the right of the continuum than the left hand pole, that the enumeration-induction looks at all pretty. Nevertheless, it can be shown that such inductions can be "vindicated" as potentially useful inferences.

This vindication takes off from recognition of the fact that nature has at least shown certain regularities in the past. It then proceeds by saying that where a man has seen certain regularities, it will be methodologically valuable for him, lacking any other information, to act as if this regularity will continue in the future. He has no assurance that it will; nature may not be regular in the future with respect to these instances; it may not even be regular in the future with respect to any instances: but nevertheless, being a creature of action, and having to make predictions, man should act as if the regularity will continue. This, so the argument runs, will work if anything will work. If a continued regularity should in fact exist, then the induction will have been valuable; if it should not exist, then almost certainly the agent will have been no worse off than he would have been in the absence of any grounds for making a decision. If the reasoner is obliged to act, he can only gain by acting inductively; he has nothing to lose. Russell's chicken,¹⁰ who apparently lost his head over induction, might not appear to agree with this, but though use of inductions may have led him to disaster, the absence of

any grounds for action would have served him no better. Modern battery turkeys, which are so exceedingly stupid that they largely lack the ability to make simple inductions, have their necks wrung just as readily as the farmyard chicken.

The verificationist theory is, naturally, a product of pragmatism, notably of Peirce and Reichenbach. Under the influence of such a view, "induction" would take on rather the character of eduction, and inductive science would be viewed instrumentally. Induction, rather than being considered as a source of knowledge—knowledge being conceived as the grasping of truths about the nature of the world—would be considered as a source of power, a useful means of manipulating the environment. The present author does not intend to reject this approach wholeheartedly: it will be accepted as a perfectly effective rationale of pure and unashamed L.H.S. inductions. It has, first, the great merit of avoiding the charge of circularity usually attributable to arguments which refer to the fact that induction "works". It does not find itself saying that induction will be useful in the future because it has worked in the past, which obviously begs the question: it just says that if anything at all will work, induction will work. Accordingly, the vindicationist account has the further great merit of making no metaphysical assumptions about how nature must work. However acceptable this theory may be as a rationale for pure L.H.S. inductions, though, it will be contended that it is quite unacceptable as a complete theory of induction. The unashamedly pure L.H.S. induction is really very rare, and the picture which the vindicationist account of induction paints of science, using this type of induction as its model, is grossly inadequate. Not only does it paint an unpleasant

instrumentalist picture which would find favour with very few, but the type of induction which it foists upon science as its paradigm simply does not conform with the type of induction which leaves the scientist satisfied. Having been presented with an induction of the L.H.S. type, scientists will not, if they can possibly avoid it, leave the induction in this condition—they will seek the unknown conditions, in effect proceeding through the use of induction by elimination. Having noted the repetitions, the scientist will seek varying situations, noting any resulting differences as indicative of the conditions underlying the repetition. Only when it is felt that conditions are well understood is it felt worthwhile to present a universal law.

Furthermore, it is not really at all clear that vindicationism has provided a genuine alternative to the Humean position on induction. In fact, were it worded appropriately, we could easily imagine it flowing from the lips of Hume himself. It says, in effect, that there is no justification for induction from the point of view of the pure theorist. The pure theorist can never be assured that his inductions will lead to the truth; it is just inasmuch as nature obliges us to act, threatening us with a swift and uncomfortable end if we do not, that we induce. Inductions, from the point of view of the pure seeker for truth and knowledge, will always lack "respectability". As we shall see shortly, vindicationists are even obliged, however unwillingly, to make appeals to conditioned reflex to complete their account. Wherein, then, does the difference between the Humean and the vindicationist account lie? Vindicationists would say that they have explained why we ought to induce: they would say that they have shown that it is perfectly rational to act.

inductively. But are they not to some extent at cross purposes with Hume when they speak thus? Hume primarily wishes to say that if we stay within the bounds of reason alone, induction can not be justified. What vindicationism shows is that man qua active being ought to induce—not that man qua rational being ought to induce. They agree, in fact, precisely with the view that man qua rational being need have no faith whatsoever in the results of induction. Vindicationism, rather than providing a genuine alternative to Hume's account of induction, largely reformulates his attitude within a novel philosophical scheme which encapsulates his doctrine.

A further problem which vindicationism meets is worth pursuing, since it leads us to consider an alternative approach to L.H.S. induction which sheds some light on the whole issue. This is the problem of why we come to suppose that a sufficiently large number of repetitions gives us a very strong reason to believe in the continuation of the repetition. We have a feeling that a repetition which is very well established, having been observed for a very long period, deserves to leave us with a much greater faith in its future continuance, than a sequence which is in all other respects similar, but has been observed for a comparatively short time. The vindicationist doctrine cannot possibly account for this. According to this doctrine, we never have any justifiable assurance; it is only pragmatically worthwhile to suppose that the repetition will continue. No amount of repetition, they say, can change this essential feature of induction, so what could produce this increase of assurance? At this stage, the vindicationist can only complete his alliance with Hume by referring to conditioned reflex: the

experience of repetitions leads people, eventually, to such a state of mind that they cannot doubt the continuation of the repetition—but for psychological, not logical, reasons.

VIII. This conclusion concerning the logical irrelevance of continued repetition is both unnerving and unsatisfying, but cannot be avoided unless we reject the vindicationist line as a complete account of L.H.S. inductions. We shall thus look instead at an explanation based on the following notions: First, some, if not most L.H.S. inductions should not be treated as pure, unashamed L.H.S. inductions, but should rather be viewed as first strivings towards pure R.H.S. inductions. Secondly, the closer an induction can be located to the right hand pole of the continuum, the greater does its credibility grow. This latter point is itself based on the fact, noted before, that we feel complete assurance that a sequence will be repeated if all relevant conditions are again repeated. That being so, the greater our assurance that all relevant conditions are equal, the greater our confidence in the product of the induction. Though the induction may still lead to a false conclusion, we will be in a superior position to the person making an induction locatable further to the left of the continuum, since we can eliminate various potential falsifying conditions which he cannot take into account. Once these points are understood, we can easily comprehend the relevance of repetitions to the strengthening of our belief in corresponding inductions. The effect of repetition is precisely to increase our confidence that all relevant conditions will be satisfied in the future. Though we may not know what the conditions are, each further repetition puts us in

a better frame of mind for supposing that they will be fulfilled on future occasions. After countless repetitions of the occurrences, we will come to feel that the conditions are very easily satisfied, or at least are satisfied under all the conditions we are likely to meet with. Thus, we come to have virtually no qualms about predictions made on the basis of such inductions.

This line of thought, which is essentially that inductions gain their credibility according to the degree to which they can approximate to the pure R.H.S. induction, can also, it may be noted, easily account for the preference felt by most inquirers for induction by elimination over induction by enumeration. Inductions by elimination are specially tailored precisely to discover conditions relevant to the reoccurrence of a sequence, and will thus naturally be placed further to the right of the continuum than an induction by enumeration. Note, again, that this approach also explains why repetitions should be irrelevant to pure R.H.S. inductions. The function of the repetitions, according to this approach, is precisely to give greater strength to the hope that the induction is locatable to the right of the continuum. But if the induction is already at the right hand pole of the continuum, repetition obviously can serve no purpose.

This explanation of the principles underlying induction naturally has to meet a number of objections when it is presented as providing a rationale of induction which shows that we need feel no embarrassment concerning them. One objection may try to stress the point that the "sophisticated" law of uniformity underlying it—the "law" that under identical relevant conditions the same thing will always result—is

vacuous, since there is never any assurance that the "relevant conditions" do not stretch into infinity, perhaps even encompassing all the states of the universe. Now it is, indeed, true that for the principle to be of any use we must accept some sort of Keynesian principle of limited variety. We do have to suppose that at least sometimes, only a limited number of conditions are relevant to a particular event. Nevertheless, this principle is not some unsupportable postulate which we just blindly have to accept; it is known empirically to be a truth. To the extent to which it is used in a rationale of induction, the fact that we only have knowledge of its truth in the past does not represent any potential importation of circularity, either. It is not a question of our having to make a completely unsupported presupposition that in the future, the principle of limited variety will hold, just as it did in the past. The single principle that that which has happened in the past will happen in the future under all similar relevant conditions itself guarantees that if in the past, a particular set of conditions is the whole set of conditions relevant to an event, then in the future, those very same conditions will be the whole set of conditions relevant to that event. The burden of induction, then—the principle responsible for legitimatizing the inductive leap—still remains solely with the sophisticated principle of uniformity.

This response would understandably hasten expression of the major objection to this line concerning the rationale of induction. If, in fact, our inductions are to be seen as based on this sophisticated principle of uniformity, it may be true that we have gained a greater understanding of the inductive process, but we are still no closer to removing the sense of disquiet hanging over this aspect of human reason. This principle is not,

by any means, certain. Insofar as the principle refers to what will happen in the future, it cannot be verified; nor is it, by all accounts, demonstrable. This being so, it would seem that we rest our inductive reason on foundations which cannot offer any guarantee that the whole edifice may not crumble into ruins, and inductive reasoning would then remain just as disquieting, philosophically, as ever.

We have not, then, as yet seen a reply to Hume's doctrine concerning induction: the major fight still has to come. If we have to rest R.H.S. inductions and their aspirants on a principle which remains unsupported, itself being just "foisted on us by nature", then Hume's doctrine concerning induction in general manifestly stands. If, alternatively, it should be shown that the principle is in a real sense a justifiable "principle of reason", then Hume's doctrine would seem to fall. There are, however, at least two ways of asserting that the principle is a principle of reason. It could be done in the good old metaphysical style of presenting it as a metaphysical truth, a "cosmic principle", or it could be done in the less outrageous post-Kantian manner, by showing that it is in some way a presupposition of any successful attempt to understand the world. A discussion of these themes, and accordingly a decision concerning Hume's doctrine of induction, will form the subject matter of the next chapter.

CHAPTER 10: REASON AS A COSMIC PRINCIPLE

I Hume's general position concerning reason will, of course, meet with very strong opposition from some quarters, and the discussion of such topics as the sophisticated principle of uniformity will bring this to the fore. Many rationalists, such as Brand Blanshard, would want to present reason as far more than Hume presents it to be.¹ Looking upon reason as essentially man-oriented, a useful tool for his survival, would strike them as ignoring its main significance. The attitude which is of permanent attraction to those of a rationalist bent is that reason is in some sense a "cosmic" principle, something which transcends mere sentient creatures, being infused in the essence of the universe. Many will want to follow Averroes in speaking of the existence of a transcendent "universal reason", of which man's reason is but a fleeting manifestation. The reified reason of others, such as Marcus Aurelius—who spoke of God as cosmic or universal reason, in which all consciousness is dissolved after death—may seem a little too strong, but the attraction of assertions such as "the real is the rational, and the rational, real", remains. Plausible explanations of why this should be, however, are by no means easy to find. We might be presented with a quasi-mystical view involving the doctrine that one aspect of reason is intellectual intuition, the faculty of reason thus being able to grasp the forms underlying all order. Alternatively, we might be presented with the more conservative argument that our reason is a God-given copy of the divine faculty used to create

the world, the world inevitably, therefore, being rational.² Thirdly, we might be presented with the response of the Absolute Idealist, whereby reality, being by definition the most coherent aspects of our experience, must inevitably reflect rationality. None of these responses is, however, appealing. The first, making reference as it does to the highly questionable notions of intellectual intuition and "forms", would find few adherents today. The second response, though it might satisfy some, is not really of much use, since it only explains rationality in the natural world at the cost of reproducing the whole problem in the realm of the supernatural. The third response, too, though it is much the best of the three, simply asks too much of us. It involves embracing a vast metaphysical system, a system which not only has extensive problems connected with it, but is highly unfashionable as well.

Now it may not be at all easy to defend explanations of why the world must be "rational", but at present, it must be recognized that the attribution of rationality to the universe, and speaking of reason as a "cosmic" principle, is, at the least, intelligible. It centres around a distaste of "brute fact", the feeling that there can be no utter contingency in the universe. The "brute fact" is that which just happens to be, lacking any reason for its existence. However inoffensive this may seem to the empiricist, it is anathema to the rationalist. The rationalist will avow something like the following, implicitly, if not explicitly:

There are always reasons why things come into existence. All events are comprehensible, or "rational". There will always be found laws under which individual events can be subsumed, thus making them comprehensible. These laws themselves, moreover, are not just facts about the universe to

be blindly accepted. They, too, are "comprehensible". This will probably be due to a subsumption under higher laws, which thus makes them, in their turn, comprehensible, though the highest possible laws, the laws under which all others must be subsumed, obviously cannot themselves be shown to be comprehensible in this manner. These highest laws themselves certainly cannot be mere brute facts, however: they cannot just be truths about the way the world, in fact, happens to be. That would involve an importation of non-comprehensibility, of irrationality, into the heart of the system. Rather, these supreme laws, if correctly identified, will be "seen" by the rational being as inevitably true. To give an example: a supreme law of the Newtonian system involved the brute fact of gravitation. It was simply said to be a fact, which we have to accept, that bodies gravitate together. In the Einsteinian system, however, gravitation becomes "rational" rather than brute fact. The law according to which things act, when they gravitate together, becomes equivalent to the law that things will always take the easiest route in space-time—always go down-hill in space-time, as it were.³ This (so at least it may be argued) is not mere brute fact: the intellect will accept this, unlike the Newtonian principle, as a supreme principle which is not in need of explanation, since it is a principle which the intellect "sees" as rational.

The rationalist viewpoint, it must be stressed, is not just that the world is comprehensible as a matter of fact; this would itself be to make use of "brute fact". Rather, the position is that the universe has to be, at every level, comprehensible or rational. Reason "permeates the universe".

Why, we may ask, is this tendency to treat reason as a "cosmic"

principle appealing? This question might best be answered on a psychological level. Apart from any particular psychological reasons leading us to take this approach, adherence to any of the major schools of philosophy may be largely a result of subconscious or aesthetic tendencies. Nevertheless, we may still pertinently ask what considerations could be brought against the Humean approach to reason, leading us to hypostatize, in some sense, reason itself. We will in fact find considerations which can be put into two main groups. First, there is a large cluster of problems, including the problem of induction, which lead people to make reference to "natural necessity", or to how the world must be. Secondly, there is a group of problems connected with Hume's man-oriented conception of reason which might seem insuperable within that account, and which would seem to lead us to support the "cosmic" theory of reason in default of its competitor. This latter group of problems will not detain us long and thus will be dealt with first.

II Since Hume rejects the view that reason is something self-justifying, saying that we cannot defend reason by reason; since he argued that it is not something sublime and transcendent which is somehow intrinsic to the nature of the universe, it might seem that he cannot avoid philistinism (see above, pp. 113-116). Respect for reason would certainly seem to lag, and we may wonder what on earth there can be to prevent someone from saying "I'll not accept that—it's just based on reason". But this remark seems ludicrous, and thus if we cannot show it to be so within the Humean conception of reason, it would seem that we have a reductio ad absurdum of the whole Humean naturalistic account of the understanding. There is, also, a

feeling that reason must be more than merely man-centred: we frequently speak of the possibility of other rational creatures in the universe, and tend to think, in an Averroesian fashion, of these other creatures sharing in something which goes far beyond any particular species—something independent of them, which involves independent, objective criteria to judge between the reasonings of various species.

These objections, however, particularly the latter, do not in fact lead to our having to go beyond an essentially Humean account of reason and the knowledge-system. It is, in fact, only necessary to develop a hint given by Hume himself concerning reason, to meet them. In his discussion of reason's place in morals, Hume showed his awareness that there is a conceptual link between the notion of reason and the notion of objectivity, though he probably thought the link to be fairly tenuous, perhaps just a surplus connotation of the term "reason". In the Treatise at III, III, I, Hume asserts that both in moral matters, and in matters of sense perception, it is necessary to consider our data in an objective fashion, in order to communicate: we ignore the particular, completely subjective elements of both, and speak in the manner likely to be adopted by any other observer under those circumstances. Only then, he says, are language and communication possible.⁴ This objectivising, he then goes on to say, is part of what is involved in moral reasoning: "Reason requires such an impartial conduct".⁵ Now the "reason" he is talking of here, may be reduced by Hume eventually to a matter of "calm passions", but the hint he furnished is enough to see us over the present problems.

There is indeed a conceptual link, tenuous or otherwise, between reason and objectivity. When we use criteria which are not peculiar to

ourselves, not merely of subjective significance but rather accepted by the community as correct means of deciding upon a question, then we will be considered by the community to be reasoning fairly. But at the same time we will, of course, be using criteria which are accepted as objectively valid. The "objectivity" here need not be of any ultimate kind, but merely relative. It may be that the criteria of sound argumentation used are common only to the particular community involved, or that particular species, but no more is required. As long as reason is equatable with objectivity, the members of the community cannot assert "I won't accept it, it is merely based on reason". That would be to withdraw from discussion within the community, rejecting the tools of discussion. We may indeed object to some of the criteria used in our community, but we will not thus reject reasoning itself if we wish to continue to converse with members of that community. Rather, we will attempt to change the criteria used within the community.

It is worth pointing out in passing that it is inasmuch as reason is conceptually linked with objectivity that morality is, indeed, inevitably connected with rationality. The essence of morality lies precisely in acting according to principles which can be accepted universally within the community, rather than according to principles favoured just by oneself. Our judgment, taking on the character of an objective judgment, shares to that extent the characteristics of rationality.

But moral philosophy is not the topic of the present study. The point required is just that it can be shown to be ludicrous for a sane member of the community to assert "I won't accept that—it is just based on reason". But this is not because we have any indisputable reasons

for supposing that reasoning properly carried out inevitably leads us to truth, but solely because of the link between rationality and objectivity. This link, and the need to remain within the community, makes respect for reason essential. We are not, then, led beyond Hume's basic position concerning reason and the knowledge-system, to account for this respect. It may still be that major elements of the understanding are foisted on us by nature, and are not results of reason, or defensible by reason.

Continuing to use the hint provided by Hume, we can see that there is indeed some sense in thinking that any sufficiently "advanced" species would make use of reason. We would expect creatures to exist in other parts of the universe which discourse amongst themselves and make use of objective criteria—objective, that is, with respect to individuals of that species—in order to come to agreement. Were we to come across this species in moot, we would say that they were reasoning among themselves, even if we had very little idea of the forms of argument, or the criteria used. The assumption, however, that the reasoning of these creatures should be in any major way similar to human reasoning, such that we could profitably engage them in argument, seems grossly anthropomorphic: more unreasonable than the Englishman's expectation that all "foreigners" will speak English. Perhaps elements of the non-empirical aspects of the reasoning of another intelligent species might be similar, though this is very much a matter of dispute in contemporary literature,⁶ but it seems quite unreasonable to assume that its empirical reasoning would be at all similar to our own. The natural history of the different species would presumably be so different that few points of contact between their conceptual framework and our own could be expected. Kant's conception of a

categorial framework common to all discursive intellects as such has not stood the test of time. Wittgenstein's rather mysterious comments concerning the different forms of life of different species being such that one species could not understand another⁷ manifests more successfully the current attitudes on this question. All this may be leading us deeply into matters which go far beyond the scope of this dissertation, but the main point is clear: it is by no means obvious that suppositions concerning the existence of other rational creatures need lead us to speak of reason as having any sort of "ultimate reality", or criteria which are "implicit in the nature of the universe".

III We can now turn to the cluster of problems which lead people to speak of a "natural necessity", and, accordingly, of a "cosmic" reason. It is largely, though not exclusively, with respect to the concept of causation that this cluster of problems arises. The nature of the causal link, the principle of universal causation, and the inductive inference, all seem to bring in a tendency to refer to some "cosmic" principle of reason. We have already seen how attempts to understand induction bring in appeals to some sort of metaphysical principle which is, in effect, part of the hypostatization of reason. The world just must be, it is felt, such that if a procedure is effected in conditions identical to previous occurrences, then the results will always be found to be the same. There is a tendency to feel, as we have observed, that this must be so; that if it were not, there would be "irrationality" in the universe. Very similar considerations are involved with the question of the analysis of causation itself. Hume's analysis of causation in terms of constant conjunction

would seem to be adequate from the point of view of an empiricist, and yet it tends to leave us wholly unsatisfied, and precisely because it leaves out any reference to a "natural necessity". It tends to be felt that there is far more involved in causation than just one event always being followed by another. It is felt that somehow the event has to follow from the cause; that there would be some kind of absurdity involved in that particular cause occurring without the particular event following. We tend to feel, once again, that the cause is the reason for the effect's existence, such that any arbitrary conjunction of events is intrinsically quite different from the causal conjunction. Very similar considerations again apply to the law of universal causation. If an event should occur without a cause, there would be a tendency to feel that it would be utterly, irrevocably, incomprehensible, and thus "irrational". As noted before, it is because of this felt absurdity that we feel indeterminism to be ridiculous.

Other considerations also lead us into this position of wishing to appeal to principles of "natural necessity". The appeal to the principle of simplicity, i.e. to the principle that nature always does things in the simplest ways, tends to involve such considerations. Nature necessarily acts in the simplest way, it is often felt, any other mode of action being "irrational". Again, there is a definite tendency to appeal, even in science, to specific a priori principles concerning the way the world must be, as in the case of Newton's law of inertia. That all things should retain their own motion, all things being equal, seems, oddly, to be a "rational" law: one does tend to feel that the universe must conform to such a principle.

Now all this talk of "natural necessity" and "rationality" in the universe will strike some philosophers as utterly confused and indefensible: nevertheless, it does retain a striking hold on many, and is at the heart of objections to the whole Humean epistemology. A major task which many philosophers have set themselves since Hume wrote has been the attempt to make sense of the notion of "natural necessity", showing why it is that the world must proceed according to certain fundamental principles of rationality.

It has not always been noticed how closely the various problems concerning "natural necessity" and the hypostatization of reason are connected with a variant of the principle of sufficient reason. This principle is in effect constantly appealed to by those speaking of a natural necessity, epitomizing, as it does, the elements of their position. The principle states, quite baldly, that there must be a reason for everything. This is the supreme rationalist principle, a principle which, once questioned, brings an enormous amount into doubt. Its disarming simplicity camouflages the fact that it really is extremely powerful. To start with, a substantiation both of R.H.S. induction and the principle of universal causation follows directly from it, as does the inadequacy of the constant conjunction theory. First, the "sophisticated" law of uniformity of nature follows directly from the principle, since this says just that under exactly the same circumstances, exactly the same will happen: the point is that there could be no reason for the negation of this, since any such reasons would involve variations of circumstances. Once, then, we grant the principle of sufficient reason, the sophisticated law of uniformity becomes indubitable. Secondly, the law of universal

causation is as easily derived from this supreme law: If an event were completely uncaused, it could have no reason for its existence, and thus indeterminism is inconsistent with the supreme law. Thirdly, the constant conjunction theory is incompatible with the principle of sufficient reason since it makes mere brute facts of every causal relation. It would mean that no reason can be given why a particular cause produces a particular event, all such conjunctions being mere matter of fact: and this is exactly what the principle of sufficient reason will not allow.

The power of the principle of sufficient reason is, in fact, even greater than has so far appeared. Its power can also be seen as very strong in the realms of scientific explanation. Principles of science are never felt to be fully, or ultimately, satisfying unless they are felt to be directly derivable from the principle. So long as a principle smacks of "brute fact", so long as it does not seem to be in accordance with the principle of sufficient reason, so does it seem in further need of explanation. The principle of sufficient reason, then, provides a sort of pre-empirical test of what can be considered a completely adequate explanation. Thus would the Einsteinian explanation of gravitation appear superior to that of the Newtonian, for the reasons noted before, even if there were no empirical tests supporting preference for it. Thus, also, does the Newtonian law of inertia seem particularly indubitable: There could be no reason, it will be thought, for a material object not to retain its own motion when unaffected from without.

The fact that the principle of sufficient reason is the supreme principle of those who wish to make reference to reason as a "cosmic" principle is useful inasmuch as it allows an economy of discussion. The

status of the sophisticated law of uniformity, and other laws such as that of universal causation, is dependent entirely on the status of this supreme principle. From the point of view of the rationalist who wants to defend the appeal to "cosmic" reason, however, it is of no great help to recognise that the principle of sufficient reason is, in fact, the supreme principle he appeals to in making his particular stand. It gives him no clue as to how to give a satisfactory justification of his principles, showing why it should be that the universe must conform to principles of "rationality". On the other hand, it does give an easy clue to his opponents who wish to "explain away" our tendency to hypostatize reason. Once we concentrate particularly on this principle, it is easy to conclude that the principle of sufficient reason, along with its lesser allies, have the status of prescriptive or regulative, rather than metaphysical, principles.

This, indeed, is the line which we would seem obliged to take, but it need not be urged just that the principle of sufficient reason and the cluster of principles surrounding it are regulative. These principles can also be presented, perfectly intelligibly, as constitutive of the realm of science. The point is that if we wish to understand something, then we will have to treat that which we tackle as comprehensible: obviously, if it were not comprehensible, it could not be understood. Any attempt to explain something presupposes that the explicandum is part of a comprehensible realm, and a fortiori, if a thing is considered to be explained, it must be taken as part of a realm whose elements are explicable. It does not follow that reality has to conform with the principle of sufficient reason, of course, only that it must to the extent to which

it is to be included in the realm of science.* Thus, though the principle of sufficient reason does gain to some extent the status of a constitutive principle, it is only constitutive of the realms of science and would-be knowledge. And of course the principle of sufficient reason is remarkable in that it is supposed to be completely universal, not just true within realms of science which might encompass only a small part of reality.

It is in accounting for this latter supposition, that the pragmatic or regulative element of the principle has to be invoked. We might just assume that only some aspects of reality are ultimately comprehensible, and thus subsumable within a scientific system. Thus, though the principle of sufficient reason might have to hold in the realm of the scientist, being constitutive of this realm, it would not be accepted as true of the world at large. It is very easy, however, to show the great value of assuming the universality of the principle of sufficient reason, using arguments basically similar to those noted above in the "vindication" of L.H.S. induction. Only if we assume that a thing can be found to be comprehensible are we likely to make any attempt to understand it, and thus discover something which may be of importance to us. If we remain constantly

*Consideration of modern indeterminism in physics may help to throw some light on this matter. Those who follow Heisenberg and his school are quite happy to accept that certain sub-atomic events are uncaused, and happen purely at random; others find this anathema to science. The source of disagreement partly, at least, centres around the fact that the determinists refuse to accept that subatomic events could be ultimately beyond the ability of any science to explain, while the indeterminists cheerfully accept it as fact. In taking their stand, the indeterminists just wash their hands of any attempt to explain that particular type of event. As long as they are trying to explain, they do and must accept that that which they study is caused and thus explicable: only when they refuse the attempt to explain, can they accept the presence of indeterminacy, and thus the negation of the principle of sufficient reason.

dubious of the intelligibility of anything, feeling that numerous events are utterly incomprehensible, since there is no reason for their being as they are, apathy would be an almost inevitable result. Should any problem defy just superficial attempts at understanding, there would be a slackening of efforts to understand it. If, on the other hand, we presuppose that all things are ultimately comprehensible, we will strive constantly to attain understanding. We will be far more likely to find the truths which can be grasped. If we accept the principle of sufficient reason, then, we will gain a great deal, and risk losing very little. Where events are comprehensible, we are far more likely to gain understanding, while if they are not, we will at the worst only have lost some of our time.

This account of the principle of sufficient reason as constitutive of the realms of science, but regulative when applied to the world as a whole, may strike many as intolerably inadequate. It may be felt that the principle involves far more than mere usefulness; rather, that all things must be comprehensible, to a superior intellect, if not to ours. This feeling is not just a gesture of irresponsible irritability, either, but common to nearly everyone. We certainly do feel, for instance, that cancer must have a cause, and must be explainable, however many the failures to explain it. Much as we may sympathise with the attitude, however, no acceptable account of the principle of sufficient reason as necessary, or as constitutive of the whole of reality, would seem forthcoming.

Part of the antipathy towards approaching the principle of sufficient reason as a regulative principle might at least be allayed

when it is realized that this does not involve saying that it is actually false. We may, at least, say that all elements of the world can, as it happens, be understood, though this may be an assertion of the purest optimism, since we cannot, of course, know it to be true. We are, just the same, at liberty to make it. This concession does not go very far, nevertheless, in assuaging the feeling that something stronger than the "regulative" approach is required to account for the extent of our faith in the principle of sufficient reason. It could be argued that if we accepted the principle as a guiding principle because of its pragmatic value, then our attitude towards people who do not accept it would be that appropriate to anti-social characters. A professor, if this was true, would reprimand his student for asserting that the event he studied was uncaused and thus incomprehensible; again, the student's peers would feel either that he was courageous to question the strictures of his elders, or that he was letting the side down, by refusing to accept a worthwhile prescription. This, however, certainly is not the case. If a student studying, for example, the formation of crystalline structures should say that in many cases, the formation was causeless, we should assume that he was making a bad joke, or was suffering from mental derangement. The professor would not have the slightest temptation to silence the student, in the fear that his refusal to accept an important prescription might spread to others. Treating the principle as a regulative principle voluntarily accepted for its pragmatic value would seem, then, to be quite untenable.

This objection is indeed a powerful one, and effectively destroys the view that we voluntarily accept the principle of sufficient reason

and its allies because of its pragmatic value. The essence of the prescriptivist view may, nevertheless, be retained. It could be asserted, first, that its functionality provides the rationale of the principle, and shows why we should accept it; and that secondly, the principle has become an unconscious part of our mental equipment, precisely because of its very great value. We might say that it is unconsciously foisted on us by our culture; or we might take the biological line, saying that we instinctively accept it, it having been foisted on us by nature because of its very great survival value. If such theories do not entirely satisfy the reader, and he still feels that the "rationality" of the universe should be explained as an objective fact, not in terms of subjective phenomena, then he has my sympathy. But in the absence of an alternative theory which makes good sense of "natural necessity" or "cosmic reason" in objective terms, we simply have no choice but to recommend acceptance of such an approach. An adequate alternative just does not exist.

Note, however, that to the extent to which we speak of principles being accepted involuntarily, foisted on us because of their value, we come close to Hume on the matter. The attempt to explain our conviction concerning the principle of sufficient reason—and thus of the lesser principles allied with it—inevitably saw us making appeals to the sort of tribunals that Hume said must be involved. Though a rationale of the principle could be produced which shows why we ought to accept it, it would mean that our actual acceptance of it is not a matter of decision: we are, rather, passive in respect to it: it is "foisted on us".

IV It is valuable to observe that the principle of sufficient reason can be rephrased in terms of system. Rather than asserting, as a supreme principle of intellectual endeavour, that all things are comprehensible, we can use the principle that all things can be systematized, or placed within the framework of an all-embracing system. This is no more than a rephrasing of the principle of sufficient reason, since there is a conceptual link between the notions of "reason for" or "explanation" and "system", but rephrasing can produce some enlightenment.

That "explanation" is conceptually linked with the notion of system may seem a little questionable to some, and, though a complete defense of the notion has been heavily taxing a number of eminent contemporary philosophers, some brief indication of it will be offered here. To explain, or "give a reason" for something, it is argued, is equivalent to showing that it can be located comfortably within a system of knowledge. Geoffrey Warnock brought out this fact very successfully in an excellent paper on causal explanation,⁸ by considering so-called explanations which we would, in fact, consider non-explanatory. He gave as an example the case of a car which did not start, considering as an "explanation" of this the assertion that it did not start because it was Thursday. If, Warnock said, explanation was just a matter of showing there to be uniformities and regularities with which we become familiar, we could happily accept "it happened on Thursday" as an explanation. We would only need to note, on a sufficiently large number of occasions, that the car did not start on Thursdays for this to be a satisfactory explanation of future starting failures. But Warnock points out that even if we should note for a hundred years that the car did not start on Thursdays, we would not

accept as a satisfactory explanation of a further failing, the fact that it was Thursday. This, Warnock asserts, is precisely because the "explanation" does not provide any coherence of the facts with our system of knowledge. On the other hand, the assertion that the car will not start because it is a very damp day is accepted as a satisfactory explanation, and precisely because it fits in with a wide system of knowledge, including all that we know about vapour, electricity, the starting system of a car, and so forth. "Brute fact", Warnock goes on to say, can be adequately understood through the notion of system.⁹ If something can be seen as a result of the system, it is entirely comprehensible; but if it stands alone, not being derivable within the system, it is looked upon as mere "brute fact".*

A further example of the conceptual link between assumption within a system and explanation is worth presenting. Action at a distance, within Newtonian 17th and 18th century paradigms, was quite inexplicable. There

*For this, Warnock gains from J.S. Mill the retrospective accolade of being wiser than all of the ancients. J.S. Mill asks:

Why is a single instance, in some cases, sufficient for a complete induction, while in others, myriads of concurring instances, without a single exception known or presumed, go such a very little way towards a universal proposition? Whoever can answer this question knows more of the philosophy of logic than the wisest of the ancients and has solved the problem of induction.⁹

Warnock's discussion of causal explanation, along with some points made in the last chapter, render the facts that baffled Mill quite comprehensible. A myriad of concurring instances will not produce a universal proposition if the causal sequence cannot fit harmoniously into the accepted system concerning such matters. Alternatively, a single instance will produce a complete induction if our system of knowledge concerning such matters is such that we can say with confidence that all conditions relevant to the causal sequence have been noted. Then, we would have an R.H.S. induction which, as has been seen, does not require repetition but gives complete confidence on the basis of a single instance.

was no apparent reason, or explanation, for the fact that bodies gravitate towards one another. The paradigm used for understanding the source of motion was the mechanical push-pull model: motion was seen as transferred by immediate contact. Since there was no apparent way of reducing gravitational phenomena to this paradigm, however, gravitation remained something which could not be explained, and thus a mere brute fact. Faced by his student with the question "why do bodies gravitate", the teacher could produce no answer, but merely say "they just do". Note, however, what would have resulted had Boscovitch's suggestion concerning motion,¹⁰ made at about 1750, been accepted. Boscovitch suggested that action at a distance was the primary mode of action, other supposed types in fact being reducible to this. Now had his suggestion been accepted at the time, scientists would have ceased their efforts to understand, or explain, action at a distance, and given their attention, rather, to an explanation of why there should be any transference of motion apparently of the push-pull type. Since their time this explanation has, of course, been provided. It is now accepted that one's foot, for instance, does not actually touch the ball that it rolls along. Rather, clouds of atoms come fairly close together, and repel one another, motion thus ensuing. Within the atomic system, the attraction and repulsion of atoms becomes the primary mode of motion-transference, and thus the supposedly push-pull type of action is explained in terms of action at a distance.

Within Boscovitch's system, then, gravitational phenomena would not be "brute fact"—they would not be matters to be just accepted. If he should have been faced by a student asking why things should gravitate together, and thus asking in effect how there could be action at a distance, Boscovitch

would not have been nonplussed, having to assert that they just do. He could answer his student by showing that his bafflement was misplaced. He could try to show that all transference of motion is effected through action at a distance, and thus that there is nothing unusual about gravitation. The sense of bafflement about gravitation would then be lost. It would no longer appear as a mere brute fact, something which just has to be accepted. And this is precisely because it is shown to cohere with the accepted system.

Before leaving this topic, it is worth while emphasizing the view that the production of system itself is extremely important in science. We still tend to think of problem-solving as the major consideration of scientific explanation and theory, but a more fundamental aspect of science is directly concerned with the production of system, even when problems do not exist. Consider, for example, the state of biology before Darwin. It was well known that varying animals had certain structural similarities, but there was no problem connected with this. Each was considered to have been created individually, and there was no reason why there should not have been similarities. The evolutionary theory, however, saw connections and interrelations where the creation theory saw none. It fitted the observations into a coherent system, producing a framework within which the facts of similarity could be seen as perfectly natural. There was no explanation of a previously felt difficulty: no problem had been felt. Rather, there was systematization of what was already known. The facts were fitted together and shown to be meaningful within a system, whereas before there was just a jumble of facts.

It should by now be clear that it is not unreasonable to assert that

comprehensibility and systematization are conceptually related, and thus that the principle of sufficient reason can be rephrased in terms of system. The point of this translation will not have become clear as yet, but it is twofold. First, by putting the principle into its new form, we can see it from a different viewpoint, and our understanding of it is improved. The principle of sufficient reason becomes equivalent to the doctrine that all phenomena could, eventually, be seen as part of an all-embracing system, a system within which everything can be seen as having a natural place. Attainment of such a system is one of the most fervent aspirations of science, its production being the ultimate goal of rational endeavour. Acceptance of the principle, then, amounts to a profession of faith in the possibility of science moving closer and closer to its consummation.

The second advantage of putting the principle of sufficient reason into its new form is that some sense can thereby be made of the rationalistic attitude towards the broad, irreducible principles used in science. As we have seen above (pp. 216-7), while the principle of sufficient reason was phrased in its original form, it was very difficult to render intelligible the assertion that the broad principles of science which are not deducible from further principles, are themselves "comprehensible" or "rational"—i.e. not just brute facts. Explanation, or understanding, is not something self-contained, but involves a relatum, since we explain or understand always in the light of something further. This being so, the broadest principles of science would not seem to be explicable or "comprehensible". An event becomes comprehensible when it is seen as a result of a further event or law; a law becomes comprehensible when it is seen as a result of a further law: but the broadest laws could not be made explicable in this way. The

rationalist position, inasmuch as it asserts that the general laws are not brute facts, would thus seem in danger of becoming meaningless. Certainly, when we tried to make sense of it above, recourse was made to the notion of the intellect "seeing" that the laws must be as they are. Inasmuch as this seems to involve us in notions such as mystical insight or intuition, it is not acceptable. Nevertheless, the rationalistic assertion that the broadest principles of science are not brute facts, but themselves "comprehensible" does have some merit, and does need to be explained. The new formulation of the principle of sufficient reason does make at least some sense of it.

This fact will have become clear during the above discussion of Boscovitch's suggestion concerning the primacy of action at a distance. Within the standard scientific paradigms of his time, motion resulting from push-pull modes of action were not in need of explanation, but gravitation, supposedly action at a distance was, since it could not be reduced to it. Once Boscovitch's suggestion was accepted, however, the position was inverted: supposed push-pull activity became anomalous until it could be explained in terms of action at a distance. Once this was achieved, such motions were explained. Note, however, that at no stage was action at a distance actually explained. Rather, as we have seen, the need to explain it was removed. Boscovitch would say that only push-pull motion needs to be explained; action at a distance is the model through which the explaining is done. Prior to Boscovitch's work, it was perfectly reasonable to ask why there could be "apparent" action at a distance, while it was quite unnatural to ask why a solid object moved when a heavy solid object struck it. Boscovitch's suggestion allowed

the "naturalness" to be reversed. In general, then, we can say that brute fact-ness, or the felt absence of reasons and explanation, does not apply to the models, the broadest laws and principles used in science. These provide criteria of explanation: it is through them that the supposedly brute fact is shown to be explicable.

This manner of making sense of the rationalist's claim will not, unfortunately, satisfy him completely. Though it does indeed show that in one sense, the broadest principles of science cannot be brute facts, a more intransigent sense of "brute fact" remains. It may be true that the layman or scientist will not ask "why?" of the broadest principles of science; it may be unnatural to ask for explanations of them, since it is through them that we are used to finding explanations: nevertheless, it remains open for the philosopher to point out that if indeed they are the irreducible final principles, then this represents just an ultimate fact about the way the world is. Nobody but him may bother to make this assertion; they may not seem to be brute facts to the layman, but to the philosopher, used to speculating about alternative sets of ultimate framework principles, they have just the character of hard facts. Geoffrey Warnock espoused this position with no qualms, candidly asserting that if a principle is not derivable from another, it is a mere brute fact.¹¹

What, however, of the examples offered earlier? Why should we happily accept some supreme scientific principles as "comprehensible" whereas others strike us as in need of explanation? Why do we accept Newton's law of inertia, or the Einsteinian doctrine concerning gravitation as perfectly acceptable facts, while the Newtonian gravitation

strikes us as mere brute fact? We do not feel like asking why a material thing should always travel as if downhill in space-time, or why it should preserve its motion in unaffected from without. Why is this? The answer is that such principles are deductively derivable from a proposition which is likely to be considered analytic, and it is easy to see how the deduction can be effected. If matter is by definition passive, then it would follow that a sample of pure matter must act passively either in respect to space-time, or in being unaltered in motion except when externally affected. It may today seem a little odd to speak of matter as analytically passive, but passivity has been accepted at least since the time of Descartes by virtually everybody as a definitive characteristic of matter.¹² Only a few thinkers, such as Leibniz, seem to have questioned it. Even today, when science authoritatively speaks of matter as a form of energy, eyebrows are raised in surprise when it is heard that Teilhard de Chardin conceives all material things as active. The tendency to equate matter with passivity may today be anachronistic, but it has been so persistent, that statements attributing passivity to matter still seem virtually analytic.

Speaking of the proposition as "virtually analytic" may strike some as unfortunate expression: it may be said that a statement is either analytic or not. However, recent work on the analytic/synthetic distinction has shown that there is not an entirely clear-cut distinction, and this is precisely what makes the present instance so interesting. H. Putnam has introduced the notion of the "cluster concept" which can generate propositions which would be considered analytic at one stage in the evolution of a concept, but not at another.¹³ The "cluster concept" is one which

is characterized, at any particular time, by a number of statements, and this set of characterizations is likely to alter by gain or loss as the concept evolves. "Matter" seems to be such a concept. It may have started off as a term just applicable to the basic "stuff" of the world—the furniture of the universe—but it gained, during its evolution, the characterization of pure passivity.

Now through the notion of shifting analyticity, and the evolution of key terms, further sense can be made of the rationalistic notion of the ultimate principles of science being other than brute fact, being instead somehow "rational". Our concepts can be seen as so evolving that they come to reflect the ultimate principles of science, taking on meanings which allow the principles to flow deductively from their analysis.* Thus could an ultimate aim of rationalism be effected: the whole of science would be apodeictic. Lesser principles would flow deductively from wider principles, and the widest principles would be analytical. At all levels laws and phenomena would be seen as "natural", flowing deductively from further laws, or from analytic statements.

Even after all this has been said, and the maximum effort to accommodate and make sense of rationalist's horror of brute fact has been made, it still creeps back, as it inevitably would. Even if a sufficiently rich set of key concepts could be evolved, adequately reflecting a comprehensive scientific system, and thus allowing the most general scientific principles to be all derived from analytic propositions, it would be a mere fact that the key concepts, so understood, actually apply to the real world. Suppose,

*Note, incidentally, that such principles could appropriately be labelled as "analytic a posteriori" propositions.

for instance, that "matter" in fact remains amongst the key terms, retaining passivity as part of its meaning. Then, though anything would have to be fundamentally passive to be called matter, it would not follow that elements of the universe conforming in every other way to the notion of matter would in fact have to be passive. If it did, it would just be a fact, in spite of a possible inevitability of adequate and applicable key concepts eventually being evolved as science reaches its culmination.

It is thus impossible, finally to endorse the view that there can be no brute fact: that reason permeates every level of reality, bestowing "rationality" on everything real. The rationalistic approach to reason as a cosmic principle cannot finally be made acceptable.

V. We can now, finally, come to a decision concerning Hume's account of induction. At the end of the last chapter we saw that if we have to rest R.H.S. inductions and their aspirants on a principle which is just foisted on us by nature, then Hume's doctrine of induction stands, while if they are based on a principle which is a justifiable "principle of reason", it falls. We have now seen that the principle of sufficient reason, upon which the R.H.S. induction rests, cannot be considered a metaphysical, or "cosmic" principle. However much we may desire to do so, we cannot viably show that the world must be rational. We have seen, furthermore, that we are obliged to invoke psychological and genetic factors in order to fully account for our acceptance of the principle of sufficient reason. It might seem, then, that Hume wins all the

honours, in the end, with respect to induction. This is not quite the case, however. We have also seen that the principle of sufficient reason can be construed as a regulative or prescriptive principle, and thus, as a genuine "principle of reason", though not with the genealogy which rationalists would have hoped. Neither Hume, nor his opponents, then, has won a complete victory on induction. Nevertheless, I suspect that the rationalist would be far less happy than Hume with the outcome.

As a result of the discussions of the last four sections, it will also have become clear roughly where we now stand on the matter of the natural beliefs. A general "framework hypothesis" doctrine, in the style of W.V. Quine and other quasi-Kantians, has been adopted which Hume would not accept. This position allows that an important and entirely legitimate function of reason is that of providing a systematization of our data, perhaps going beyond the experiential in so doing. Thus, the belief in external durability, for instance, could be defended as a perfectly sound, rational hypothesis, which we ought to accept precisely because of its very great systematic value. This approach would apparently undermine Hume's doctrine concerning the nature of our knowledge-system, since it can effectively allow a meaningful attribution of rationality to the natural beliefs. Hume was, in fact, completely hostile to the suggestion that the presentation of any sort of framework hypothesis, which goes beyond experience, would be a function of reason, as we noted above (pp. 83-86). The justifiability of his attitude was questioned above, and this matter now needs to be settled: Hume's reasons for his attitude need evaluation.

One professed reason given for the dislike of framework hypotheses was in effect that such hypotheses, voluntarily made, are not even "so much

as useful in the conduct of life" (see above, p. 86). But this would seem to have been quite simply falsified by various developments in science. Non-empirically verifiable hypotheses concerning atomic entities, for instance, are of great value to the physical scientist, and have become of increasing practical importance. Hume, however, had more significant reasons to stigmatize this type of hypothesis, these reasons being centred in his empiricism. Hume had enthusiastically followed the Baconian-Newtonian tradition in respect of its antipathy to hypotheses. Newton, almost phrenetically, asserted that he would make no use of hypotheses—meaning thereby that he would make no use of conjectures which went beyond the experiential—and Hume, it has been shown, emulates his great predecessor in this, as in other respects.¹⁵ Note also that early in the Abstract, Hume speaks of the author of the Treatise as one who

Talks with contempt of hypotheses; and insinuates, that such of our countrymen as have banished them from moral philosophy, have done a more signal service to the world, than my Lord Bacon, whom he considers as the father of experimental physics.¹⁶

Dislike of the type of hypothesis which might take us into the realm of non-empirical entities is, of course, virtually definitive of the empiricists. Those modern quasi-Kantians who make use of the notion of framework hypotheses, but still wish to consider themselves empiricists take care, it might be noted, to heap some terms of obloquy upon such conjectures. Quine, for instance, speaks of externally durable objects as "comparable, epistemologically, to the Gods of Homer".¹⁷ But nothing more than a distrust of such hypotheses—a slowness to accept them unless their value becomes quite evident—is really in order. To some extent

Hume apparently did attempt to prove more through the use of his copy principle. This, if it is interpreted as providing a rigid criterion of meaning, would exclude the non-empirical entities frequently used in framework hypotheses from the realm of meaningful discourse. But of course the copy principle, as a rigid criterion of meaning, fails. Those who speak of the copy principle as essentially prescriptive¹⁸ interpret the copy principle in its only tenable and valuable form. It would then be part of a programme proscribing a priori speculation on methodological, rather than logical, grounds, and it would have been doing a service to science. Science in its early days suffered severely from an excess of a priori speculation, as any comprehensive history book will show. Throughout the early days of modern physical science, and during the later rebirth of the moral sciences, there was a very real need for disdainful prognostications concerning a priori conjectures. Nevertheless, this is not a problem today. We do not have to tell people that their speculations must be firmly rooted in knowledge concerning the facts, since this has been assimilated by our culture. Now that we are not longer hypersensitive about excluding the potentially occult from our science—it is a very long time since magical forces and leprechauns have been seriously invoked in a scientific discussion—the true function of the conjecture involving non-empirical factors is becoming appreciated. Through such pivotal works as T.S. Kuhn's The Structure of Scientific Revolutions, the great importance of imagination—taken as a conscious and rational process of constructing framework hypotheses—is at last becoming widely recognised. This whole approach clearly does undermine Hume's approach towards the natural beliefs

in particular, and towards reason and the knowledge-system in general.

But many honours remain to Hume in respect both to his doctrine of natural beliefs, and his naturalistic account of reason in general, as we will see in the conclusion.

CHAPTER 11: CONCLUSION

By way of conclusion to this dissertation, a summary of the strengths and weaknesses of Hume's naturalistic account of the understanding, discovered during its evaluation, will be presented. The weaknesses are fairly substantial. We will not accept dianoetic skepticism, though this was a pillar of Hume's naturalistic account. Hume's arguments attempting to prove the truth of this with respect to demonstrative reason are easily refuted, as we saw in chapter 8. And, more significantly, the essential doctrine of Hume's primary type of skepticism, when it is applied to matters of fact, has not been found acceptable. Hume wished to argue that all knowledge of fact, to the extent to which it involves induction, must be grounded in something quite other than reason. We induce, he argued, because of a contingent fact about our psychological make-up; reason, according to Hume, could not provide a basis for induction. In chapters 9 and 10, however, we saw that a rationale can be given for R.H.S. inductions and their aspirants, showing that induction need by no means be seen as based on purely extra-rational foundations. In addition to this, we have rejected Hume's view that crucial elements of our knowledge system—the natural beliefs—are neither based upon, nor conformable to, reason. It has been argued that these natural beliefs do not have to be treated as entirely arational, but can be looked upon as perfectly legitimate offspring of the organizing aspect of rationality.

Hume, as we have seen, was wrong to have excluded the conscious production and acceptance of framework hypotheses from the class of legitimate functions of reason.

Dianoetic skepticism, then, and many of the most shocking doctrines found in Hume's naturalistic theory can be rejected. A great deal remains, however, even after this weakening has been effected. It could be said that he merits at least a draw with his opponents with respect to the natural beliefs and induction, and he does retain some of the honours concerning skepticism. We could point out, first, that the grounds for the epistemology which supercedes his, showing how rationality can be wholeheartedly attributed to induction and the natural beliefs, were very firmly laid by Hume himself. If Hume had just thought of "imagination" in a laudatory, rather than deprecatory manner, he would have virtually presented intact the modern quasi-Kantian doctrine. Furthermore, this modern position encapsulates, to a large extent, Hume's skepticism. It disowns for ever the quest for certainty; it speaks of all knowledge as structured by hypotheses any of which may be replaced, at any point, by more adequate hypotheses. No part of the knowledge-system whatsoever—even the principles of logic—are for some adherents of this doctrine not subject to potential revision¹, and thus there can be no question of attempting to build up an incontrovertible system on unshakeable first principles. This embodies much, at least, of the point which Hume wanted to make on skepticism. Hume's endeavour to discredit one of the major preoccupations of philosophy—the quest for certainty—is thus strongly reinforced, to the benefit of philosophy.

Much more than just these points can be found in favour of Hume's doctrine concerning the understanding, however. It is not just a matter of his having anticipated, and helped produce, a view which is bigger and better than his own. Much of what he says about the natural beliefs and induction is both true and important. Even after the concessions noted above have been made, his naturalistic doctrine retains much of its vitality.

If we bear in mind all that has been said concerning induction, it will be clear that in spite of the rationales offered for both types of induction, much of Hume's viewpoint remains. Hume is right to assert that we in fact induce primarily because it is our nature to do so. We are not, except as philosophers, aware of any rationale of induction: we just do it. If it had been necessary for reason to give its sanction to induction before its use could be allowed, man would never have survived. Furthermore, as we have seen above (pp. 207-210), though we are able to show that reason can give its sanction to pure and unashamed L.H.S. inductions, it is only inasmuch as man has to act, not because of any reason for presuming that the conclusions will be true, that the sanction is given. R.H.S. inductions and their emulants, also, can only be given the sanction of reason if we are willing to make a certain act of faith involving the sophisticated principle of uniformity, one which we only make so readily because of psychological factors. Now inasmuch as Hume produced his arguments supposedly proving that induction cannot be given the sanction of reason largely in order to reach these naturalistic points, we can say that a most important aspect of his account survives its criticism.

Concerning the natural beliefs, it can again be said that Hume was

quite simply right in asserting that psychology has a lot to say about why we accept certain fundamental beliefs. The belief in external durability, for example, does seem to be correctly treated when considered as a "natural" belief: something foisted on us by nature, through genetic factors. It may be true that such beliefs can be defended as extremely useful framework hypotheses, but they were accepted as unquestionable beliefs long before any such defence could have been formulated: it required a sophisticated epistemology which has been in existence for only a short time, to give them any rational justification. It could conceivably be said that it was man qua rational that adopted such beliefs all along—that though we may not have formulated the reasons clearly or consciously, our reasons nevertheless "grasped" it somehow. This is not very convincing, but it is arguable. However, it is essential, at least in the case of our acceptance of the principle of sufficient reason and its immediate heirs, for us to go beyond reason to psychological factors, to explain the attitude we take towards them. We have seen (p. 230) that we have no choice but to invoke psychological factors to explain the peculiar feeling of indubitability—almost of reverence—which we have towards these principles. But, this being so, there is no reason for us to be opposed to the admission of a similar role with respect to other fundamental beliefs. This is important and needs to be absorbed by epistemology. Since Hume's time, the felt necessity of principles such as the causal axiom and the sophisticated principle of uniformity has been sending philosophers to the utmost limits of their invention in the endeavour to find its explanation. But Hume, all along, has had the only viable account of the necessity, though the notion of natural belief.

The doctrine of natural beliefs is of considerable relevance to the format of metaphysics adopted in recent years. Kant, we must remember, spoke of reason as producing a single, unalterable set of categorial principles, this being the set which the discursive intellect as such must use. Since his time, however, the notion of an altering framework hypothesis set has been far more dominant. Collingwood, C.I. Lewis, W.H. Walsh, W.V. Quine, and others, have all, in their various ways, endorsed the notion of an alterable, and perhaps evolving, set of fundamental framework principles. The production of more and more adequate sets of framework principles has thus become the goal of many modern metaphysicians. Metaphysics, seen in this light, is not conceived primarily as a science of fundamental facts about the universe, but rather as an imaginative art synthesizing ever more successful fundamental modes of organization. This approach, however, is endangered by Hume's doctrine of natural belief. By basing the natural beliefs originally on facts about our psychological constitution, Hume, unlike Kant, can offer a viable account of the uniqueness and invariability of the fundamental modes of organization. Thus, Hume could provide a basis for questioning the possibility of the new type of metaphysics. Even this lesser form of metaphysics could be assailed by his mitigated skepticism.

There does, certainly, seem to be some ground for accepting Hume's stricture. "Common sense" metaphysics undoubtedly is impervious to reason. We do not allow a number of our fundamental beliefs to be shaken by philosophical doubts. Berkeley's philosophy, for instance, with its central rejection of external durability, hardly even begins to seem acceptable to us, but it is not because of any arguments brought against it. However good Berkeley's reasonings may seem, we refuse from the first to give up

our belief in external durability. Other beliefs, such as the belief in determinism, are similar in this respect. But whether the psychological origins of the beliefs would make them completely inalienable remains dubious. It would seem more likely that it would only present a substantial hindrance to the supersession of such beliefs by more useful principles; the advantages of the new principles might have to be very obvious indeed before acquiescence in them could be effected. Metaphysicians of the new school would have to bear this very much in mind when it came to presenting their findings. They would have to explore the psychological basis of the beliefs they wish to replace, weaning us away from them by making us conscious of their nature. And in so acting they would show that they had learnt from Hume.

We should also show that we have learnt from Hume's general rejection of the "cosmic" approach to reason, substituting in its place a purely naturalistic approach. We have seen that, as post-Darwinians and post-Freudians, we are obliged to accept this; and indeed, that nothing can ultimately be made of hypostatizing reason as some sort of "cosmic" principle. It tends not to be obvious, however, exactly how significant Hume's teaching on this matter is, because few thinkers consciously avow the "cosmic" approach: rather, it just lurks in the background of our thought, lying "in wait to break in upon every unguarded avenue of the mind".² It underlies, nevertheless, the whole rationalistic programme. Until it is recognised, and brought into the open; until its psychological origins are made clear, and its appeal is thus understood, a recrudescence of rationalistic extravagance can never be discounted.

NOTESCHAPTER 1

¹F. Zabeeh, Hume, 4.

²Treatise (T), 455.

³See particularly, N. Kemp Smith, The Philosophy of David Hume, 155.

⁴C. Hendel, Studies in the Philosophy of David Hume, 367.

⁵Sir Leslie Stephen, English Thought in the 18th Century, I, 36.

⁶Dialogues (D), Ed. N. Kemp Smith, 148.

CHAPTER 2

¹T, 51.

²E.g. T, 96 ff.

³E.g. T, 134.

⁴T, 78-82, 134.

⁵T 88 ff., 155 ff.

⁶T, 181.

⁷T, 182.

⁸T, 187.

⁹T, 187 ff., 209.

¹⁰T, 216-231, 232.

¹¹T, 231.

¹²T, 251-261.

¹³T, 217-218.

Chapter 2 Continued

- 14 T, 264-269.
- 15 T, 633.
- 16 T, 636.
- 17 Enquiries (E), 153.
- 18 T, 183.
- 19 E, 149.
- 20 R. Popkin, "David Hume: His Pyrrhonism and His Critique of Pyrrhonism", in Hume, ed. V. C. Chappell.
- 21 T, xx.
- 22 T, xviii.
- 23 John Passmore, Hume's Intentions, 133.
- 24 Sir Lesley Stephen, op. cit., I, 4.
- 25 A. H. Basson, David Hume, 143.
- 26 D. C. Stove, Probability and Hume's Inductive Skepticism, Ch. 8.
- 27 John Laird, Hume's Philosophy of Human Nature, 180.
- 28 E, 161-162.
- 29 T, xxii.
- 30 T, 273.
- 31 T, 639.
- 32 See, for example, E, 6-9, 12, and 72, as well as 161-165.
- 33 E, 161.
- 34 E.g. at T, xxi, and E, 72.
- 35 See, rather, The Philosophy of David Hume, 1-12, 17, 79-84, 86, 108-111, 207-212, 218-219.
- 36 T, 15-16.
- 37 T, 251.

Chapter 2 Continued

³⁸T, 157.

³⁹See J. Noxon, Hume's Philosophical Development, for a defence of this point.

⁴⁰J. Y. T. Grieg, The Letters of David Hume, 376n.

⁴¹E, 160.

CHAPTER 3

¹See, e.g. T, 78.

²See, e.g. E, 39.

³See A. G. N. Flew: "Hume", in D. J. O'Connor's Critical History of Western Philosophy, 260-261.

⁴E, 159. See also T, 106-107; T, 139; T, 166; and E, 76.

⁵T, 126.

⁶T, 130.

⁷T, 187.

⁸T, 188.

⁹See, e.g. T, 210, 215.

¹⁰T, 198.

¹¹T, 198.

¹²T, 204.

¹³T, 208.

¹⁴T, 213-214.

¹⁵T, 187.

¹⁶T, 195-196.

¹⁷T, 196.

Chapter 3 Continued

¹⁸E, 160.

¹⁹E, 46-47.

²⁰T, 183.

²¹T, 217.

²²T, 217.

²³T, 268.

²⁴T, 269.

²⁵T, 218.

²⁶T, 269.

CHAPTER 4

¹D. Erasmus, The Praise of Folly.

²See R. Popkin, The History of Skepticism, Chs. 3 and 4.

³Ibid., Chs. 1-4.

⁴Ibid., 82.

⁵Cf. G. R. Cragg, Reason and Authority in the Eighteenth Century, 10 and 53.

⁶Ibid., Ch. 1.

⁷See J. Locke, The Reasonableness of Christianity.

⁸G. R. Cragg, op. cit., Chs. 1. and 2.

⁹E.g. "to renounce reason is to renounce religion", John Wesley, Letters, 264.

¹⁰G. R. Cragg, op. cit., 28.

¹¹Mark Pattison, Essays, II, 55.

¹²W. Warburton, Works, III, 620.

Chapter 4 Continued

- ¹³ See G. R. Cragg, op. cit., 79.
- ¹⁴ Ibid., 48.
- ¹⁵ J. Butler, Works, I, 375.
- ¹⁶ J. Wesley, Works, VIII, 11-12.
- ¹⁷ J. Wesley, Letters, V, 364.
- ¹⁸ See Sir Leslie Stephen, op. cit., I, 135.
- ¹⁹ See, for example, J. Rée, Descartes, esp. 94-97, and note 11, pp. 181-182, for a discussion of confusions on this matter.
- ²⁰ R. Price, A Review of the Principal Questions and Difficulties in Morals.
- ²¹ W. Godwin, An Enquiry Concerning Political Justice, II, 528.
- ²² R. Price, op. cit., 313.
- ²³ See. W. D. Hudson, Ethical Intuitionism, Ch. 5.
- ²⁴ W. Wollaston, The Religion of Nature Delineated, in Selby-Bigge (ed.), British Moralists, 361-384.
- ²⁵ W. D. Hudson, op. cit., 34.
- ²⁶ T, 415.
- ²⁷ T, 413.
- ²⁸ T, 415.
- ²⁹ T, 416.
- ³⁰ T, 457.
- ³¹ See, e.g. T, 469.
- ³² T, 455.

CHAPTER 5

¹E.g. P. Charron (1541-1603), La Sagesse; J. P. Camus (1584-1654), Essay Skeptique; and (possibly) F. La Mothe Le Vayer (1588-1672), numerous works.

²Hume, Letter from a Gentleman, 21.

³T, 176.

⁴T, 179.

⁵E, 106.

⁶At T, 195-196.

⁷T, 196-197.

⁸See e.g. T, 202, 209, 217.

⁹The first paragraph of T, I, IV, II, shows this to be true of the natural belief in question: the belief in external durability.

¹⁰T, 220.

¹¹T, 225.

¹²T, 225.

¹³T, 225.

¹⁴The Philosophy of David Hume, 288.

¹⁵See, e.g. C. Hendel's introduction to the Scribner edition of Hume's writings, xi.

¹⁶E.g. at T, 124, 139, and E, 35. At T, 225, also, Hume says that a causal reasoner "reasons justly and naturally".

¹⁷T, 466.

¹⁸T, 159.

¹⁹T, 414.

²⁰E, 294.

²¹T, 115.

²²T, 118.

²³T, 97n.

Chapter 5 Continued

²⁴T, 156.

²⁵See, e.g. T, 92, 104, 183, and E, 39.

²⁶E, 46-47.

²⁷See, e.g. W. H. Walsh, Reason and Experience, 176-177.

²⁸T, 72.

²⁹T, 43.

³⁰T, 89.

³¹T, 95.

³²T, 184.

³³E.g. E, 35: "That there are no demonstrative arguments in the case seems evident, since it implies no contradiction that the course of nature may change."

³⁴E, 25.

³⁵F. Zabeeh, Hume, 59.

³⁶See also T, 205.

³⁷E, 25.

³⁸E, 26.

³⁹E, 35.

⁴⁰See the discussion of Beattie's reply to Hume, in C. W. Hendel's Studies in the Philosophy of David Hume, 67.

⁴¹L. White Beck: Early German Philosophy, 189-194.

⁴²Kant-Studien, 1974.

⁴³Op. cit., 276.

⁴⁴"Hume and Necessary Truth", Dialogue, 1966-1967.

⁴⁵"Hume on Mathematics", Philosophical Quarterly, 1960.

⁴⁶David Hume.

Chapter 5 Continued

⁴⁷Ibid., 76.

⁴⁸Op. cit., 133.

⁴⁹Op. cit., 274.

⁵⁰Op. cit., 50.

⁵¹E, 55.

⁵²E, 54.

⁵³T, 195.

⁵⁴T, 225.

⁵⁵E, 55.

⁵⁶E, 55.

⁵⁷D, 198.

⁵⁸D, 211.

⁵⁹D, 208.

⁶⁰D, 207.

⁶¹Loc. cit.

⁶²Loc. cit.

⁶³E, 159.

⁶⁴T, 261.

⁶⁵T, 209.

⁶⁶T, 271.

⁶⁷The Philosophy of David Hume, 486.

⁶⁸Ibid., 493.

⁶⁹Ibid., 564.

⁷⁰T, 217.

⁷¹T, 117.

Chapter 5 Continued

72_T, 215.73_T, 218.74_T, 265.75_T, 266.76_T, 266.77_T, 132.78_T, 149.79_T, 225.CHAPTER 6

¹N. Kemp Smith, Hume: Dialogues Concerning Natural Religion: R. Wollheim, Hume on Religion.

²See, e.g. E, Book I, Part X.

³See, e.g. T, II, III, I-II.

⁴See, e.g. On the Immortality of the Soul.

⁵D, 142.

⁶Loc. cit.

⁷E, xix.

⁸D, 135.

⁹D, 142.

¹⁰D, 143.

¹¹D, 146.

¹²D, 147.

¹³D, 148.

¹⁴D, 148.

Chapter 6 Continued

- ¹⁵D, 156.
¹⁶D, 156.
¹⁷D, 156-157.
¹⁸D, 162.
¹⁹D, 176.
²⁰D, 179-180.
²¹D, 178.
²²D, 178.
²³D, 198.
²⁴D, 202.
²⁵D, 214-215.
²⁶D, 216-217.
²⁷See D, 217-219.
²⁸V. C. Chappell, Hume, A Collection of Critical Essays, 405.
²⁹Ibid., 407.
³⁰D, 159.

CHAPTER 7

- ¹T. H. Huxley, Hume, 50.
²E.g. the followers of Fries and Beneke.
³E.g. by Bradley and Frege.
⁴T, 339.
⁵T, 308.
⁶T, 355-357.
⁷T, 427 ff.

Chapter 7 Continued

⁸ Dissertation on the Passions, in Essays and Treatises on Several Subjects, 231.

⁹ T, 428 ff.

¹⁰ T, 504 n.

¹¹ T, 504 n.-505 n.

¹² T, 513.

¹³ T, 515.

¹⁴ T, 523.

¹⁵ T, 586.

¹⁶ T, 535.

¹⁷ Selby-Bigge, Introduction to the Enquiries, xxi.

¹⁸ T, 98.

¹⁹ T, 129-130.

²⁰ T, 122.

²¹ T, 60-61.

²² T, 60.

²³ T, 11.

²⁴ E.g. "Resemblance...strengthens the relation, and conveys the vivacity of the impression to the related ideas with an easier and more natural movement." T, 112.

²⁵ T, 184-185.

²⁶ T, 215.

²⁷ T, 220.

²⁸ T, 198.

²⁹ T, 217.

³⁰ T, 167.

Chapter 7 Continued

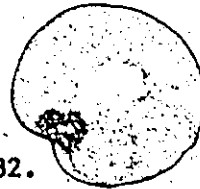
³¹T, 167.

³²See, for example, T, 5.

³³T, 19-22.

³⁴T, 26-28.

³⁵Hume's Philosophical Development, 132.

CHAPTER 8

¹T, 181.

²T, 182.

³T, 182.

⁴T, 183.

⁵T, 184.

⁶D. M. Johnson, "Reasoning and Logic", Int. Ency. of the Social Sciences, 13, 344.

CHAPTER 9

¹G. G. Simpson, "Evolution", Chambers Encyclopedia, 5, 469.

²Konrad Lorenz, King Solomon's Ring, 107-111.

³Ibid., 109.

⁴Tractatus Logico-Philosophicus, 6, 363.

⁵A. J. Ayer, The Problems of Philosophy, 75.

⁶See, e.g. Introduction to Logical Theory, 249-263.

⁷W. H. Walsh, Reason and Experience, 184.

⁸See, e.g. Objective Knowledge, Ch. 1.

Chapter 9 Continued

⁹Book of British Birds, 298.

¹⁰Bertrand Russell, Problems of Philosophy, 63.

CHAPTER 10

¹See, e.g. Reason and Analysis.

²Chrysippus, for example, appears to have explicitly formulated this position.

³Bertrand Russell, ABC of Relativity, 79.

⁴T, 582.

⁵T, 583.

⁶See, e.g. B. Stroud, "Wittgenstein on Logical Necessity".

⁷Philosophical Investigations, Section 223.

⁸G. Warnock, "Hume on Causation".

⁹J. S. Mill, Philosophy of Scientific Method, 186.

¹⁰R. J. Boscovitch, Philosophiae Naturalis Theoria.

¹¹Op. Cit., 65.

¹²Berkeley, for instance, certainly thought of passivity as an essential quality of the "alleged" substance. See, e.g. The Principles of Human Knowledge, para. 91.

¹³H. Putnam, "The Analytic and the Synthetic".

¹⁴W. V. Quine, From a Logical Point of View, 43-46.

¹⁵See: J. Noxon, Hume's Philosophical Development.

¹⁶Abstract, 6-7.

¹⁷W. V. Quine, Op. cit. 44.

¹⁸See: J. Noxon, Op. cit., 144-148.

CHAPTER 11

¹W. V. Quine, From a Logical Point of View, 43.

²E, 11.

BIBLIOGRAPHYAbbreviations:

- APQ: American Philosophical Quarterly.
- JHI: Journal of the History of Ideas.
- JP: Journal of Philosophy.
- NQ: Notes and Queries.
- P: Philosophy.
- PAS: Proceedings of the Aristotelian Society.
- PPR: Philosophy and Phenomenological Research.
- PR: Philosophical Review.
- PQ: Philosophical Quarterly.

A. WORKS BY HUME

- A Treatise of Human Nature. Ed. L. A. Selby-Bigge. Oxford, 1888.
- An Abstract of a Treatise of Human Nature. Ed. J. M. Keynes and P. Sraffa. Cambridge, 1938.
- Of the Standard of Taste and Other Essays, Ed. M. W. Lenz, Indianapolis, 1965.
- Enquiries Concerning the Human Understanding and Concerning the Principles of Morals. Ed. L. A. Selby-Bigge. Oxford, 1902.
- Essays and Treatises on Several Subjects. 2 Volumes. Millar, London, 1767.
- David Hume. A Letter from a Gentleman to his Friend in Edinburgh. Ed. E. C. Mossner and J. V. Price. Edinburgh, 1967.
- Hume on Religion. Ed. R. Wollheim. London, 1963.
- Dissertation on the Passions. In Essays and Treatises, noted above, Vol. II.

Political Essays. Ed. C. W. Hendel. New York, 1953.

Dialogues Concerning Natural Religion. Ed. N. Kemp Smith. Indianapolis, 1947.

The Letters of David Hume. Ed. J. Y. T. Grieg. Oxford, 1932.

B. OTHER WORKS

Anderson, R. F. Hume's First Principles. Lincoln, Neb., 1966.

Anon. Book of British Birds. London, 1969.

Ayer, A. J. The Problem of Knowledge. Harmondsworth, 1956.

Ayers, M. R. The Refutation of Determinism. London, 1968.

Aschenbrenner, K. "Psychologism in Hume", PQ 11 (1961), 28-38.

Atkinson, R. F. "Hume on Mathematics", PQ 10 (1960).

Basson, A. H. David Hume, Harmondsworth, 1958.

Beck, L. W. Early German Philosophy. Cambridge, Mass., 1969.

----- "The Analytic/Synthetic Distinction Prior to Kant", forthcoming.

Belgion, M. David Hume. Brit. Council, Writers and Their Works, No. 181, 14, 106-119.

Bennett, J. F. "The Status of Determinism", Brit. J. Phil. Sci. 14 (1963), 106-119.

----- Kant's Analytic. Cambridge, 1966.

----- Locke, Berkeley, Hume: Central Themes. Oxford, 1971.

Blanshard, B. Reason and Analysis. La Salle, Ill., 1962.

Bousma, O. K. "Naturalism", JP 48 (1951).

Bradley, F. H. Principles of Logic. Oxford, 1922.

Britton, K. Philosophy and the Meaning of Life. Cambridge, 1969.

Broad, C. D. "Hume's Theory of the Credibility of Miracles", in Sesonske and Fleming (eds.), op. cit.

Broiles, D. The Moral Philosophy of David Hume. The Hague, 1964.

- Butler, J. Works. Oxford, 1874.
- Butts, R. E. "Hume's Skepticism", JHI 20 (1959), 413-419.
- Capitan, W. H. "Part X of Hume's Dialogues", APQ 3 (1966), 82-85.
- Chappell, V. C. (ed.). Hume: A Collection of Critical Essays. New York, 1966.
- Church, R. W. Hume's Theory of the Understanding. London, 1935.
- Conroy, G. R. "Did Hume Really Follow Berkeley", P 44 (1969), 238-242.
- Cook, J. W. "Hume's Skepticism with Regard to the Senses", PQ 3 (1968), 40-50.
- Copleston, F. A History of Philosophy. 8 Volumes. New York, 1962-1967.
- Cragg, G. R. Reason and Authority in the Eighteenth Century. Cambridge, 1964.
- Cunningham, G. W. "On Reason's Reach: Historical Observations", APQ 6 (1969), 1-16.
- Dewey, J. The Influence of Darwin on Philosophy. New York, 1910.
- Drever, J. "A Note on Hume's Pyrrhonism", PQ 3 (1953), 40-50.
- Drummett, M. "Bringing About the Past", PR 73 (1964).
- Edwards, P. (ed.). The Encyclopedia of Philosophy. New York, 1967.
- Erasmus, D. The Praise of Folly. In The Essential Erasmus, ed. J. P. Dolan, New York, 1964.
- Feigl, H. "What Hume Might Have Said to Kant", in M. A. Bunge, The Critical Approach to Science and Philosophy, New York, 1964, 45-51.
- Enn, S.-N. "Has James Answered Hume?", JP 49 (1952), 159-167.
- Flew, A. "Images, Supposing and Imagining", P 28 (1953), 246-254.
- "David Hume" in D. J. O'Connor (ed.), Op. Cit.
- Hume's Philosophy of Belief. London, 1961.
- "Did Hume Ever Read Berkeley", JP 58 (1961), 50-51.
- French, S. G. "Hume's Hurdle", JP 58 (1961), 710-711.
- Furlong, E. J. "Imagination in Hume's Treatise and Enquiry", P 36 (1961), 62-70.

- Gaskin, J. C. A. "Hume's Suppressed Dissertation: An Authentic Text", Hermathena 106 (1968), 54-59.
- Gasking, D. "Causation and Recipes", in Sesonske and Fleming (eds.), op. cit.
- Gilson, E. Reason and Revelation in the Middle Ages. New York, 1966.
- Godwin, W. Enquiry Concerning Political Justice. London, 1793.
- Gossman, L. "Two Unpublished Essays on Mathematics in the Hume Papers", JHI 21 (1960), 442-449.
- Gotterbarn, D. "Kant, Hume and Analyticity", Kant-Studien, 1974.
- Goudge, T. A. The Ascent of Man. Toronto, 1967.
- Grene, M. "David Hume", Encounter, March, 1955.
- Grieg, J. Y. T. David Hume. London, 1931.
- Hall, R. "Did Hume Read Some Berkeley Unawares?", P 42 (1967), 276-277.
- "Hume's Actual Use of Berkeley's Principles", P 43 (1968), 276-280.
- "Unnoticed Words in Hume and Others", NQ 213 (1968), 445-448.
- Hampshire, S. "David Hume's Place in Philosophy", Listener 67, 1063-1064.
- Harris, E. E. Fundamentals of Philosophy. London, 1969.
- Hendel, C. W. Studies in the Philosophy of David Hume. Indianapolis, 1963.
- Henze, D. F. "The Linguistic Aspect of Hume's Method", JHI 30 (1969), 116-126.
- Hobart, R. E. "Hume Without Skepticism", Mind 39 (1930), 273-301, 409-425.
- Hobhouse, L. T. Development and Purpose: An Essay Towards a Philosophy of Evolution. London, 1913.
- Hudson, W. D. The Is-Ought Question. London, 1969.
- Ethical Intuitionism. London, 1967.
- Huxley, T. H. Hume. London, 1901.
- Jessop, T. W. "Some Misunderstandings of Hume", Rev. Int. de Phil. 6, 155-167.
- Johnson, D. M. "Reasoning and Logic", in D. L. Sills (ed.), International Encyclopedia of the Social Sciences, New York, 1968.

- Katz, J. J. The Problem of Induction and its Solution. Chicago, 1962.
- Kemp-Smith, N. "The Naturalism of Hume", Mind, 1905.
- "David Hume", PAS supp. vol. xviii (1939), i-xxxiv.
- The Philosophy of David Hume. London, 1941.
- Kneale, W. Probability and Induction. Oxford, 1949.
- Kuhn, T. S. The Structure of Scientific Revolutions. Chicago, 1970.
- Kuypers, M. S. Studies in the Eighteenth Century Background of Hume's Empiricism. New York, 1966.
- Kydd, R. M. Reason and Conduct in Hume's Treatise. New York, 1964.
- Laflour, L. J. "A Footnote on Descartes and Hume", JP 49 (1952), 780-783.
- Laird, J. Hume's Philosophy of Human Nature. London, 1932.
- Lakatos, I. (ed.). Inductive Logic. Amsterdam, 1968.
- Lenz, J. W. "Hume's Defense of Causal Inference", JHI 19 (1958), 559-567.
- Locke, J. The Reasonableness of Christianity.
- Lorenz, K. King Solomon's Ring. London, 1961.
- MacDiarmid, H. The Man of (Almost) Independent Mind. Edinburgh, 1966.
- MacNabb, D. G. C. David Hume: His Theory of Knowledge and Morality. London, 1951.
- "Hume, David", in P. Edwards (ed.), op. cit.
- Markus, R. I. "Hume: Reason and Moral Sense", PPR 13 (1952), 139-157.
- Maxwell, J. C. "An Allusion in Hume's Letters", NQ 190 (1946), 228-230.
- Mill, J. S. Philosophy of Scientific Method. New York, 1950.
- Mossner, E. C. "The Continental Reception of Hume's Treatise 1739-41", Mind 56 (1947), 31-43.
- "Hume's Early Memoranda 1729-1740: The Complete Text", JHI 9 (1948), 492-518.
- "Philosophy and Biography: The Case of David Hume", PR 59 (1950).

----- "The First Answer to Hume's Treatise: An Unnoticed Item of 1740", JHI 12 (1951), 291-294.

----- The Life of David Hume. Edinburgh, 1954.

Nathan, G. J. "Hume's Immanent God" in V. C. Chappell (ed.), op. cit.

Noxon, J. "Hume's Agnosticism", PR 73 (1964), 248-261.

----- Hume's Philosophical Development. Oxford, 1973.

O'Connor, D. J. John Locke. New York, 1967.

----- (ed.). A Critical History of Western Philosophy. New York, 1964.

Otten, T. "A Borrowing From Hume", NQ 214 (16) (1969), 189-190.

Passmore, J. Hume's Intentions. London, 1968.

Pattison, M. Essays. Oxford, 1889.

Pears, D. F. Bertrand Russell and the British Tradition in Philosophy. London, 1967.

----- (ed.). David Hume: A Symposium. London, 1963.

Penelhum, T. "Hume on Personal Identity", PR 64 (1955), 571-589.

Pepper, S. C. World Hypotheses. California, 1970.

Popkin, R. H. "David Hume: His Pyrrhonism and His Critique of Pyrrhonism", PQ 1 (1959), 385-407.

----- "George Tucker, An Early American Critic of Hume", JHI 13 (1952), 370-375,

----- "The Skeptical Precursors of David Hume", PPR 14 (1955), 61-71.

----- "Did Hume Ever Read Berkeley?", JP 56 (1959), 535-545.

----- "So, Hume Did Read Berkeley", JP 61 (1964).

----- The History of Skepticism. New York, 1964.

Popper, K. R. "Philosophy of Science: A Personal Report", in C. A. Mace, British Philosophy in the Mid Century. London, 1957.

----- "Hume's Explanation of Inductive Inference", in Sesonske and Fleming, op. cit.

- Objective Knowledge. Oxford, 1974.
- The Logic of Scientific Discovery. Toronto, 1959.
- Price, H. H. "The Permanent Significance of Hume's Philosophy", P 15 (1940), 5-37.
- Belief. London, 1969.
- Hume's Theory of the External World. Oxford, 1940.
- Price, R. A Review of the Principal Questions and Difficulties in Morals. London, 1769.
- Putnam, H. "The Analytic and the Synthetic", Minnesota Studies in the Philosophy of Science, Vol. III, 1962.
- Quine, W. V. O. From A Logical Point of View. Harvard, 1964.
- Ree, J. Descartes. Allen Lane, London, 1974.
- Reichenbach, H. The Theory of Probability. Berkeley, 1949.
- Robinson, J. A. "Hume's Two Definitions of Cause", PQ 12 (1962), 162-171.
- Russell, B. ABC of Relativity. London, 1958.
- History of Western Philosophy. London, 1961.
- Problems of Philosophy. Oxford, 1912.
- Wisdom of the West. New York, 1964.
- Salmon, W. "Justification of Inductive Rules of Inference" in I. Lakatos (ed.), op. cit.
- Santayana, G. Skepticism and Animal Faith. New York, 1955.
- Selby-Bigge, L. A. British Moralists. New York, 1965.
- Sesonske, A. & Fleming, N. (eds.). Human Understanding. Belmont, 1966.
- Simpson, G. G. "Evolution", Chambers' Encyclopedia. London, 1973.
- Smart, N. Philosophers and Religious Truth. London, 1964.
- Stephen, Sir L. English Thought in the Eighteenth Century. New York, 1962.
- Stove, D. "Hume, Probability and Induction", PR 74 (1965), 160-177.
- Probability and Hume's Inductive Skepticism. Oxford, 1973.

- Strawson, P. F. Introduction to Logical Theory. London, 1964.
- "The Justification of Induction", in Sesonke and Fleming
(eds.), op. cit.
- Stroud, B. "Wittgenstein and Logical Necessity" in G. Pitcher (ed.),
Wittgenstein, New York, 1966.
- Suchting, W. A. "Hume and Necessary Truth", Dialogue 5 (1966), 47-60.
- Walsh, W. H. Reason and Experience. Oxford, 1947.
- Metaphysics. London, 1963.
- Warburton, W. Works. London, 1788.
- Warnock, G. "Hume on Causation", in D. F. Pears (ed.), op. cit.
- Wasserstrom, R. "Hume and Philosophical Analysis. A Reply to Professor
Lazerowitz", P 35 (1960), 151-153.
- Wesley, J. Works. London, 1829.
- Letters. London, 1931.
- Wilbanks, J. Hume's Theory of the Imagination. The Hague, 1968.
- Williams, D. The Ground of Induction. Cambridge, Mass., 1947.
- Wittgenstein, L. Tractatus Logico-Philosophicus. London, 1971.
- Philosophical Investigations. Oxford, 1967.
- Wolff, R. P. "Hume's Theory of Mental Activity", PR 69 (1960), 289-310.
- Wollaston, W. The Religion of Nature Delineated. Reprinted in Selby-
Bigge's British Moralists (see above), Vol. II.
- Wright, G. H. von. The Logical Problem of Induction. Oxford, 1957.
- Zabeeh, F. Hume: Precursor of Modern Empiricism. The Hague, 1960.