PRIESTLEY'S METAPHYSICS

being

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by

Alan Tapper

B.A. (U.W.A.), M.A. (Lancaster)

Department of Philosophy

University of Western Australia

I accordance with the Regulations governing the submission of theses I hereby declare that I have acknowledged all sources in my thesis, and that the thesis is my own composition.

Alan Tapper

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ABSTRACT

Joseph Priestley was a man of many and varied intellectual interests. This thesis surveys his philosophical thought, with a central focus on his philosophical theology. The subject can be divided into two parts, natural theology and moral theology.

Priestley's natural theology is a perhaps unique attempt to combine and harmonize materialism, determinism and theism, under the auspices of Newtonian methodology. His materialism is based on three arguments: that interaction between matter and spirit is impossible; that a dynamic theory of matter breaks down the active/passive dichotomy assumed by many dualists; and that Newton's "Rules of Reasoning in Philosophy" require the rejection of the "hypothesis" of the soul. His determinism arises from his theory of causation. He attempts to show that the only acceptable account of causation is one in which every cause is invariably followed by the same effect, and that libertarianism violates this central assumption of scientific thought. His theism rests on the Argument from Design. He defends the Argument by trying to show that none of the alternatives to Design advanced in Hume's Dialogues concerning Natural Religion constitute a plausible scientific hypothesis. His critics accused his synthesis of materialism, determinism and theism of leading to atheism or pantheism. His defence against these charges is that his system is essentially theistic, and that its ontology is determined by the Argument from Design.

Priestley's moral theology is also in part a response to Hume's Dialogues. He offers a number of replies to the "problem of evil". Evil and adversity heighten our appreciation of good; they are a consequence of the finitude of the creation; they follow from the desirability of having a world governed by general laws; and they make possible the achievement of moral character. Character-formation is his main defence, and his methodology requires him to show that adversity leads more often than not to positive results. This requirement is embodied in his progressivist philosophy of history. History, he holds, exhibits temporal purpose and Design, just as nature exhibits atemporal purpose and Design. Priestley's political thought can be seen as arising from his moral theology, mediated by the notions of "luxury", which he regards as morally harmless, and "idleness", which is the main source of moral evil. His combination of liberalism and radicalism is examined both for internal consistency and as a response to the events of his day, ending with the French Revolution.

Priestley is interesting partly for his unorthodoxy, partly for the interconnectedness of his diverse concerns, and partly because he debated with distinguished contemporaries. Throughout the thesis his views are juxtaposed with those of Hume, Reid, Price, Boscovich, Burke and a number of other thinkers.

ABBREVIATIONS

References to the Theological and Miscellaneous Works of Joseph Priestley, 25 volumes in 26, edited by John Towill Rutt, (London, 1817-1832; reprinted New York, 1972), are signified in the text as, e.g., (III,91). Volume One is in two parts; Part One is referred to as (I,1,91), Part Two as (I,2,91).

Priestley's titles have been abbreviated as:

Matter and Spirit = Disquisitions relating to Matter and Spirit, 2nd edition, 1782.

Philosophical Necessity = The Doctrine of Philosophical Necessity Illustrated, 2nd edition, 1782.

Examination = An Examination of Dr Reid's Inquiry into the Human Mind on the Principles of Common Sense; Dr Beattie's Essay on the Nature and Immutability of Truth; and Dr Oswald's Appeal to Common Sense in Behalf of Religion, 2nd edition, 1775.

"Introductory Essays" = Priestley's introduction to his abridged edition of David Hartley's Observations on Man, entitled Hartley's Theory of the Human Mind, on the Principle of the Association of Ideas, 2nd edition, 1790.

Free Discussion = A Free Discussion of the Doctrines of Materialism and Philosophical Necessity, in a Correspondence between Dr Price and Dr Priestley, 1st edition, 1778.

Philosophical Unbeliever = Letters to a Philosophical Unbeliever, Part I, 2nd edition, 1787.

Additional Letters = Additional Letters to a Philosophical Unbeliever, 2nd edition, 1787.

Institutes = Institutes of Natural and Revealed Religion, 2nd edition, 1782.

Essay on Government = An Essay on the First Principles of Government, and on the Nature of Political, Civil and Religious Liberty, 2nd edition, 1771.

Observations on Education = Miscellaneous Observations relating to Education more especially as it respects the Conduct of the Mind, 1st edition, 1778.

Lectures on History = Lectures on History and General Policy, 2nd edition, 1803.

Letter to Pitt = A Letter to the Right Honourable William Pitt, 2nd edition, 1787.

Letters to Burke, = Letters to the Right Honourable Edmund Burke, occasioned by his Reflections on the Revolution in France, 3rd edition, 1791.

Political Dialogue = A Political Dialogue. On the General Principles of Government, 1st edition, 1791.

Northumberland Letters = Letters to the Inhabitants of Northumberland and its Neighbourhood on Subjects Interesting to the Author, and to Them, 2nd edition, 1801.

I have preferred Matter and Spirit as my abbreviation instead of the more usual, but less descriptive, Disquisitions. Where it has seemed necessary to distinguish between the different editions of Priestley's works, this has been done explicitly. I have modernized Priestley's punctuation and deleted italics where these have only hindered the flow of his sentences. All remaining italics are Priestley's, except where it is indicated otherwise. Cross-references within the thesis are as follows: "Section 5.2(iii)" refers to Chapter 5, Section 2, sub-section (iii).

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... the boldest and most original experimenters are those who, giving free scope to their imaginations, admit the combination of the most distant ideas; and ... though many of these associations of ideas will be wild and chimerical, yet ... others will have the chance of giving rise to the greatest and most capital discoveries; such as very cautious, timid, sober and slow- thinking people would never have come at.

Priestley, Experiments and Observations on Different Kinds of Air, 3rd ed., 1781, Vol. I, p. 258.

INTRODUCTION

In his Travels in France, Arthur Young records a conversation he had in 1789 with the French chemist, Baron Guyton de Morveau. Young was expounding his then somewhat novel idea that any man with a talent for science should be "fully employed in experiments", and that the King or his minister should "make that employment so profitable to him, that he should do nothing else". To this, Guyton "laughed, and asked me, if I was such an advocate for working, and such an enemy to writing, what I thought of my friend Dr Priestley? And he then explained to the other two gentlemen, that great philosopher's attention to metaphysics, and polemic divinity. If an hundred had been at table, the sentiment would have been the same in every bosom".<1>

This thesis is about "that great philosopher's attention to metaphysics". We are dealing with Priestley the "philosopher", in the modern sense of the word, not in the eighteenth-century sense of "natural philosopher". It is surprising both how early and how often Priestley's "writings", his philosophical writings especially, have been treated with the kind of easy dismissal they received from Guyton and Young. It is perhaps one of the penalties of versatility that a man's efforts in one field can be contrasted detractingly with his greater achievements elsewhere. Priestley, in short, has frequently not been counted as a philosopher at all, but as one who deviated into philosophy by mischance.

The two foremost philosophers of the day were of a different opinion. Thomas Reid was one who took Priestley seriously. Reid had no liking for Priestley, and his explicit references to him are disparaging and dismissive, but he was, as this thesis will show, inwardly much occupied by Priestley's doctrines. His Essays on the Active Powers of the Human Mind, to give only the most obvious instance, can be read as largely a reply to Priestley.

Immanuel Kant also held Priestley in some regard. In broad outline Priestley's philosophy might be described as an attempt to make the Enlightenment serve Christian ends. Writing soon after Priestley's excursion into philosophy, Kant complimented him with the remark that he "knew how to combine his paradoxical teaching with the interests of religion".<2> The paradox is that of a man who, though "a pious and zealous teacher of religion", has striven to "pull down two such pillars of religion as the freedom and immortality of the soul (the hope of a future life is for him only the expectation of the miracle of a resurrection)". Kant was not one to be daunted by a mere apparent paradox. Priestley, he observes, "was concerned for the interests of reason, which must suffer when we seek to exempt certain objects from the laws of material nature, the only laws which we

can know and determine with exactitude". Kant goes on to voice the conventional opinion that, "having strayed outside the field of natural science", Priestley was "unable to find his bearings"; but this turns out to be a distinctively Kantian opinion, based on specifically Kantian grounds, and therefore not on grounds available to Priestley. In Kant's view, Priestley's speculations (like Hume's) had the merit of assisting in the breakdown of traditional metaphysics, and thereby they hastened the day when reason undertakes to examine her own resources. His speculations are granted at least an interim validity. It seems that, if only the methods of natural science were valid outside natural science, as Priestley thought they were, then Kant would have no fundamental objection to his "paradoxical teaching". Their contemporary, Herder, unencumbered by Kantian considerations, had no hesitation in endorsing Priestley's materialism, and does not seem to have held any fears for its effect upon religion.<3>

The standard opinion on Priestley's philosophy is perhaps that of Leslie Stephen. Priestley's combination of materialism and determinism with theism is described by Stephen as an attempt "to combine theology and science, by accepting a view of God and the soul which should make them accessible to ordinary methods of scientific investigation". Stephen disavows any intention himself to "enquire how far it is possible to combine materialism and theism without an absolute logical contradiction". He asserts, nevertheless, that Priestley's "theology was connected by the flimsiest of ties with [his] philosophy", and that a thoroughgoing materialism would have dispensed altogether with the theology. His "unnatural alliance", in Stephen's opinion, "bears the marks of hasty and superficial thought". Priestley "possessed one of these restless intellects which are incapable of confining themselves to any single task, and, unfortunately, incapable in consequence of sounding the depths of any philosophical system". His "whole system ... is one of those little eddies of thought which can hardly maintain themselves in the minds of their originators, and are speedily swept away by stronger currents".<4>

That Priestley's talents were better suited to science than to philosophy was the opinion not just of his enemies, but of some of his friends. Eventually he was dissuaded from pursuing his philosophy further, and it is this that accounts for the impression that his thought could hardly maintain itself in the mind of its originator. Priestley's "little eddy of thought" nevertheless enjoyed a brief but surprisingly powerful vogue amongst his younger contemporaries, the generation that later came to be thought of as the "Romantics". Coleridge, Southey, Godwin, Wollstonecraft, Blake, Lamb, Hazlitt and (though no "Romantic") James Mill can all be found enthusing over one aspect or another of Priestley's outlook. The enthusiasm was mostly short-lived. By 1830 when his staunch supporter John Towill Rutt had managed to put together his Theological and Miscellaneous Works the interest in what those works contained had indeed been "swept away by stronger currents".

Still, Priestley was not quite without champions in the nineteenth century. William Hazlitt could say that he "took in a vast range of subjects of very opposite characters, treated them all with the same acuteness, spirit, facility, and perspicuity, and notwithstanding the intricacy and novelty of many of his speculations, it may be safely asserted that there is not an obscure sentence in all he wrote".<5> Another defender, James Martineau thought the problem with Priestley's reputation was that his concerns were so much to do with theology, and "a fame locked up in theology is scarcely more hopeful than

an estate locked up in chancery".<7> Writing of his scientific career Priestley commented that "like a meteor, it may be my destiny to move very swiftly, burn away with great heat and violence, and become as suddenly extinct".<8> The metaphor has little application to his scientific reputation, which has endured, but it seems fairly apt for his other achievements. The meteor, it might be added, broke up as it came to earth. What remained of his achievements existed only in fragments, as the theology, the science, the psychology, the progressivism and the politics, which for him were integral, separated and disintegrated, until they could appear as disconnected as they did to Stephen.

Not until recently has the tenor of Stephen's judgement been energetically challenged. The challenge has come from two historians of science, J. G. McEvoy and J. E. McGuire. In their 1975 essay entitled "God and Nature: Priestley's Way of Rational Dissent" they defend a picture of the man very different from that of Stephen:

> Although his work is not in the forefront of the intellectual achievements of the eighteenth century, Priestley is one of the great systematic thinkers of the century. Despite his diffuse and rambling writings, the categories of his thought reveal a mind with unusual synoptic power, dedicated to articulating the interconnections and ramifications of the central doctrines in his philosophy of man and nature .... Ultimately, his entire intellectual system rests on theological foundations, the central concepts of which are determinism, necessity, causation, and materialism.<8>

Before them John Passmore had advanced a more qualified and balanced defence of Priestley's thought. Priestley, he says, had "the sort of mind for which versatility is appropriate; not quite of the first order in intellectual penetration, but bold, energetic, commonsensical, unrestricted by an undue respect either for tradition or for the entrenched prejudices of specialists".<9>

Despite these judgements, Priestley's name as a philosopher is still little heard amongst historians of the subject, or even amongst historians of the Enlightenment. Stephen's view of him as a philosophical incompetent, the father of a still-born system, seems to continue to hold the field, if only by default. This thesis will at least look for the thinker of "unusual synoptic power", though without pre-judging the issue, or issues, most of which are still unsettled amongst philosophers. It was certainly Priestley's intention to produce a coherent system of "rational religion", but that was not so rare an intention as to particularly distinguish him, nor does it tell us anything about his achievement. Certainly also much of his system was hastily built, but it can not be inferred from this alone that it collapses into contradiction. One of Stephen's accusations was that Priestley's Christian materialism "caricatures the ordinary English tendencies to make a compromise between things incompatible".<10> This last gibe, at least, misses the mark. None of his contemporaries noticed any tendency towards compromise in Priestley, and many thought him an all-too-enthusiastic controversialist. He himself was well aware that his cast of mind favoured "precipitancy", not "procrastination".<11>

Priestley's versatility was proverbial, and earned him the nickname "Proteus-Priestley". He not only wrote books faster than other people could read them, he wrote on a range of subjects broader than others would care to master. As James Martineau put it, "To refer to

a catalogue of Dr Priestley's works is like consulting a prospectus of a Cyclopaedia...." Such versatility, he added, leaves the impression that his mind was "more adventurous than profound, and its vision more telescopic than microscopic". To assess Priestley's philosophy is partly to weigh the merits of the adventurous and the telescopic against those of the microscopic and the profound; but, as Martineau observed, the impression that his qualities lie wholly in the former classes, and not at all in the latter, is not quite just. Of this impression he says, "We believe it to be the truth, but not the whole truth".<12>

If Priestley's interests were various and complex, so also were the intellectual relationships that grew out of them. As a result, Priestley should be of interest to many who have no direct interest in him. Many of the leading thinkers of the century appear in his pages: Newton, Locke, Berkeley, Samuel Clarke, Anthony Collins, Hume, David Hartley, Richard Price, Roger Joseph Boscovich, Baron D'Holbach, Thomas Reid, Erasmus Darwin, Edmund Burke. To write about Priestley is necessarily to write about his relation to these other thinkers. By no means a "great philosopher", Priestley is a rough diamond in whose many facets it is possible to make out the reflections of his more distinguished contemporaries, and the likenesses which appear there are not always as favourable as their reputations would indicate. This thesis will attempt to place Priestley firmly in his contemporary setting; but little effort will be made to sketch the historical background to his thought.

The topic of this thesis draws together Priestley's views on some central questions in metaphysics. The first five chapters deal with questions of an ontological nature, and can be broadly classified as a survey of Priestley's natural theology. This includes his arguments for materialism (Chapters One and Two); his arguments for determinism (Chapter Three); his arguments for theism (Chapter Four); and his views on the nature of God (Chapter Five). (The order of my presentation of these topics follows the order in which Priestley published on them.) The last four chapters discuss his optimistic moral theology. Chapters Six and Seven consider his views on the problem of evil and its relation to his progressivist philosophy of history. Chapters Eight and Nine relate these views to his political theory. Priestley's "polemic divinity" - his Unitarianism - is outside our scope. So also is the question of life after death, which he held to rest on revelation, not natural theology. The distinction which I have drawn between natural and moral theology is reflected in his publications. His natural theology consists of a compact series of writings, composed in a very short period. His moral theology was never given a full or systematic presentation, but it permeates his writings on almost any subject, no matter how apparently remote.

A man with a restless mind, Priestley also led an unsettled life. Like almost all those who achieved intellectual distinction in the later eighteenth century, his origins were ordinary and his rise to fame slow. After his Yorkshire childhood and student days at Daventry Academy, he lived successively at Needham Market, Suffolk (1755-58), Nantwich, Cheshire (1758-61), Warrington (1761-67), Mill Hill, Leeds (1767-73), Calne, near Bath (1773-80), Birmingham (1780-91), London (1791-94) and Northumberland, Pennsylvania (1794-1804). Always a Dissenting clergyman who took his duties seriously, his careers also included school-teaching, teaching at the Warrington and Hackney Dissenting Academies, librarian and adviser to Lord Shelburne and supervisor of his sons' education, and of course scientific researcher.

When, at the age of forty-seven, he became free to choose his own place of residence, Priestley chose Birmingham. Many of his friends were there, it had a strong constituency of liberal Dissenters, and it was a centre of scientific and industrial activity - the famous Lunar Society had been meeting there for about twelve years before Priestley joined it in 1780. However, while Birmingham was his spiritual home, it was not the place of his best work. The Birmingham Priestley was mainly Priestley the church historian, the antagonist of Bishop Horsley; and the guiding framework of his church history comes largely from his earlier philosophy and theology.

Without doubt Priestley's most creative period was his seven years under the patronage of Lord Shelburne at Calne or (during the winter) in London. The ample time afforded by this position Priestley divided mainly between "natural philosophy" and "metaphysics". His habit was to spend the middle of the day on his experiments and the evenings on his other writings. His daytime experiments in the 1770s yielded nine gases (six of them previously unsuspected), a new theory of respiration, the first steps towards a theory of photosynthesis, and various advances in experimental technique. His evenings at Calne and London produced much of his philosophical work.

Priestley's ontological writings, his natural theology, fall entirely within the span of a single decade, from 1772 to 1782. In 1772 he began his religious apologetic, the Institutes of Natural and Revealed Religion (1772-4), which is however only incidentally philosophical. His first important essay in philosophy, the 1774 Examination (of the Scottish philosophers, Reid, Beattie and Oswald) dealt mainly with perception and epistemology. Then followed a series of works on the mind and human powers: the "Introductory Essays" of 1775 which preface his abridged edition of David Hartley's Observations on Man; his exposition of materialism, the Disquisitions relating to Matter and Spirit of 1777; The Doctrine of Philosophical Necessity Illustrated, which first appeared as an Appendix to the 1777 edition of Matter and Spirit; the Free Discussion ... between Dr Price and Dr Priestley of 1778; and various Letters in reply to his libertarian critics (1777-1780). This rapid sequence of publications was brought full circle when Priestley returned to philosophical theology in Part I of his Letters to a Philosophical Unbeliever of 1780 and in his Additional Letters to a Philosophical Unbeliever of 1782. (Part II of the Philosophical Unbeliever, which appeared in 1787, is historical rather than philosophical - an answer to the implicit charges against Christianity in Gibbon's Decline and Fall of the Roman Empire. A third part was added in 1794 in response to Paine's Age of Reason.)

The writings that relate to Priestley's moral theology begin with his first lectures at Warrington Academy (1761-67) and continue steadily to the end of his life in 1804. His views on the problem of evil are to be found mainly in the Institutes and the Philosophical Unbeliever, but also in many other religious discourses and in his social, political and educational works. His first political work was the Essay on the First Principles of Government of 1768. His 1778 Observations relating to Education is of wider significance than the title suggests. The most important of his early lectures were not published until 1788, when they appeared in a revised form as the Lectures on History and General Policy, containing much of his progressivism and some political reflections. In the 1790s he was caught up with political controversy, in his 1790 Letter to Burke and his 1791 Political

Dialogue, amongst much else. These titles give only a minimal impression of the range and quantity of his writing, and because he produced no systematic statement of his moral theology, sometimes we have to turn to these minor writings for elucidation of a point that receives no explanation elsewhere.

In pursuing the central questions of this thesis, a variety of related philosophical topics are encountered along the way. Priestley was the first to defend the Lockean "Theory of Ideas" against Thomas Reid's "Common Sense" philosophy (itself a response to Hume's epistemological scepticism); and Priestley's materialism can be traced to its source in his response to Reid and in particular to the problem of interaction between dissimilar substances which Reid highlighted. It was also in the course of fashioning his materialism that Priestley came to adopt from Boscovich and John Michell the new dynamic theory of matter which challenged the atomistic tradition and led ultimately to the field theories of Faraday and Clerk Maxwell. The third and main support for Priestley's materialism is drawn from his views on scientific methodology. Here Priestley was an important link in the tradition (running through Hartley, Erasmus Darwin, and William Whewell) which accepted the use of analogical reasoning in the development of scientific theories. The opposite "Baconian" tradition, which disfavoured analogies, was led (in Priestley's time) by Reid. Both traditions appealed to the authority of Newton's "Rules of Reasoning in Philosophy", so it is one task of this thesis to disentangle Priestley's and Reid's competing interpretations of these "Rules".

Priestley is one of the few important British exponents of materialism before recent times. Perhaps only Hobbes rivals him in this record. To defend materialism in the eighteenth century was to become conspicuously heterodox, even leaving aside his attempt to ally it with theism. There was hardly at all a materialist tradition; his materialism was, to a large extent, his own creation. Hobbes, for instance, contributes nothing to Priestley here. Priestley's determinism, by contrast, stood within the solid tradition which runs from Hobbes through Collins, Hume, Hartley, Jonathan Edwards and Lord Kames. However, Priestley does attempt to advance this tradition on one significant point. In his view the debate about determinism is essentially a debate about the nature of causation. His argument contains a rudimentary attempt to demonstrate that the only acceptable account of causation is one in which every cause is invariably and necessarily followed by the same effect (as opposed to the view which allows something to be regarded as a cause although it might or might not be so followed). Earlier British determinists (I would argue, although space forbids any historical excursus) tended to assume this account; Priestley tried to make it a compelling one.

Philosophical theists in the eighteenth century, both Christian and Deist, mostly found determinism unacceptable, and almost all anathematized materialism. In combining both doctrines with theism Priestley found himself virtually in a class of his own.<13> Yet in defending theism Priestley for once stood with the majority. He was perhaps the leading British exponent of the Argument from Design in the latter half of the century. (Paley did not publish on Design until 1802, two years before Priestley's death.) Priestley happened to be on the scene when the Enlightenment's two greatest challenges to philosophical theism came off the presses: the Syste`me de la Nature of 1770, attributed then to "the elder Mirabaud" (an author who had been dead for ten years) but now known to be by Baron D'Holbach; and Hume's Dialogues concerning Natural Religion of 1779, published three years after the author's death. Priestley thought the Syste`me the better book,

describing it as "the most plausible and seducing of any thing I have met with in support of atheism" (IV,389), but his actual counter-arguments are mostly directed against Hume.

Priestley had not only to defend his type of theism against its critics - he also had to defend it, as it were, against himself. Priestley's own critics - Price, and later Coleridge - contended that materialism and determinism are incompatible with belief in a transcendent Deity, and that these doctrines lead more naturally to Spinoza's Deus sive Nature, if they lead to anything. Each of the preceding philosophical problems - those to do with materialism, determinism and theism - form subjects of interest in themselves, but it is Priestley's attempt to combine and harmonize these three doctrines that gives some unity to this half of the thesis. Indeed, he can make some claim to uniqueness as a philosopher in this attempt, which he pursued with a modicum of rigour, to bring about a synthesis of these doctrines. Priestley was aware that his system required a radical departure from the traditional assumptions of Christian thought, but he was convinced that the old foundations had decayed, and he believed that "if the superstructure itself be valued, a man will always look out for some better supports rather than let it fall altogether" (IV,390).

Throughout this thesis critical commentary has been kept to a bare minimum. Mostly I have preferred to let his contemporary critics present the case against Priestley. Price, Reid and others subjected Priestley's determinism and materialism to the best criticisms they could muster, and their remarks can be used to shed light on his positions. This method works less well in the case of Priestley's attempted synthesis. Priestley certainly welcomed criticism, as he makes plain in the Preface to Matter and Spirit:

> So very free and undisguised an attack upon an opinion [belief in the soul] almost universally deemed to be of the utmost importance to all religion, natural or revealed, may be expected to arouse the zeal of many friends to the prevailing system, and produce defences of it. This is what I expect, and what I wish.... (III, 204).

He added, with his usual optimism, that "when the warmth of debate is over ... the real weight of argument is the thing that will decide in the end" (III, 206).

In assessing Priestley's attempted synthesis it is necessary to distinguish between the success or failure of the synthesis and the success or failure of its elements. Modern opinion is likely to value his materialism and determinism more than his theism; eighteenth- century opinion held the reverse. Priestley's "synthesis" stands or falls independently of these judgements. The issue is simply whether the arguments supporting the various elements are consistent with each other or mutually reinforcing or mutually detrimental.

Priestley's materialism received the criticism he expected, but his materialistic theism, strangely, did not. The criticisms which did appear in Priestley's time were piecemeal and scattered. The one consistent line of criticism, the accusation of pantheism, is mainly later in origin, suggested first by Price but stemming mainly from Coleridge and persisting to the present day. I argue in Chapter Five that, despite the frequency of this accusation, Priestley was not by intention a pantheist. The one published criticism of the Letters to a Philosophical Unbeliever came from a genuine pantheist, Matthew Turner, and in

Priestley's Additional Letter we can see how he tried to rebut Turner. Whether the defences he employs here are adequate is more debatable. He avoids the objection that his arguments for materialism would count against his theism by defending a materialistic account of the nature of God. When faced with the difficulty that analogy would require God to be thought of as having something like a brain, he seeks to exempt this case from the principle of analogy. This move conflicts with his general epistemology, and undermines the central reasoning of his Argument from Design. In every other way, however, the principle of analogy would seem to suggest that Priestley's system is not incipiently pantheistic. As he pointed out, the Design analogy assumes a categorical distinction between maker and made. His theory of causation allows no place for the notion of immanent causation which must be crucial for the pantheist. Priestley maintains that the production of thought by the brain is not to be regarded as a kind of immanent causation, and thus can not serve pantheistic purposes.

Priestley's moral theology is a kind of optimism. He assumes that the classical problem of evil, the difficulty of reconciling a perfect Creator with an imperfect creation, can only be answered by an argument which would tend to exhibit this imperfect world as the best of all possible worlds. His optimism is unusual in two respects. First, unlike earlier optimists, he thinks that the predominance of good over evil in this world is not a matter of metaphysical deduction, but is discoverable from experience. In this way his moral theology is consistent with his general empiricism. Secondly, his optimism is unusual in being progressive optimism. He sees no difficulty in holding both that this is the best of all possible and that it is steadily becoming a better world. In his work as an historian he presents a view of the past as embodying a process of material, intellectual and moral improvement. He thinks of historical progress as a kind of Design, the counterpart in the moral realm to Design in the natural order. Further, his progressivism arises at least partly out of his response to the problem of evil.

Like his defence of Design, Priestley's moral theology can be viewed in relation to Hume's Dialogues, though his arguments precede its publication. In response to Hume's objections to the assumption of divine benevolence he attempts to employ the full repertoire of eighteenth-century theodicy (with the exception of the "free-will defence", which is incompatible with his determinism). The primary consideration for him is the claim that adversity is necessary for the creation of moral character, a claim which is barely noticed in Hume. Priestley has difficulty in demonstrating that character can be formed only under adversity. He attempts to give it plausibility by connecting it to his theory of progress. He tries to show that scientific and material progress follows from the free exchange of ideas, which makes possible the formation of hypotheses and leads to a variety of experiments. This scientific model suggests a society in which diversity and toleration are valued as the means of discovering moral and religious truth.

Priestley's view of society does not follow quite straightforwardly from this scientific model. He is not convinced that moral achievements can be accumulated in quite the same way as can intellectual and material achievements, for the simple reason that the adversity which produces moral progress can not be shared. However, he thinks that this problem of the transition from scientific to moral progress is not insuperable. In his view science has a moralizing influence because it reinforces the credibility of the idea of Design.

Much of Priestley's political thought follows easily from these theological premises. His notion of progress is socially robust: the civilizing agencies, science and education, are the creators of a new kind of material power and prosperity. This view is at odds with Burke's account of progress, which rests ultimately on the socially vulnerable influence of Christianity and chivalry, acting through the clergy and the nobility. Both Burke and Priestley regard economic prosperity as morally beneficial; in this they are in opposition to many of Priestley's fellow radicals, who stigmatize it as "luxury", and count it a source of political and moral corruption. In Priestley's view this "luxury" is the end-product of the long historical struggle with adversity. It is thus theologically justifiable.

Burke and Priestley are in conflict over the necessity of an hereditary nobility. Priestley rejects aristocracy on moral and theological grounds. A system which awards honours and privileges without any correlative duties and demands is the embodiment of "idleness", which is for him "the great inlet to the most destructive vices" (XXV, 340). "Idleness" corrupts because it attempts to evade the character- forming difficulties ordained by a wise Providence. Priestley is a radical in that he employs this notion against the established social system. He is also a liberal in that he thinks that the forces of "luxury" and progress are steadily overcoming the influence of "idleness". Burke's political theory contains a defence of the necessity and utility of "idleness". In his judgement political stability can be ensured only by establishing a class which enjoys leisure and economic independence. Ultimately this disagreement stems from their conflicting accounts of progress. Burke sees progress as fragile and regards both radical intellectuals and the majority of the people as a threat to it. Priestley regards it as intrinsically robust because it arises from this same majority, the "industrious classes".

When we examine more closely Priestley's response to the events of his day, however, his political thought appears more complex than this model allows. He is more radical as a pamphleteer and propagandist than he is in his formal theory. He greets the arrival of the French Revolution with a utopian fervour at odds with the gradualism required by his doctrine of progress, and he glosses over its failings in a manner incompatible with his empiricist pretensions. Less obviously, he is deeply ambivalent about developments in his own country. England is for him the most socially advanced of nations and yet in political matters it seems to be retrogressing. How this might be possible according to his general theory of progress he never manages to explain. It might be expected that the failures of the Revolution in France and the success of the establishment in England would create an intellectual crisis for Priestley. In a sense it does, for when all else fails he turns to millenarianism for a solution to the difficulties of the 1790s. I attempt to show that though much of his millenarian outlook is compatible with his progressivism, the crucial premises which make it seem like a possible solution to this crisis are deeply incompatible with the rest of his moral theology.

Priestley wrote so much so quickly that one might think he had had his philosophy stored up inside him for some time. This was largely true of his determinism, his Argument from Design and his optimism. His more controversial doctrines were more spontaneous. His materialism was published as soon as it formed in his mind. His political thought also changes, becoming (in contrast to the usual pattern) more radical as he grew older. To avoid creating an idealized and timeless picture I have compared his early statements with

later ones, taken notice of real or apparent inconsistencies, and tried to assess the impact of his critics on the development of his ideas.

Whatever the status of his arguments, Priestley's character as a philosopher has also caused dispute. Temperamentally, he is a peculiar combination of the serene optimist and the embattled polemicist, able (as he put it) "to venerate and rejoice in God, not only in the bright sunshine, but also in the darkest shades of nature" (XXV,351), yet never passing up the chance to score a point against his many opponents. It is, in its own way, the tough-minded pursuit of the most tender-minded objectives, to borrow William James terms. Criticism never disturbed him: his advice to his enemies was "strike me, and as often as you please, but hear me and answer me" (IV,223). When Gibbon teased him with the remark that he gloried "in outstripping the zeal of the Mufti and the Lama", he replied that "should the Mufti and the Lama become parties in the [controversy], I should rejoice the more" (XVII,533f). Priestley's admirers, including some of his opponents, praised his plain dealing. One critic, Augustus Toplady, could say: "Give me the person whom I can hold up as a piece of crystal, and see through him. For this, among many other excellencies, I regard and admire Dr Priestley" (I,1,310). Other opponents, such as Reid, Burke and William Cobbett, and many ordinary readers, tended to regard him as devious and hypocritical, an extremist, at once both sectarian and partisan. "Candour" was a central virtue in Priestley's own outlook, but his practice of the virtue is, not surprisingly, neither as flawless nor as faulty as they suggest.

Some of the paradox is captured in Gibbon's remark (in his Autobiography) that "the dauntless philosopher of Birmingham continued to fire away his double battery against those who believed too little, and those who believed too much". Against, that is, the sceptic, deprived of the hope and larger vision of rational religion, and the orthodox Christian, encumbered by doctrines of the soul, free-will and Trinity. In an intellectual world starting to become divided between English Christian conservatism and French radical atheism, Priestley's path between the credulous and the incredulous is not likely to be overcrowded. Portrayed this way he seems an isolated and idiosyncratic figure. What is missing from the picture is that he thinks he has behind him all the authority and force of "science". Natural science after Newton, he thinks, has achieved sufficient self- definition as to furnish principles ready for universal application, to theology as much as to the mind. The central subject of this thesis is Priestley's philosophical theology; but the recurrent theme, which connects all his diverse interests, is the Newtonian methodology. It is this methodology which is the source of both Priestley's controversialism and his religious elevation. On his interpretation it licenses what Dr Johnson once derisively termed "hypothetical temerity"; that is, the provisional acceptance of imaginative hypotheses, if those hypotheses conform to the requirements of "simplicity" and "analogy".

Alongside the mountain of publications on Locke, Berkeley and Hume, no single book has ever appeared on Priestley's philosophy. The only extensive published survey of his philosophy is the recent article by McEvoy and McGuire, mentioned above. My work has proceeded independently of theirs. I make the Argument from Design central to Priestley's outlook; they scarcely mention it. They make Priestley a "philosophical monist"; I contend that he was a theist and not a pantheist. I treat his materialism at some length; they discuss it less fully. Their account of the determinism and the theory of causation is comprehensive and valuable, but even here my approach has been somewhat different.

They try to show that Priestley's general view of science shapes his socio-political thought. I go further than this in linking the two to his moral theology, which they do not discuss. I have tried to document Priestley's relation to his critics and contemporaries; they have mostly restricted themselves to Priestley alone. Together, I hope, these and other studies will do something to restore Priestley to his at once both eccentric and conventional place in the history of eighteenth-century thought.

When in 1784 Dr Johnson attended some chemical experiments and found frequent mention being made of Priestley, he "knit his brows [Boswell reports], and in a stern manner enquired, 'Why do we hear so much of Dr Priestley?' He was very properly answered, 'Sir, because we are indebted to him for these important discoveries'. On this Dr Johnson appeared very well content; and replied, 'Well, well, I believe we are; and let every man have the honour he has merited'."<12> Johnson would not have credited Priestley with any comparable "discoveries" in philosophy, but Priestley's name will have to be heard many times before we are in a position to let him have "the honour he has merited".

Notes to Introduction

1. Arthur Young, Travels in France in the Years 1787, 1788, 1789, 4th ed., (London, 1892), Entry for August 1st, 1789, p. 223.

2. Immanuel Kant, Critique of Pure Reason, trans. N. Kemp Smith. (London, 1933), B733, p. 597f.

3. From his Ideas for a Philosophy of History excerpted in J. G. Herder on Social and Political Culture, ed. F. M. Barnard, (Cambridge, 1969), p. 272.

4. Leslie Stephen, History of English Thought in the Eighteenth Century, 2 Vols, (New York, 1962), I, 54f, 364-6. Henry Brougham is equally disdainful: Priestley's "whole writings, which are numberless, and without method, or system, or closeness, or indeed clearness, bear ample testimony to what we might expect would be the result of so very imperfect a foundation as his scanty and rambling education had laid" (quoted from his Lives of Men of Letters and Science of 1845 by John Passmore in his introduction to Priestley's Writings on Philosophy, Science and Politics, (New York, 1965)).

5. See The Complete Works of William Hazlitt, ed. P. P. Howe, 21 Vols, (London and Toronto, 1932), XX, 237.

6. James Martineau, "The Life and Works of Joseph Priestley" in his Essays, Reviews and Addresses, 4 Vols, (London, 1890), I, 3.

7. F. W. Gibbs, Joseph Priestley. Adventurer in Science and Champion of Truth, (London, 1965), p. 96.

8. J. G. McEvoy and J. E. McGuire, "God and Nature: Priestley's Way of Rational Dissent", Historical Studies in the Physical Sciences, Vol. 6, pp. 325-404, quoting here from p. 326.

9. John Passmore, op. cit., p. 37.

10. See Stephen, op. cit., p. 365.

11. Also in Autobiography of Joseph Priestley, ed. Jack Lindsay, (Bath, 1970), p. 125.

12. Boswell, The Life of Johnson, ed. G. B. Hill, (London, 1937), Vol. IV, p. 238.

CHAPTER ONE: MATERIALISM (1)

1.1 The Motives to Materialism

Priestley's materialism is both philosophical and theological in inspiration. Matter and Spirit, his fullest exposition of the doctrine, is addressed to "men of reason and religion" who, Priestley hopes, will find his materialist hypothesis "neither irrational in itself, nor destitute of countenance in the sacred writings". Indeed, Matter and Spirit was partly born of theological controversy, for the accusations of atheism which had greeted his first expressions of doubt about dualism had only spurred him on to a fuller study of the nature of mind, and "this at length terminated in a full conviction that the doubt I had expressed was well-founded" (III,202). Though some of his friends feared that to proclaim this "full conviction" would only bring odium on himself and his patron (Lord Shelburne), Priestley decided that "the cause of important truth" required him "to proceed without regard to any consequences ...." (1,1,203).

Priestley was over forty when he took up materialism. He had not long been a member of the Royal Society, and was beginning to establish a reputation in scientific and literary circles. He had been a firm determinist for twenty years, without ever writing on the subject. His determinism had not prompted in him any doubts about dualism. Nor did it contribute greatly to his later materialism - Priestley always preferred to argue separately for these doctrines. In his student years at Daventry Academy Priestley had been (he says) "exceedingly attached" to metaphysical speculations, but subsequently his various careers as clergyman, schoolmaster, lecturer, historian and scientist had left little time for philosophy. However, one of the three central arguments for his later materialism did persistently trouble him during these years, so much so that he had once entertained the possible truth of Berkeleian idealism:

> I very well remember [he wrote in 1777] many doubts occurred to me on the subject of the intimate union of two substances so entirely heterogeneous as the soul and body were represented to be. And, even when I first entered upon metaphysical enquiries, I thought that either the material or immaterial part of the universal system was superfluous. But not giving any very particular attention to a subject on which I could get no light, I relapsed into the general hypothesis of two entirely distinct and heterogenous principles in man, connected in some unknown and incomprehensible manner; and I acquiesced in it as well as I could (III,201).

Priestley's dualism was unusual only in supposing the soul "incapable of exerting any of its faculties independently of the body", an opinion he shared with "many modern divines" (ibid.).<1> It was, as we shall see, this problem of interaction which first rekindled his interest in materialism.

The problem of interaction between mind and body had been a persistent one, not only for Priestley, but for philosophy at large, at least since the time of Descartes. The other two arguments which swayed him towards materialism were much less traditional and may even originate with Priestley. Both are connected with his work as an historian of science in the period 1765 to 1772. His History and Present State of Electricity of 1767 concluded with some methodological reflections which foreshadow his later methodological argument for materialism. The aim of science, he says there, is to ascend from the particular to the general. Indeed,

> we actually see in nature a vast variety of effects proceeding from the same general principles, operating in different circumstances; so that judging from appearances, that nature is everywhere uniform with itself, we are led by analogy, to expect the same in all cases, and think it an argument in favour of any system, if it exhibits a variety of effects springing from a few causes. For such variety in effects, and such simplicity in causes, we generally see in nature.<2>

Priestley was here doing no more than paraphrasing, as he saw them, the first two of Newton's four famous "Rules of Reasoning in Philosophy". In Matter and Spirit these rules are presented directly (though in Priestley's words) as, first, "we are to admit no more causes of things than are sufficient to explain appearances": and secondly, "to the same effects we must, as far as possible, assign the same causes" (III,221). For convenience I will speak of Rule I as embodying the "principle of simplicity" and Rule II as embodying the "principle of analogy". (The notion of simplicity has been variously interpreted in recent philosophy; in my usage nothing is meant by it except whatever the first of these two rules mean.) It was of course a considerable step from endorsing these rules in science to seeing that they might be used to determine the nature of mind, and Priestley did not take that step until he came to write Matter and Spirit. He came to believe that the rules told unequivocally in favour of materialism, and against dualism.

In his History and Present State of Discoveries Relating to Vision, Light and Colours of 1771 Priestley had been led to consider the nature of matter and its relation to light. The Swiss mathematician and scientist, Leonhard Euler, had objected to Newton's particle theory of light that by "such a copious emission of material particles" the sun would be gradually exhausted. One answer to this objection, Priestley proposed, is to adopt the hypothesis of the Jesuit scientist Roger Joseph Boscovich, according to whom matter is only powers of attraction and repulsion located at "physical points". This theory excited Priestley's curiosity, and he was led to consider its implications for both science and philosophy. He came to think that it undermined the traditional notion that matter is passive, and in Matter and Spirit he used the theory to suggest that matter might bear properties (such as the power of thought) other than those traditionally ascribed to it.

The theological motivation of Priestley's materialism relates more to "revealed" than to natural theology, and consequently, though it would be important in a broader study, it warrants only a brief description here. Priestley had been brought up an orthodox Calvinist, and had later been for some years an Arian, but by 1767 he had been converted to "Socinianism", or in more familiar terms, Unitarianism; that is, the complete denial of Christ's divinity. The story of his progress from Calvinism to Unitarianism epitomizes a process which many of his fellow Dissenters were also undergoing. Where Priestley was

quite unprecedented was in his conclusion that materialism is the natural outcome of this "rationalized" Christianity. He believed that materialism, determinism and Unitarianism depend on one another and

> are equally parts of one system, being equally founded on just observations of nature, and fair deductions from the Scriptures .... At the same time, each of these doctrines stands on its own independent foundation, and is capable of such separate demonstration, as subjects of a moral nature require or admit (III,220f).

Priestley did not much expect to persuade his fellow-Christians, of whatever variety, to adopt his new scheme. Dualism was too deeply entrenched in Christianity for even a man of Priestley's optimism to hope to shift it. He had his eye more on the Deists and atheists; and in fact his alliance of materialism with Unitarianism was formed in response to his experience amongst his non-Christian contemporaries. In 1774 he visited Paris with Lord Shelburne, and dined at Baron D'Holbach's "Cafe de l'Europe". Unlike Hume, who claimed to know of no atheists there, Priestley found "all the philosophical persons to whom I was introduced at Paris, unbelievers in Christianity, and even professed Atheists" (1,1,199). He cited the Syste`me de la Nature (which had been published four years earlier) as a work in which free- will and the soul are "reprobated with contempt (III,214).

> On the whole, [he concluded] the state of things is now such that it appears to me to be absolutely necessary to abandon the notion of a soul, if we would retain Christianity at all. And, happily, the principles of it are as repugnant to that notion, as those of any modern philosophy.

By furnishing Christianity with a materialistic metaphysic, Priestley hoped to take away the main grounds of objection to it. He aimed to head off the drift towards Deism and atheism, and to persuade these philosophical unbelievers that Christianity is very much more "consonant to the real appearances of nature" than they had thought (III,203f).

At the same time Priestley's arguments were designed to redound to the benefit not of Christianity in general, but only to that of "Socinianism". Denial of the pre-existence of Christ is, he says, "the capital inference that I make from the doctrines of materialism, penetrability of matter, and necessity ...." (IV,6). His reasoning is that

> if no man has a soul distinct from his body, Christ, who, in all other respects, appeared as a man, could not have had a soul which had existed before his body; and the whole doctrine of the pre-existence of souls (of which the opinion of the pre-existence of Christ was a branch) will be effectually overturned (III,220).

His argument goes on the assumption that orthodoxy had attributed to Christ a human soul. Priestley's ambition was to eradicate the doctrine of the soul and its consequence, belief in the divinity of Christ, which he regarded as results of the mischievous influence of "Heathen philosophy" on early Christianity; and thereby to "recover the pristine simplicity and purity of our most excellent and truly rational, though much abused, religion" (III,209).

1.2 Materialism and the Problem of Interaction

1.2(i) The Examination

We can turn, then, from Priestley's general motives to the grounds of his materialism. It was in 1774 in the Examination that he "first entertained a serious doubt of the truth of the vulgar hypothesis" (III,202), and underlying this fact is an episode of some complexity. The Examination was Priestley's reply to the three Scottish Common Sense philosophers, Thomas Reid, James Beattie and James Oswald, with appendices on Richard Price and James Harris. Reid's Inquiry into the Human Mind of 1764 was Priestley's main concern, and the subject of the debate was not the nature of mind but scepticism, realism and the "Theory of Ideas".

The "sceptics" under discussion were Berkeley and Hume. Both Reid and Priestley thought Berkeley and Hume had denied the reality of the external world, and both wished to reinstate external reality. Priestley thought the sceptical challenge could be met without any great difficulty. It was, he held, based on a misunderstanding of the canons of scientific reasoning: the assumption that whatever can not be demonstrated is not worthy of rational belief.

> It is quite sufficient if the supposition [of an external world] be the easiest hypothesis for explaining the origin of our ideas. The evidence of it is such that we allow it to be barely possible to doubt of it; but that it is as certain as that two and two make four, we do not pretend (III,46f).

Priestley's realism was "representative" realism. He took the Lockean Theory of Ideas - the theory that all our perceptions are mediated to us by sensations - to be one of the best established achievements of modern philosophy, and he could see nothing in Berkeley or Hume capable of undermining that achievement.

Reid, by contrast, thought that Berkeley and Hume had brought about an upheaval in philosophy and that order and sanity could only be restored by abolishing the whole tradition of "ideas" - a tradition which goes back to Democritus and Aristotle. The defence of realism against Humean scepticism required a new conception of the powers and operations of the human mind. The capacity to perceive reality had to be counted as one of the native powers of the mind, and this power is not to be explicated by reference to representative ideas. The Theory of Ideas is, in fact, to be regarded as the principal source of Humean scepticism. Priestley, on the other hand, thought the Theory entirely innocent; on his view, Hume's scepticism stemmed from his theory of causation and causal reasoning. For Reid, Hume's "destruction" of causal relations is only one casualty in the general "destruction of worlds" produced by the Theory of Ideas.

Reid appealed to common sense to support his belief in the mind's ability to perceive reality directly. In Priestley's eyes, this appeal is itself a manoeuvre fraught with sceptical implications. It disputed the sufficiency of scientific reasoning to furnish us with a realistic world-view, and thereby compelled us to regard as knowledge a lot of mere "instinctive persuasions, depending upon the arbitrary constitution of our nature" (III,71). He allows that, if science is to be possible, some propositions must be taken as self-evident and foundational, but he confines self-evidence to analytical propositions - subject and

predicate must be "different names for the same thing" (III,17). The elementary propositions of mathematics ("twice two is four") fall within this category, but the other sciences - metaphysics, morals, theology, natural science and politics - can produce no comparable "elementary propositions" which can be accepted as self-evident. According to Priestley, Reid's relatively circumscribed appeal to common sense inevitably leads his successors, Beattie and Oswald, to enlarge its jurisdiction to include "the primary truths of religion" and the evidences of Christianity (Oswald) or all truth ("that to us is truth which we feel that we must believe", he quotes from Beattie [III,72]).

Only a part of Reid's Inquiry consists of assertions based on self- evidence or common sense. That there is no external world is self- evidently false, Reid argues; but that "ideas" do not exist is not self-evident. Reid's argument against the existence of ideas depends in part on his claim that belief in ideas leads to an "absurd" denial of external existence: put this way, the argument is designed to give pause to any followers of Hume and Berkeley who value common sense. But against the followers of Locke, his argument has to consist of a demonstration that belief in ideas does entail a denial of matter, and this side of Reid is more difficult to reconstruct. Reid believes that this demonstration has already been performed by Berkeley and Hume, and he takes the demonstration, together with the argument from common sense, as constituting a reductio ad absurdum of the Theory of Ideas. Priestley's purpose is to show that Reid's "demonstration" is a failure. The Theory of Ideas is, in his opinion, entirely innocent of the sceptical progeny Reid accused it of fathering. Reid's appeal to common sense is not only dangerous; it is also unnecessary.

The Reid-Priestley debate about ideas has a number of aspects, but it revolves around a central proposition: that sensations and ideas (if ideas exist) do not resemble the qualities of external objects. Reid thinks this is a truth discovered by Berkeley and Hume, which served as the "innocent mother" when the Theory of Ideas begat the sceptical denial of external reality. Throughout the Inquiry Reid also assumed that ideas must resemble objects if they are to represent them; for him, then ideas must be images of external things.<3> The main point in Priestley's Examination is his denial that ideas must resemble what they represent. In arguing thus, he openly concedes that they do not resemble their objects. Reid, he says, has

> suffered himself to be misled ... merely by philosophers happening to call ideas the images of external things; as if this was not known to be a figurative expression denoting not that the actual shapes of things were delineated on the brain, or upon the mind, but only that impressions of some kind or other were conveyed to the mind by means of the organs of sense and their corresponding nerves, and that between these impressions and the sensations existing in the mind there is a real and necessary, though at present an unknown connexion (III,36).

Priestley is defending the Lockean claim that "ideas" mediate perceptions. Lockean mediation is usually thought of as twofold: "ideas" both represent their objects and they stand as part of a causal explanation of perception. Perception is to be thought of as the outcome of the causal sequence object - (physiological) impression - sensation or idea. In defending ideas, Priestley defends this causal theory, and he seems to assume that by so doing the representation issue is also satisfied. He does, indeed, talk about two aspects of mediation in the first two (of six) "fallacies" which he sees as "the principal source of

[Reid's] mistakes", but these aspects are both presented in causal rather than representational terms.

(1) Because he cannot perceive any resemblance between objects and ideas, he concludes that the one cannot produce the other.

(2) Because he cannot perceive any necessary connexions between sensations and the objects of them, and therefore cannot absolutely demonstrate the reality of external objects, or even of the mind itself, by the doctrine of ideas, he rejects that doctrine altogether, and has recourse to arbitrary instincts (III,34).

The first point here shows that Priestley thought Reid's denial of likeness between objects and ideas was aimed at refuting the causal rather than the representational aspect of mediation.

The second point highlights a different dimension of the debate about ideas. The Inquiry contains a subsidiary attack on the Theory of Ideas which turns not on the issue of resemblance between objects and ideas but on conditions governing causal relations between body and mind. Reid's "resemblance" argument can be phrased as running: "no representation without resemblance". His subsidiary argument claims that we can only speak of causal relations between two entities when we can discern the mechanism or "necessary connexion" between cause and effect. Priestley quotes Reid: "We are inspired by the sensation, and we are inspired by the corresponding perception, by means unknown."<4> For Reid, we cannot know that objects cause ideas because we do not know of any means by which they do so. Priestley thought this argument fallacious. Priestley and Reid disagree about perception partly because they dispute whether ideas must be images, but also because they dispute whether it is necessary to know the mechanism by which a putative cause produces its effect.

However, while it is easy to distinguish between these two arguments in the Inquiry, Priestley's way of handling the arguments blurs the distinction between them, even as he talks about Reid's "two fallacies". He reads "no representation without resemblance" as tantamount to "no causal relations without resemblance". In this way the first argument becomes, like the second, a causal argument. And, for Reid, the second argument rests on the assumption that mind and body are so dissimilar that there could be no intervening mechanism by means of which they could interact. Both arguments, then, involve the question of resemblance. Priestley contends that both lack of resemblance between cause and effect, and ignorance of mechanisms, is no barrier to knowledge of causation.

The disagreement between Reid and Priestley about mechanisms affects not only their attitude to the causal theory of perception: it is also (as Chapter Three will show) fundamental to their positions for and against free-will. (Priestley will argue that "correspondences" show motives to be causally bound to actions, just as objects are bound to ideas.) In the absence (as he thinks) of a well- authenticated mechanism of perception, Reid feels entitled to claim that the "images" allegedly transmitted by the nerves are mere fictions, of no evidential value. Hartley's theory of nervous "vibrations" is likewise dismissed as conjectural. He adds that these "theories" are equally lacking in explanatory force: "If any man will show how the mind may perceive images in the brain, I will

undertake to explain how it may perceive the most distant objects".<5> On Priestley's account of causal reasoning, these objections carry no weight. The "correspondences" between objects and sensations provide evidence of causation which cannot be overruled by gaps in our understanding of the perceptual process.

> I know ... that the eye is the instrument of vision, because without it nothing can be seen.... I am equally certain that the brain is necessary to all perception because if that be disordered, thinking either entirely ceases, or is proportionably disturbed (III,38).

The philosopher is entitled to fashion hypotheses about the causal mechanism, and these cannot be dismissed if they "suit the phenomena". It is interesting to note in passing that Reid's rhetoric against ideas - "unphilosophical", "no foundation in fact or observation", etc - corresponds closely to Priestley's language against the soul in Matter and Spirit. The difference between them is that for Priestley, unlike Reid, not all conjectures are unphilosophical. Priestley is committed to the view that ideas are, but the soul is not, a philosophical conjecture.

Priestley's view of causal reasoning rules out, for him, the possibility of occasionalism or parallelism: we know that mind and body do interact. Reid's different view makes the denial of interaction a possibility. Priestley's two main points against Reid - Reid's first two "fallacies" are seen by him as nullifying the force of the Inquiry, but his Examination also mounts a counter-offensive which seeks to drive Reid into the occasionalist camp, or, further still, into idealism. It is from this counter-offensive that Priestley's early materialism largely derives. In a section entitled "Mr. Locke's Doctrine not so favourable to Berkeley's Theory as Dr Reid's", he assembles various passages from the Inquiry where Reid approaches occasionalism. In these passages Reid's dualism is so absolute as to make interaction doubtful. Mind and body are so different, Reid says, that "we can find no handle by which one may lay hold of the other" (III,48).<6> And, following Berkeley, he asserts that "sensations and ideas in our minds can resemble nothing but sensations and ideas in other minds" (ibid.).<7> Dissimilarity has here become not a contingent fact, discovered by careful attention to the phenomenology of sensations, but a necessity, consequent upon the nature of the mind and matter. Priestley quotes a third passage which goes to the source of Reid's dualism: "I take it for granted, upon the testimony of common sense, that my mind is a substance ... and my reason convinces me that it is an unextended and indivisible substance; and hence I infer that there cannot be in it anything that resembles extension" (III,47).<8> Reid's dualism, it seems, is based on the traditional contrast between matter's complexity and mind's "simplicity". Substances so dissimilar, he is inclined to suggest, are unable to interact; and if Reid himself hesitates to draw this conclusion, Priestley will draw it for him.

Priestley goes on to argue that this "occasionalism" leads readily to Berkeley's idealism. His reasoning here rests on the principle which underlies the later materialism of Matter and Spirit, the principle of simplicity. If all our perceptions and thoughts would remain exactly as they are if matter did not exist, then belief in a material world is otiose. If occasionalism is true, then the external world

> can be of no proper use to give us sensations and ideas. It must be [God] himself who impresses our minds with the notices of external things, without any real

> instrumentality of their own; so that the external world is really a superfluity in the creation (III,47).

Deny interaction and it follows that "this external world, which has been the subject of so much controversy, can have no existence", for a wise God would create nothing superfluous.

Priestley's "counter-offensive" rests not just on the principle of simplicity, but also on the proposition that interaction between dissimilars is impossible. By now it may be beginning to appear that this proposition conflicts with his whole defence of the Theory of Ideas, but this apparent conflict can be examined in a moment. The proposition also forms the basis of Priestley's early materialism, and we can now see how this materialism followed from his encounter with Reid. Priestley was willing to regard Berkeley's idealism as a serious option - he could not dismiss it as contrary to common sense. He tells us that "when I first entered upon metaphysical inquiries, I thought that either the material or immaterial part of the universal system was superfluous" (III,201), and Reid's Inquiry seems to have returned him to the same point. Despite the problem of interaction, Priestley could not deny that interactions between mind and matter did occur. It is, for him, more certain that there are causal relations between matter and mind than that the mind is or is not material (III,154), whereas for Reid the mind's immateriality is the fundamental certainty. The Theory of Ideas itself requires that there is a material world producing ideas in the mind. The causal theory of perception, and the theory of causal reasoning underlying it, are Priestley's primary concerns; to protect them involves rejecting idealism. But beyond this, he thinks that the principle of simplicity can also be enlisted against idealism. The chief defect of Berkeley's scheme is that it supposes a multitude of divine interpositions which, while not impossible, is not "consonant to the course of nature in other respects" (III,23). The view that ideas are caused by their objects "is recommended by the same simplicity that recommends every other philosophical theory, and needs no other evidence whatever". It "exhibits particular appearances as arising from general laws, which is agreeable to everything else we observe". Realism is, then, a superior scientific theory.

Far from the Theory of Ideas leading to Berkeley's "scepticism" (as Reid thought), the Theory on Priestley's view of it entails the falsity of idealism, and, further, Reid's denial of the Theory leads to idealism. But having thus tried to turn the tables on Reid, Priestley's own opinions also underwent a reversal. The problem of interaction between dissimilars was so great that if it was not alleviated, idealism would retain a measure of appeal. Interaction seemed impossible, and idealism seemed incompatible with the realism assumed by the Theory of Ideas. Priestley, then, had no alternative but to declare himself a materialist. No problem is presented by interaction between brain and body.

Two other difficulties did immediately present themselves: If the mind is the brain, are ideas also material? And, are there any a priori objections to identifying the mind with the brain? On the first point, Priestley took Hartley as his authority; on the second, Locke. He suggests that ideas no more resemble their objects than the stroke of a plectrum resembles the sound it produces. If Reid wishes to deny that objects cause ideas, then he must also deny that the stroke produces the sound.

> The transferring of this comparison to the doctrine of ideas is very easy. If, as Dr Hartley supposes, the nerves and brain be a vibrating substance, the analogy will hold very nearly; all sensations and ideas being vibrations in that substance, and all that is properly unknown in the business being the simple power in the mind to perceive, or be affected by, those vibrations. And if, as Locke and others supposed, matter itself may be indued with that sentient power, even that difficulty, as far as the present problem is concerned, is removed (III,36f).

These points were to present more difficulty than Priestley realized: he was to equivocate later about whether ideas are merely brain- processes; and he was to be troubled by the question of how matter might think.

It remains to return to the apparent contradiction running through the Examination, both sides of which contribute to the formation of Priestley's materialism. In the defence of ideas he comments that "it is impossible to say how [the nerves and brain] act upon the mind, or the mind upon them" - but, he adds, this is no ground for denying that they do interact. To reason thus would end in utter scepticism; by such sceptical reasoning "we may deny every principle in nature" (III,36). The implication is that science frequently makes progress despite an ignorance of mechanisms. And yet, when we come to the counter-attack on Reid, he asks, to reinforce the problem of interaction, "how can any thing act upon another but by means of some common property?" (III,47). The implication here is that the absence of a mechanism makes causal relations between matter and spirit impossible.

Priestley says no more than this, and his commentators have not pursued the matter. However, the "contradiction" is only apparent. Priestley can be paraphrased as follows: Where we know a priori that there can be no mechanisms (as in the case of matter and spirit), there causation can be safely denied. Where we are simply ignorant of any mechanism, there knowledge of causation is a possibility. The difficulty in Priestley's case lies not at the level of these principles of causal reasoning, but at the point where he claims, while still trying to be neutral about the nature of mind, that "correspondences" show that objects do cause ideas.

Clearly, if objects are, and ideas are not material, then (for him) objects cannot cause ideas. He is not entitled to adopt even a temporary stance of neutrality towards the ontological question. He wants to claim we can know that objects cause ideas without knowing how they do so, but his own principles require him to show that a mechanism is at least possible in the case, and only materialism (or idealism) can guarantee this. It is not only his counter-attack on Reid that requires him to adopt materialism; his defence of the Theory of Ideas also requires it. The fact that he seems unaware of this suggests no more than that the Examination records his transition to materialism.

One other difficulty remains. It is a basic point in Priestley's defence of ideas that, contra Reid, ideas need not resemble their objects. However, his newly-adopted materialism holds that objects and ideas are not ontologically dissimilar. One is left to conclude that the dissimilarity is of a different kind, presumably qualitative or configurational dissimilarity. It is true that Reid argues (in what we have termed his subsidiary attack on

ideas)<9> from an onto- logical dissimilarity between objects and ideas to the conclusion that ideas cannot resemble or represent objects in any way, but we can presume that for Priestley ontological dissimilarity is not the only kind of dissimilarity.

1.2(ii) The "Introductory Essays"

In 1775 Priestley published an edited version of Hartley's Observations on Man to which he gave the title Hartley's Theory of the Human Mind, on the Principle of the Association of Ideas. His intention was to highlight the associationist psychology, and to separate this psychology from both the religious and the physiological content in which Hartley had embedded it. Priestley prefaced the edition with some "Introductory Essays", and in them he again touches briefly on materialism.

It is sometimes thought that Priestley's materialism grew out of his commitment to Hartley. As John Passmore rightly puts it, "He was convinced that materialism was the natural metaphysical concomitant of Hartley's associative psychology ...."<10> Priestley himself says that Hartley's "hypothesis" of associations "would be much helped by" materialism (III,181). However, the "concomitance" between associationism and materialism was something which not only Hartley but the whole of the associationist tradition - Priestley alone excepted - down to and beyond Alexander Bain refused to concede. It is also notable that, when Priestley tentatively avowed his newly-adopted materialism in the "Introductory Essays" with which he prefaced Hartley's Theory of the Human Mind, he drew no arguments in its favour from Hartley's psychology. (Hartley's contribution to Priestley's materialism will be discussed in Section 2.1(i): it is certainly not negligible, but it is perhaps less crucial than has usually been thought.) So far as any argument is presented in 1775, it is only the Lockean contention that "no one will say that he has any conception how the principle of thought can have any more relation to immateriality than to materiality" (III,182). The "Introductory Essays", in fact, adds nothing to Priestley's materialism except a more direct avowal of his commitment to it. It was presumably this greater directness which drew public attention to him, when the materialism of the Examination had gone unnoticed.

1.2(iii) Matter and Spirit

Priestley's materialism, then, originated from the problem of interaction between dissimilar substances, which Reid had revived in the course of attacking the Theory of Ideas. Priestley held that to deny both the Theory and interaction led to Berkeleian idealism; but, to uphold the Theory, he was himself driven to materialism. Two years later, when he returned to the subject with his full-scale defence of materialism, Matter and Spirit (1777), the problem of interaction had become only one of three supporting arguments, and not the most important of the three. By this time the principle of simplicity and the Boscovichian theory of matter had become the dominant themes. However, he does discuss the interaction difficulty, combining with it a "deduction of the history of opinions concerning the soul".

Priestley contends that the Cartesian, or, more exactly, post- Cartesian, notion of an "immaterial substance entirely without extension or relation to place", whose essence is thinking, is the creation of modern philosophy, without precedent in either earlier philosophy or popular thought. "Post-Cartesian" is the more exact description here, as Priestley thinks that Descartes' idea of the soul was not "wholly abstracted from matter" because he "supposed that the seat of it was the pineal gland" (III,367). In fact he ascribes the first complete statement of this post-Cartesian doctrine to Kenelm Digby, in his Treatise on the Nature of Man's Soul of 1644. In contrast to this "strict immaterialist" conception of the soul, the ancients, and the common people of modern times, think of the soul as nothing more refined than "a kind of attenuated aerial substance, of a more subtle nature than gross bodies" (III,258); and Priestley claims that his own materialism is the more genuine descendant of this popular opinion than is the Cartesian theory. He attributes the rise of Cartesian dualism partly to the modern scientific belief in the homogeneity of matter, the theory that "all matter is ultimately the same thing" (III,369). (Descartes homogenized matter by making extension its essence; for others the adoption of atomism brought about the same result.) Belief in homogeneity broke down the distinction between gross and subtle matter. To re-establish the distinction between mind and matter, it was then found necessary to proceed by "denying to spirit every property common with matter". The inadvertent effect of this refinement is to make matter and spirit "incapable of mutual action or influence; in consequence of which, it will be naturally impossible that the Divine mind should either have created matter or be capable of acting upon it" (III,370).

The "strict immaterialists" had not quite monopolized modern philosophy. Locke had contended both that whatever exists must exist somewhere, and that God can "superadd" the power of thought to a material system.<11> "From this time", in Priestley's opinion, "the doctrine of the nature of the soul has been fluctuating and various...." (III,373). The Cartesian dualists have been opposed by a number of (what we may term) "spatial dualists" - Samuel Clarke is taken to be their chief spokesman (IV,39) - according to whom the soul "exists in space, and occupies a portion of it, so as to be properly extended, but not to have solidity, which they make to be the property that distinguishes it from matter" (III,373).

It is an important contention of Matter and Spirit that the rise of Cartesianism was a "natural and necessary" development (III,212), and that the spatial dualists occupy an untenable middle position (III,369-73). Priestley states categorically that "there can be no medium between absolute materialism and this proper and strict [Cartesian] immaterialism". Apologists for extended spirits are unwitting semi-materialists, and their opinion "is liable to objections similar to those which lie against the notion of a soul properly material". He claims that the strict immaterialist party, led by Isaac Watts (the hymnodist and Independent divine),<12> has proved that spirits which exist in space and are capable of motion "must have proper extension, figure and corporeal substance", though Watts' "proof" of this contention is not described.

Priestley's own arguments against the spatial dualist are expounded in Section VIII of Matter and Spirit, entitled "Of Spirits having Extension" (III,271-6). His main objection is that extended spirits will be divisible because "divisibility may always be predicated of any substance that is extended, and not infinite". "The firmness of [spirit's] texture is a thing of which we have no knowledge at all.... Consequently, it may, for anything we know, be as

corruptible and perishable as the body". To support the conclusion that extended spirits are actually divisible, Priestley adds that

> It is not the solidity of bodies that makes them capable of division so properly as their extension. It is this property that makes division possible; and then all that is necessary to actual division is discerptibility, or the possible separation of one part of its substance from another.

He seems to assume here that actual divisibility follows easily from abstract, mathematical divisibility, an assumption which the spatial dualist would no doubt deny. Priestley himself thinks this is an assumption which dualists have "universally acknowledged" as valid (III,249).

Priestley also argues that to make spirits extended is to give up the a priori argument from indivisibility to natural immortality. "The boasted unity of consciousness, and simplicity of perception and thought, can be no security against division and dissolution, unless they inhere in a substance naturally incapable of division, and consequently of dissolution" (III,272). The spatial dualist is thus put on the same footing as the materialist, and the theological interest in this sort of dualism is thereby partly undermined.

One advantage which the spatial dualist might claim is that his doctrine mitigates the problem of interaction - extended spirits at least belong within the same realm as matter. Priestley objects to this that extension alone cannot serve as the medium of interaction, "for then space and matter would be capable of a proper mutual action" (III,213).

Priestley, then, thinks that the spatial dualist enjoys none of the benefits that belong to Cartesian dualism ("simplicity" and "natural immortality") or to materialism (interaction). As a materialist, he is prepared to argue that the radical simplicity of the mind claimed by the Cartesian dualist has no empirical or theoretical basis. (See Section 2.2.) And he contends that "mutual action without some common property, by means of which the things that act and re-act on each other may have some connexion with each other" is an insuperable difficulty for any dualist (III,263). Matter and Spirit does little to expand upon the nature of this difficulty, though Priestley goes so far as to declare such interaction impossible, inconceivable and a contradiction in terms. Occasionally, though only rarely, he lapses into assuming that for the soul to act on the body it must, impossibly, exert some physical influence or possess physical attributes, and this no doubt contributed to the force with which he felt the problem (III,212, 238).

1.3 Materialism and the Theory of Matter

The strict immaterialist's distinction between matter and mind included not only the polarities divisible /indivisible, spatial/non- spatial, solid/intangible, and complex/simple, but also passive/ active. The strategy of Matter and Spirit is to argue that the first three dichotomies, if applicable, make interaction impossible; and that the fourth and fifth can be directly shown to be inapplicable. Just as there is no empirical reason for thinking of the mind as radically "simple", so, Priestley asserts, there is no empirical reason for thinking of

matter as "passive". On his account, matter and mind are equally active and equally passive. The active/passive distinction supplies no grounds for denying that thought may be a property of matter.

Matter and Spirit presents the active/passive issue as a problem of leading importance in the theory of mind. Priestley even alleges that "the only reason why the principle of thought or sensation has been imagined to be incompatible with matter goes upon the supposition of impenetrability being the essential property of it...." (III,230 - my emphasis). The theory Priestley is opposing defines matter as "solid extent", the sheer physical occupancy of space, thereby making the interpenetration of matter a logical impossibility. It claims also that material interactions take place by impulse only, and that in such interactions matter is essentially "passive", "powerless" or "inert". In Priestley's view, it is by the confluence of three traditions that this conception of matter has come to dominate modern philosophy: Gnostic religion; common, everyday observations; and Newtonian science.

Gnostic religion could of course only be a remote influence on modern ideas, but it was, according to Priestley, no less real an influence for that. Matter, he claims, has been the long-suffering victim of a severe prejudice, religious in origin. By "Gnosticism" Priestley means not so much a body of esoteric lore ("gnosis") which offers salvation from the forces of evil, but rather the metaphysical dualism which underlies this doctrine of salvation. The essential features of Gnosticism, in his account, are that it regards the mundane world as evil and it believes the soul to be celestial in origin and destiny. Belief in the natural eternity of the soul was the common denominator of the Eastern doctrine of reincarnation, the Platonic doctrine of pre-existence, and the Christian doctrine of Christ's pre-existence. Priestley's historical scheme, baldly stated, is that Hindu and Persian philosophy had influenced Platonism, and that these philosophies had jointly led to the formation of Gnosticism, which in turn had acted on early Christianity to produce the doctrines of Nicaea and Chalcedon.<13>

Priestley thinks he can detect the influence of Gnostic ideas in his own time. The moderns, he says, "have dropped the notion of pre- existence ... yet retain from that [Gnostic] system the entire doctrine of the contagion of matter...." (III,253). He takes as his chief witness a Scottish philosopher, Andrew Baxter (1686-1750), whom Priestley thought was "considered as the ablest defender of the strict immaterial system" (III,225). Baxter is quoted as decrying the idea that "union to a dead and torpid substance [i.e. matter] should give the soul life and power...."<14> Such a radical dualism, Priestley replies, must be embarrassed to explain why matter has been created at all. If matter can only confine, limit or encumber the soul's powers, the Christian "resurrection of the body" can only be, at best, "barely no disadvantage" (III,254-6).

Not everyone thought Baxter as important as Priestley did, and few could be so readily classified as "Gnostic". Richard Price, for instance, expressly deplored the moral overtones of Baxter's attitude to matter (IV,37). Yet Price remained no less convinced than Baxter that matter is "entirely a torpid and passive thing" (IV,27). Whether or not they were "Gnostics", Baxter and Price were certainly Newtonians. (Bishop Warburton had said of Baxter that his "admirable metaphysics" was "established on the physics of Newton".<15>)

Both insisted that all attractions and repulsions in nature are the result of a "foreign influence" acting on matter. They disagreed on whether cohesion is, if not a natural power, then at least a natural property of matter. Baxter asserted that cohesion too requires the action of a "foreign influence", whereas Price believed the "solid continuum" of matter to be a sufficient explanation of cohesion (IV,21).

Baxter and Price were united in affirming the natural passivity of matter. Both thought the theory of passivity to have the warrant of common sense and the endorsement of modern science, and both employed the theory to combat a materialist view of the mind. The anti- materialist aspect of the theory was epitomized by another Newtonian, Thomas Reid: "I could never see any reason to believe that matter has any active power at all. And indeed, if it were evident that it has one, I think, there could be no good reason assigned for not allowing it others".<16> Reid's main premise, that allowing one active power would open the way to others, was Priestley's position exactly. It was only the minor premise, that matter has no active powers, that Priestley disputed. Priestley's argument for materialism from the theory of matter was (like his argument from the problem of interaction) an straightforward one: to show that matter as such is not "destitute of all powers whatever" is to take away one main ground for denying that organized matter can possess other, "more sophisticated" powers, such as the power of thought. The matter-theory is used only to show that materialism is possible - the plausibility of materialism rests on the other two arguments (from interaction and from the principle of simplicity). Priestley's matter-theory itself is not so straightforward, and had emerged from a variety of considerations.

Priestley fully allowed that "common appearances" naturally suggest that matter is passive. Tables feel solid and impenetrable; billiard balls never move without being pushed, and only friction or collisions slow them down once they are in motion. Priestley's matter-theory is also based on observations. Against the "superficial appearances" of everyday experience it pits the "real appearances" brought to light by exact scientific observation. Priestley is rather reticent about identifying the philosophical versions - Baxter's and Price's - of the common theory of matter as being "Newtonian". Nevertheless, it is obvious that Baxter and Price, like Newton, think of matter as solid, massy, hard, impenetrable, moveable particles".<17> Priestley's rejection of this theory is "Newtonian" in a different way. The scientific observations to which he appeals against the Newtonian theory of passive matter are themselves Newtonian observations. Newtonian science, Priestley argues, has shown that all the best-known natural occurrences take place not by mechanical impulse but by the action-at-a-distance of forces.

> The principles of Newtonian philosophy were no sooner known than it was seen how few, in comparison of the phenomena of nature, were owing to solid matter, and how much to powers, which were supposed to accompany and surround the solid parts of matter. It has been asserted, and the assertion has never been disproved, that for anything we know to the contrary, all the solid matter in the solar system might be contained within a nut-shell, there is so great a proportion of void space within the substance of solid bodies.<18> Now when solidity had apparently so very little to do in the system, it is really a wonder that it did not occur to philosophers sooner, that perhaps there might be nothing for it to do at all, and that there might be no such a thing in nature (III,230).

As the historian of eighteenth-century electrical and optical research, Priestley could speak with some authority on Newtonian science. He maintains that transparency to light and expansion or contraction with heating and cooling have demonstrated the extensive porosity of bodies. (He accepts the Newtonian particle theory of light; transparency, therefore, is thought of as the penetration of bodies by particles.) Electrical experiments are said to have shown that seeming contact between bodies is really the action-at-a distance of powers of repulsion - this, he says, is the accepted opinion among scientists. Newton himself is claimed to have proven in the Opticks (Book II, Part III, Proposition VIII) that the reflection of light takes place at a distance from the surface of bodies. In short, modern science has no need of the hypothesis of actual contact between bodies (III,227f). And whatever be the difficulties of understanding distance-action, the fact of such action is undeniable, whatever one's theory of matter. "Let any person explain how the sun acts upon the earth, or how the solid parts of bodies are kept at a distance from each other upon any hypothesis", Priestley retorts when Price had objected that distance-action is unintelligible (IV,20).

Furthermore, Priestley believes, the Newtonian theory of atoms has broken down, even on the testimony of the Newtonians themselves. The atomic theory has proved unable to account for the cohesiveness of the atom. The Newtonian theists, notably Baxter, have taken the natural inexplicability of atomic cohesion as evidence of God's continued agency in the world. "Without this foreign influence [of the Deity] to effect cohesion and solidity in it", Baxter had written, "we could not conceive [matter] to be at all a substance" (quoted III, 225).<19> Locke too, Priestley says, held both that solidity is the essence of matter and that God's power is needed to join together the parts of any particle.<20> But matter without cohesiveness would be no substance at all, and even "if its parts be held together by some foreign power, it will still be true that power is necessary to its solidity and essence" (III,224). By "taking away attraction, which is a power, solidity itself vanishes", Priestley concludes. Here he was simply following the example of his friend, John Michell, who also had opposed Baxter.<21> Michell likened Baxter's theory of matter and force to a structure of (material) bricks and (immaterial) mortar in which, however, the mortar is doing all the work and the bricks play no perceptible part. Michell found it simpler to suppose that matter is really all mortar (i.e. force) and no bricks (i.e. no solidity) (III,232f).

The ultimate constituents of things, then, are - as far as is known - not solid atoms but localized powers of attraction and repulsion. Priestley's debt to Boscovich for this theory is obvious in general, though closer scrutiny reveals significant differences between their two accounts. Boscovich's system is, as the author himself put it, "midway between that of Leibniz and that of Newton; it has very much in common with both, and differs very much from either". Perhaps the main Leibnizian contribution was the "Law of Continuity", according to which "any quantity in passing from one magnitude to another, must pass through all intermediate magnitudes of the same class". Boscovich maintained that the accepted theory of mechanical action violates this "Law". If atoms are, as the Newtonians hold, perfectly rigid and hard, then at the point of collision they will lose and gain finite velocities in a single instant of time. Rather than sacrifice the Law of Continuity, Boscovich chose to "deny the existence of all immediate contact", and to replace impulse with repulsive forces acting at a distance. He felt able to take this step because already so much in nature had been explained by forces - '"how much more happily Newton [has] explained Astronomy and Optics by omitting [contact] altogether", he remarks. Indeed, the

Law of Continuity itself is given an inductive "proof" from the evidence of continuous force-actions such as gravity and magnetism.<22>

It is remarkable that Boscovich's central argument, from the Law of Continuity, is nowhere alluded to by Priestley. The Leibnizian component of the Theoria is quite absent from his scheme. For Boscovich impulse is impossible, whereas for Priestley it is possible but not scientifically verified (IV,20). For Priestley the central problem is not impact but cohesion. Nevertheless, their conclusion is the same, though even this they expressed differently: matter is force (Boscovich) or "powers of attraction and repulsion" (Priestley). Both believed these forces to be arrayed in alternating shells of attractions and repulsions. Priestley, however, distinguished between different levels in Boscovich's theory. He fully accepted Boscovich's general theory of matter as force, but he hesitated to commit himself to Boscovich's theory of the microstructure of matter. At the centre of the shells of force, Boscovich held, there is nothing but "point- particles", that is, simply points possessing infinite powers of repulsion. Being infinitely repulsive, it is impossible that they could possess dimensions - the "parts" of any such particle would simply explode.

Boscovich's general theory of matter, Priestley thinks, is amply attested to by a wide range of phenomena, but his theory of "point- particles" is a "random speculation" based on very few data (III,237; IV,105). Priestley does not reject such speculation: indeed, "this hypothesis will account for all the phenomena of nature", he says (III,240). The Free Discussion shows that he believes matter to be extended and not punctiform (IV,23), but whether this should be construed as a decisive denial of the puncta is doubtful. It may be that this apparent disagreement with Boscovich is only verbal, and that he still believed the curve of forces which rises towards infinity at the centre is a possible hypothesis.

In any case, there are important methodological issues here which cast an indirect light on Priestley's materialism. Priestley makes two distinct judgements about matter, employing three quite different principles. He judges that the "point-particles" theory is no more than a good hypothesis, to be elaborated and explored, but not necessarily to be believed. To command our belief a hypothesis must not only be consistent with all data; it must also possess some positive confirmation from observation or analogy. But though he refuses full assent to the puncta, he does fully assert that, internally, matter is constituted by powers. This judgement involves an inference from the observable nature of bodies to their general internal nature (as distinct from their internal configuration), and the guiding principle here is, "whatever is true of larger bodies with respect to each other, must be equally true of the smallest components of the same body" (III,222f). This is a rather simplified version of Newton's third "Rule of Reasoning in Philosophy", the same rule as the Newtonians used to infer solid atoms from solid gross bodies. (Rule III states that "the qualities of bodies, which admit neither intensification nor remission of degrees, and which are found to belong to all bodies within the reach of our experiments, are to be esteemed the universal qualities of all bodies [including atoms] whatsoever.") Touch may suggest that bodies are composed of solid atoms, "observation" persuades us otherwise. Gross bodies exhibit powers; by the analogical reasoning of Rule III, their components, whatever they be, must also.<23>

The main principle employed by Priestley in dealing with Boscovich is the principle of simplicity embodied in Newton's first and second "Rules of Reasoning in Philosophy", the same principle as he used to authorize his materialism. In the matter-theory case his claim is that resistance "is in most cases certainly caused by powers, and in no case certainly by anything else"; hence, by the Rules, "the cause of all resistance is repulsive power" and not solidity (III,227). Solidity and contact are unnecessary hypotheses, and can be replaced by the well-authenticated theory of powers acting at a distance.

Perhaps the principal physical objection brought against Priestley's matter-theory is that, in "wiping off the reproach of matter", he inadvertently erased the concept of inertia from physics. By making matter wholly "active", he made it hard to conceive how matter could be the recipient of action as well as the agent. For Newton, "the vis inertiae is a passive principle by which bodies persist in their motion or rest, receive motion in proportion to the force impressing it, and resist as much as they are resisted".<24> For Price, "these [Newtonian] positions are the foundation of all that is demonstrated by natural philosophers concerning the laws of the collision of bodies.... To me they appear to be self-evident truths" (IV,18). To Priestley, however, "the laws of motion are only general rules, to which the facts relating to the approach of bodies to each other, and their receding from each other, are reducible, and are consistent with any cause of such approaching and receding" (IV,19). Price said that mere powers would necessarily lack momentum: when an impelling body meets a stationary one it would not transfer its motion and come to a halt, but would be propelled backwards as much as it impelled the other body forwards (IV,26). Priestley, in turn, denied that

> solidity is necessary to give momentum, since a sphere of resistance may, in certain circumstances, be as impenetrable as any supposed solid substance. It is not solidity, but the resistance occasioned by it, that is the immediate cause of momentum (IV,27).

For Price, even if forces could, per impossibile, act at a distance, it would make no sense to think of them acting on each other. Priestley can see no such difficulty in the interaction of powers: indeed, "the whole effect of them is to be upon each other" (III,239).

In the first edition of Matter and Spirit Priestley appeared to include among the common misconceptions of matter, along with solidity, the belief that a billiard ball (for instance), "having no power within itself to make any change", must continue in the same state of rest or motion until it meets some obstacle (III,222). Price thought that Priestley's notion of agency was caught in a dilemma: it must either allow self-motion, or succumb to being wholly "torpid and passive". "If matter can move without being acted upon by a foreign cause, it must move itself; but this Dr Priestley cannot allow" (IV,27). Reid, too, thought that Priestley's theory of matter threatened to undermine his determinism. "Is [matter's] solidity, inertness and sluggishness first to be removed to make it capable of thinking, and then restored in order to make it incapable of acting?"<30>

In reply to Price, Priestley admitted his "inaccuracy" in allowing the suggestion that a dynamic theory of matter permits bodies to act without being acted upon. "I could not mean to give to a stone the self-determining power which I had denied to man" (ibid.). But he rejected Price's dichotomy of self-motion of passivity. The paradigm of power for him

is not self-motion but action-at-a-distance, and this distance-action is thoroughly law-governed. The theory of passivity, he suggests elsewhere, takes the billiard table as its paradigm, and thereby falls into a fallacy, for it enables us to overlook the fact that the table is immersed in a gravitational field. "As the table is level, the idea of gravity, or of a tendency to move downwards, is easily excluded" (III,192). Bodies cannot act of themselves, but they do contain "tendencies", and it is this that makes them powerful agents. The fact that bodies are, in some circumstances, in equilibrium can not be used to prove - as Price believed - that they are not naturally powerful agents; in such cases the powers simply balance each other. Likewise, "It does not follow that because a beam is in equilibrio, there are no weights in the scales" (IV,35).

Priestley's critics, especially Price, felt that powers are altogether too insubstantial to function as ontological ultimates, or even to serve any ontological role. "All power is the power of something. What is that something in the present case? - Is it a power of attraction and repulsion only that perceives, thinks, reasons, &c.? Is it only powers that circulate in our veins, vibrate in the nerves, revolve around the sun, &c.?" (IV,23). To the latter part of this, Priestley denied the inference that

> because all the powers of matter may be analyzed into modes of attraction and repulsion, [therefore] all particular substances must have the very same modes of attraction and repulsion, and consequently that there is no difference between acids and alkalis, metals and earths, &c. The powers of perception and thought ... may be the result of a certain state of the brain, and certain motions taking place within it, though they could not result from matter of a different form, texture, or consistence (IV,24).

Price requires an answer to the question: "What is it that attracts and repels, and that is attracted and repelled?" Priestley thinks it sufficient to answer that it is "a substance possessed of certain powers of attraction and repulsion.". Price finds this no more informative than to be told merely that the inhabitants of Jupiter have the power of moving. Priestley replies that this "information" is indeed all that we know of matter. Price retorts that this definition of matter is a relational one: matter is defined by the fact that it acts on other matter. "Take this away; set it at rest, or remove its neighbours, so as that it may have nothing to act upon, and it becomes nothing" (IV,25). Priestley does not deny that his definition is relational, but he sees no serious difficulty in its being so.

> A definition of any particular thing ... cannot be any thing more than an enumeration of its known properties; and in all cases whatever ... if we take away all the known properties, nothing will be left of which we can have any idea at all; everything else being merely hypothetical.... (IV,34).

Price does not accept that the ultimate constituents of the world could be defined merely empirically. For him matter has to be regarded as "a solid continuum incapable of division". Indeed, he adds, "every real existence or substance must be a monad" (ibid.). For Priestley such a definition has no warrant from experience; but further, it fails to meet the purpose required of it, for, just as (on Priestley's theory) there is no explanation of what remains when powers are removed, so too "every idea vanishes from the mind if, upon the common hypothesis, solidity or impenetrability be taken away" (III, 236).

Priestley believes that Price's definitional demands are excessively stringent, so stringent that Price's own theory of mind could not meet them. Price had asked: "If matter is not solid extension, what is it more than mere extension?" Priestley replies: "If, as Dr Clarke and Dr Price suppose, spirit be extended, what is that more than mere extension?" (IV,26). To this Price answers that spirit is "consciousness, perception, thought &c. (IV,31). But this reply, Priestley feels, is open to Price's own objection: "take away consciousness, perception &c. and what is spirit but mere extension?" (IV,32).

One remarkable feature of the critical response to Priestley's matter-theory is the frequency with which he has been described as an unwitting immaterialist. A wide variety of critics have thought that his matter-theory has converted his materialism into its opposite. The list of these critics is headed by Richard Price, who said that, if Priestley's matter is defined as merely "something not solid that exists in space", then "what he has proved will be, not that we have no souls distinct from our bodies, but that we have no bodies distinct from our souls" (IV,54). According to Coleridge, Priestley "stript matter of all its material properties; substituted spiritual powers; and when we expected to find a body, behold! we had nothing but its ghost! the apparition of a defunct substance!"<26> From a different quarter, T. H. Huxley contended that the matter-theory contained the "seeds of destruction" for Priestley's materialism, for the matter- theory recognized the principle that knowledge extends only to properties, and never to substances. If Priestley had applied this principle to the theory of mind, he would have seen that "his materialism was, essentially, very little different from the Idealism of his contemporary, the Bishop of Cloyne".<27> Even a recent historian of science speaks - perhaps not seriously - of "Priestley's matterless universe".<28>

It is true that Priestley occasionally lends some colour to this interpretation. "If they choose to call my matter by the name of Spirit, I have no objection", he says (IV,26); but elsewhere he adds the proviso that those who say this should "make as great a difference in spirits, as they have hitherto made in substances. The world has been too long amused by mere names" (III,236). If an even stronger rebuttal of the charge that he spiritualized matter is required we can turn to his reply to one of his critics, Dr Kenrick. Kenrick claimed to have (anonymously) advocated a dynamic theory of matter for twenty years, and he accused Priestley of having stolen the theory without acknowledgment. Priestley replied that he was quite ignorant of Kenrick's efforts. Kenrick further wanted Priestley to see that the dynamic theory of matter really does de-materialize matter: he urged him to re-describe force as "spirit", and to discard the obnoxious term "matter". Priestley could not do so, because for him man

> was wholly made of the dust of the ground, or of the same substance with the earth itself. Now, by what term has the earth ... been distinguished, but that of matter?.... To call matter by the name of spirit, might tend to give [the dualists] an idea that my opinions were, in fact, the same with theirs, though expressed in different words; and by this means, I might screen myself from their censure; but I should only deceive, and should not instruct them at all (IV,142).

Notes to Chapter One

1. Priestley's editor, J. T. Rutt, lists Bishop Law, Archdeacon Blackburne, Dr Peckard and Dr John Taylor as also being of this persuasion.

2. Joseph Priestley, The History and Present State of Electricity, with Original Experiments, 2 Vols, (London, 1767; repr. New York, 1966), II, 12.

3. On this aspect of Reid see Selwyn Grave, "The 'Theory of Ideas'" in Thomas Reid : Critical Interpretations, eds Stephen F. Barker and Tom L. Beauchamp, (Philadelphia, 1976), pp. 55-61.

4. The Works of Thomas Reid, ed. W. Hamilton, 7th ed., 2 Vols, (Edinburgh, 1872), I, 188.

5. Ibid., p. 157; quoted by Priestley at III, 38.

6. Ibid., p. 187.

7. Ibid., p. 132.

8. Ibid., p. 210.

9. See ibid.

10. John A. Passmore (ed.), Priestley's Writings on Philosophy, Science and Politics, (New York, 1965), Introduction, p. 24.

11. Essay concerning Human Understanding, II, xxiii, 19-21 and IV, iii, 6.

12. In his Philosophical Essays, Essay VI; see The Works of Isaac Watts, 6 Vols, (London, 1810; repr. New York, 1971), V, 556-71.

13. Priestley's main authorities were Isaac Beausobre's History of Manichaeism and J. L. von Mosheim's Ecclesiastical History, though the sweeping perspective was Priestley's own.

14. Matho, 3rd ed., 2 Vols, (London, 1765), II, 211.

15. Harry M. Bracken, The Early Reception of Berkeley's Immaterialism 1710-1733, (The Hague, 1953), p. 63. The source of the active/passive dichotomy is to be found in the Cambridge Platonists, Ralph Cudworth and Henry More, whose profound influence on Newton has been fully established by J. E. McGuire in his "Force, Active Principles, and Newton's Invisible Realm", Ambix, Vol. 15, 1968, pp. 154-208. Curiously, for all his hostile sensitivity to "platonism", Priestley nowhere alludes to this influence, although he had read Cudworth and More.

16. Letter to Lord Kames, 16th Dec., 1780, in Reid, Works, op. cit., I, 59. At the time of writing, Reid knew of Priestley's materialism, though whether he knew of Priestley's matter-theory and its use is unclear.

17. Query 31 of Newton's Opticks.

18. Newton's disciple, John Keill, is the likely source of this assertion, or something like it, though the "nut-shell" phrase seems to be Priestley's own. See Arnold Thackray, Atoms and Powers, (Cambridge, Mass., 1970) pp. 53-67. Newton himself (in Query 31 of the Opticks) spoke of atoms as "vanishingly small", and asserted that "we meet with very little motion in the world, besides what is owing to these [immaterial, force-like] active principles". Thackray's Atoms and Powers (pp. 126-34) has shown that, long before Boscovich, Robert Greene (1678?-1730) had already expunged solidity completely in his Principles of Natural Philosophy (Cambridge, 1712). There is no evidence of Greene having influenced Priestley.

19. An Inquiry into the Nature of the Human Soul, 2nd ed., 2 Vols, (London, 1737) II, 345.

20. Locke is quoted as saying: "If God cannot join things together by connexions inconceivable to us, we must deny even the consistency and being of matter itself; since every particle of it having bulk has its parts connected by ways inconceivable to us" (III,225). Though it sounds authentically Lockean, I have been unable to find this remark in Locke's works. Priestley refers us to the Essay; J. T. Rutt thinks it comes from Locke's correspondence with Stillingfleet.

21. John Michell was the discoverer of the method of making artificial magnets. He and Priestley were neighbours and close friends at Leeds (1767-1773). He helped Priestley with his composition of the History and Present State of Discoveries relating to Vision, Light and Colours, and introduced him to Boscovich's theory of matter. Michell had met Boscovich when he had visited England in 1760.

22. R. J. Boscovich, A Theory of Natural Philosophy, trans. J. M. Child, (London, 1966) pp. 19, 27-30, 56. Priestley met Boscovich on Paris in 1774 and the two enjoyed "many very agreeable conversations", Priestley said (A Scientific Autobiography of Joseph Priestley, ed. R. E. Schofield, [Cambridge, Mass., 1966] p. 167). After hearing a report of Matter and Spirit, Boscovich wrote to Lord Shelburne (then Priestley's patron) asking for Priestley to retract the "attack" on his "religion, probity and honour". Priestley replied that, "whatever guilt I have contracted by my late publication, I have not made you an accomplice in it ...." (ibid.). Boscovich, in return, rehearsed his theory and denied that Priestley's "impieties and follies" had the slightest connection with it, though he made no mention of the active/passive dichotomy which is for Priestley the real point of connection.

23. It has been claimed that, in Priestley's scheme, "Newton's third Rule of Philosophizing is implicitly denied, since an invisible realm beyond the experience of the senses, though it may exist, is not a possible object of knowledge" (P. M. Heimann and J. E. McGuire, "Newtonian Forces and Lockean Powers: Concepts of Matter in Eighteenth-Century Thought", Historical Studies in the Physical Sciences, Vol. 3, 1971, p. 271). I can find in Priestley no such scepticism about the "invisible realm" or about the third Rule. It cannot be inferred that, because he rejects the traditional primary qualities of

matter, he rejects all claims to primacy. For him powers are primary and "solidity" is secondary.

24. Opticks, Query 31.

25. Reid, op. cit., II, 635.

26. S. T. Coleridge, Biographia Literaria, ed. G. Watson, (London and New York), Chapter VIII, p. 77.

27. T. H. Huxley, "Joseph Priestley", Collected Essays, (London, 1925), Vol. III, p. 26f.

28. Thackray, op. cit., pp. 190, 249.

CHAPTER TWO: MATERIALISM (2)

2.1 The Hypothesis of the Soul

We have already twice observed Priestley appealing to the principle of simplicity in support of a philosophical conclusion: once, against Reid, to show that occasionalism makes belief in the external world redundant; and later, against the Newtonians, to show that solidity is not an essential property of matter. The principle also provided Priestley's central argument for materialism. Matter and Spirit begins by desiring the reader to

> recur to the universally received rules of philosophizing, such as are laid down by Sir Isaac Newton at the beginning of his third book of Principia.... The first of these rules ... is, that we are to "admit no more causes of things than are sufficient to explain appearances"; and the second is, that "to the same effects we must, as far as possible, assign the same causes".... We have suffered ourselves to be guided by [these rules] in our inquiries into the causes of particular appearances in nature, but have formed our notions, with respect to the most general and comprehensive principles of human knowledge, without the least regard, nay, in direct contradiction to them.... By these plain rules, then, let us pursue our inquiries concerning the nature and connexion of what have been called material and thinking substances, concerning both which very great misconceptions seem to have very generally prevailed (III,221f).

In Newton's original Latin version, the first two of his four "Rules of Reasoning in Philosophy" read: "Regula 1, Causas rerum naturalium non plures admitti debere, quam quae et verae sint, et earum phenomenis explicandis sufficiant. 2, Ideoque Effectuum naturalium ejusdem generis eaedem assignandae sunt Causae, quatenus fieri potest". It is immediately apparent that Priestley's version has omitted the reference to "vera causae", "true causes", from Rule I, a fact we will need to bear in mind. Newton's "Rules" raise problems of both interpretation and justification, as will emerge in due course. Before that, we should note some general features of Priestley's attempt to apply the Rules to the theory of mind.

Priestley, as we saw, accuses his scientifically-minded age of being fundamentally inconsistent in exempting the theory of mind from the constraints of scientific reasoning. La Grange's dictum, "There is only one universe, and Newton discovered its law", might have been adapted by Priestley (who was not in other ways slavishly Newtonian) to read: "There is only one science, and Newton defined its rules". Certainly he believed that there are not two kinds of rationality, one for physical and the other for mental inquiries.

2.1(i) Following the phenomena

Perhaps the essential originality of Priestley's materialism lies in the fact that he tried to construe the question of the nature of mind as a matter to be solved by the accepted

methods of scientific theorizing. Hartley's empirical psychology, for instance, makes no attempt to discover the nature of mind empirically; and the same could be said of Locke's "natural history of the mind". Hobbes' materialism is formed on principles influenced by Galileo's physics, but those principles were quite remote from what was conceived to be scientific methodology from Bacon and Newton onwards. (Hobbes' blunt assertion in Leviathan, Chapter 34, that "substance and body signify the same thing; and therefore substance incorporeal are words which when joined together, destroy one another" is quite foreign to Priestley's approach to materialism.) And the dominant dualist tradition mostly reasoned a priori for its position. (The dualists' insistence on the passivity of matter was given some "empirical" support, but their contrasting definition of mind as "active" is metaphysical in inspiration.) Priestley's aim is to discover "the constituent principle of human nature". For him the enquiry is little different from the typical scientific attempt to progress from (in Locke's terms) the "nominal essence" of a substance to its hidden "real essence".

Priestley found it unaccountable that Locke, who maintained "that spirits exist in place, and have proper loco-motion, that matter may be made to think, that the souls of men are probably in part material, and also that the souls of brutes are not immortal" (Priestley's summary, III, 363) should have failed to renounce dualism altogether. Locke's "failure" is ascribed to an inadequate methodology. "A philosopher ought to have been apprised that we are to suppose no more causes than are necessary to produce the effects; and therefore, that we ought to conclude that the whole man is material, unless it should appear that he has some powers or properties that are absolutely incompatible with matter" (III,246f).

Newton's Rules of Reasoning need empirical data on which to operate. Priestley's theory of mind aims to be "guided by the phenomena".

> Had we formed a judgement concerning the necessary seat of thought by the circumstances that universally accompany it, which is our rule in all other cases, we could not but have concluded that in man it is a property of the nervous system, or rather of the brain; because as far as we can judge, the faculty of thinking, and a certain state of the brain, always accompany and correspond to one another; which is the very reason why we believe that any property is inherent in any substance whatever (III,244).

Priestley's "evidence" for a constant correlation between brain-states and the faculty of thinking was rudimentary, but so too was knowledge of neurophysiology in his time. The "phenomena" adduced are: that strong passions affect the body; that brain damage impairs the mental faculties; that "there is no instance of any man retaining the faculty of thinking when his brain was destroyed"; and that "mind and body generally mature and decay together". (Priestley adds that "if, in some cases, the mental faculties continue vigorous when the body in general is enfeebled, it is evidently because, in those particular cases, the brain is not much affected by the general cause of weakness".)

Priestley's "evidence" is sketchy enough, but he no doubt felt he could fall back on the authority of Hartley if need be. It is perhaps the central claim of the Observations on Man that there is a universal correlation between mental and bodily phenomena, or in Hartley's terms, between "associations" and "vibrations". His "Proposition 2" asserts that "whatever

changes are made in [the white medullary substance of the brain], corresponding changes are made in our ideas, and vice versa".<1> Hartley, a physician, adds that "In dissections after apoplexies, palsies, epilepsies and other distempers affecting the sensations and motions, it is usual to find some great disorder in the brain...." Considerations such as these, interpreted in the light of Newton's first two Rules, are, in Priestley's view, "certainly irrefragable arguments that it is properly no other than one and the same thing that is subject to these affections, and that they are necessarily dependent upon one another" (III,224).

Richard Price could see no such "argument" in the data, and it is convenient to consider his position here, before examining more fully the role of the Rules in Priestley's reasoning. Priestley had submitted the first printing of Matter and Spirit to Price for comments, and Price's remarks formed the basis for a correspondence which grew into the Free Discussion of the Doctrines of Materialism and Philosophical Necessity of 1778, a work noted in its time as "a pleasing, though too rare an instance of a dispute conducted with sufficient acuteness on each side, yet without the loss of good temper or the kindest disposition towards his opponent, in the breast of either" - the words are those of Priestley's editor, J. T. Rutt (IV,iii). (William Hazlitt thought it "a masterpiece not only of ingenuity, vigour and logical clearness, but of verbal dexterity and artful evasion of difficulties, if any one need a model of this kind".<2>)

Priestley concluded both that mind and body are "one and the same thing" and that they are "necessarily dependent on one another". Price did not dispute the "phenomena" Priestley adduced. Rather, he insisted that "connexion and dependence by no means prove sameness.... Seeing depends on our eyes, but we are not our eyes any more than the eye itself is the telescope through which it looks, or the artist is the tool which he uses" (IV,35). Reid would later argue in the same vein: "The eye is a natural organ of sight, but it sees as little as the telescope".<3> Priestley replied to Price that

> the ultimate perceptive power relating to objects of sight is not in the eye, because though the eye may be necessary to acquire ideas of sight, they remain somewhere when the eye is destroyed. But I have no reason whatever to refer this perceptive power to any thing beyond the brain, because when the brain is destroyed, there is, to all appearance, an end of sensation and thought (IV,36).

Price was not satisfied with this reply.

> From the dependence of actual sensations and thoughts on the brain, we have, I think, no more reason to conclude that the brain is the mind than a savage who had never heard the music of a harpsichord, and did not see the hand that played upon it, would have to conclude that it played upon itself, and was the musician; because he could trace all the sounds to the instrument, and found that when the strings were out of order, the music was disturbed or destroyed (IV,51).

Priestley answers this analogy in its own terms.

> If, upon examination, nothing could be found, or reasonably conjectured, to move the strings of the harpsichord, it would be philosophical to conclude that the cause of the music that came from it was within itself (IV,52).

Priestley contends only that such evidence as we have favours the conclusion that the brain is not being "played upon", "because, for any thing that I know, perception may be the property of that material, as well as of any supposed immaterial substance" (ibid.). He rejects the suggestion that, if the brain is not "played upon", it must "play upon itself"; he claims only that thought comes from the brain, and from no other being. The powers of thought depend on the brain not merely for their operation, but for their existence. As there are no grounds for thinking of the cause of thought as separate from the brain (neither independent evidence of the soul, nor evidence of the brain's "insufficiency" for thought), the brain must be a case in which "dependence" amounts to "sameness". The internal nature of the mind is the brain, and it is the brain that makes possible the "external" operations of thought. The mind, in short, must be "the result of corporeal organisation" (III,220).

2.1(ii) Interpreting Newton's Rules

It is curious that at no stage does Price discuss Priestley's use of Newton's Rules, and, though he is "Newtonian" in his theory of matter, one cannot tell what his attitude is to Newtonian methodology. Priestley had professed "an uniform and rigorous adherence" to the Rules; but then, he added, "I must require that my own reasoning be tried by this and no other test" (III,221). In fact, although Priestley's materialism found critics who objected on various grounds, there has come down to us no critique of Priestley's use and interpretation of these Rules. The man who most showed signs of taking issue with Priestley on this was Thomas Reid, and Reid did write such a critique, which he entitled "Some Observations on The Modern System of Materialism". James McCosh, writing in 1875, described the paper as being "of a thorough and searching character, distinguished for acuteness beyond almost any of his published writings, and written with great point and naiveté". Unfortunately, the paper has been lost or destroyed. All that has survived is McCosh's brief summary, which includes the following: "Chapter II Of Newton's Rules of philosophizing, showing that he had profoundly studied Newton. He gives fair explanations of Newton's rules. He shows that Priestley does not follow these rules".<4>

Reid's surviving writings contain surprisingly little about the ontology of mind. However, he does frequently refer to Newton's Rules and to scientific reasoning in general. How Reid thought those Rules related to the theory of mind is a matter about which we will have to conjecture with the help of Dugald Stewart's biographical sketch of Reid, in which Stewart constructs a Reidian reply to Priestley's materialism. (It seems likely that Stewart, Reid's successor as leader of the Common Sense school, would have known the paper to which McCosh refers, though we cannot be sure of this.)

Although they interpreted the Rules in quite opposite ways, Reid and Priestley valued them very similarly. Reid said, for instance, that Rule I is "a golden rule; it is the true and proper test by which what is sound and solid in philosophy may be distinguished from what is hollow and vain".<4> For Priestley too the Rules mark the distinction between science

and speculation: "the moment we depart from them, we wander in the regions of mere fancy, and are only entertaining ourselves and others with our own crude imaginations and conceits" (III,222). Essentially, Reid thought the Rules proscribed hypotheses altogether and Priestley thought they distinguished between acceptable and unacceptable hypotheses. Priestley read the Rules as sanctioning "simplicity" and "analogy" as the criteria of valid and plausible hypotheses, whereas Reid thought "simplicity" and "analogy" the chief seductions from the true path of science.

Rule I, for Reid, has nothing to do with simplicity. The Rule teaches only that causes must meet two conditions:

> First, they ought to be true, to have a real existence, and not to be barely conjectured to exist without proof. Secondly, they ought to be sufficient to produce the effect.<6>

The chief offenders against this Rule are Descartes and Hartley, according to Reid. Reid's main text from Hartley is the statement that, "supposing the existence of the ether, and of its properties, to be destitute of all direct evidence, still, if it serves to account for a great variety of phenomena, it will have an indirect evidence in its favour."<7> Such explanations, for Hartley, resemble a key which deciphers a code: we know them to be right because they fit the phenomena. Reid describes this as "the common refuge of all hypotheses, that we know no other way in which the phenomena may be produced, and, therefore, they must be produced in this way". He takes the method to be logically fallacious, and assumes it, and the ether theory it is supposed to sanction, to be scientifically worthless. Hartley is also rebuked for violating the second desideratum of Rule I, sufficiency. Hartley had speculated that nervous tissue contains an ethereal medium in which vibrations are transmitted, and these vibrations are the causal explanation of our having sensations. But, Reid objects, vibrations are manifestly incapable of the task assigned them: "How shall we find varieties in vibrations corresponding to all this variety of sensations which we have by our five senses?" When Reid appeals to the criterion of sufficiency, it is typically to contrast it with the insufficiency of some hypothesis.

Priestley was an ardent supporter of Hartley's theory of vibrations, but not of his theory of ether. He rejected all ether theories, at least as explanations of gravity, and on much the same grounds as Reid: ether's existence has not been proved, and it could not produce the effects that are ascribed to it (III,234). Priestley admired Hartley not just as a psychologist, but also as a methodologist, and he took his reading of Newton's Rules in part from him. Reid thought Hartley, though he professed to follow the Rules, had in fact elaborated a "defence of the exploded method of hypothesis". What Priestley saw in Hartley is not quite the same as what Reid saw. Hartley differed from Reid on three matters, and Priestley's position can be introduced via these differences.

Hartley had held that "any hypothesis that has so much plausibility as to explain a considerable number of facts helps us to digest these facts in proper order, to bring new ones to light, and to make experimenta crucis for the sake of future inquirers".<8> Priestley agrees with this:

> Hypotheses, while they are considered merely as such [i.e. as probable suppositions, and not facts] lead persons to try a variety of experiments to ascertain them. In these experiments, new facts generally arise. These new facts serve to correct the hypothesis which gave occasion to them.<9>

About the role of hypotheses in discovery, Reid was ambivalent. "The votaries of hypotheses have often been challenged to shew one useful discovery in the works of Nature that was made in this way." "In reply to this challenge [said Dugald Stewart], it is sufficient ... to mention the theory of gravitation and the Copernican system".<10> But Reid could not wholly deny that hypotheses might be of some use: "Let them suggest experiments, or direct our inquiries; but let just induction govern our belief".<11> However, as our concern is the role of hypotheses in the theory of mind, and as experiments cannot be performed in this case, the role of hypotheses in suggesting experimental discoveries is not strictly relevant. We need to know whether hypotheses can in any way "govern our belief" before such experiments can be performed. For Reid it could only be accidental that certain hypotheses lead to discoveries; for Hartley and Priestley some hypotheses possess a prior probability which explains why they often lead to discoveries.

Hartley distinguished between direct observations, reasonable hypotheses, and "false imaginations". He does not assert that the "rational and indirect solution" of problems is better than "the empirical and direct one, where this is to be had; but only, since this cannot be had always, that we ought to proceed in an explicit and scientifical manner, rather than a confused and popular one". In defence of his principles of "vibrations" and "associations", he contends that "though they may be fictitious, [they] are, at least, clear and intelligible". Clearness and intelligibility are, for Hartley, largely determined by the role of analogy in shaping hypotheses, and analogy is a valuable source of confirmation for hypotheses. "It is often in our power to obtain an analogy when we cannot have an induction; in which case reasoning from analogy ought to be admitted.... The analogous natures of all the things about us are a great assistance in deciphering their properties, powers, laws, &c".<12>

For Priestley too it is analogy which both suggests and supports hypotheses: it is from "analogies in nature, more or less perfect", that we form "some idea what [an entity's] influence [will] probably be".<13> Reid thinks Hartley's hypotheses stand entirely unsupported except for the bare fact that they "fit the phenomena"; but Reid could hold this perhaps because, for him, analogy is of little worth as a source of confirmation. "Arguments from analogy are always at hand, and grow up spontaneously in a fruitful imagination...." - the very ease with which they are produced betrays them. In one place he allows, surprisingly, that they can "lead us to probable conjectures about [the] nature and qualities" of things - a concession which hands over everything that Hartley or Priestley could wish for - but elsewhere he counter-asserts that "in our inquiries concerning the mind and its operations, we ought never to trust to reasonings drawn from some supposed similitude of body and mind".<14> Priestley simply wants analogy to supply "probable conjectures" about the mind-body relation as it would supply them in other inquiries.

Hartley's third difference from Reid is that he rejects the fact- theory dichotomy to which Reid subscribes. He rejects it simply because he ascribes so much to analogy. From his belief in "the analogous natures of all the things about us", he can conclude that, "thus all things become comments on each other in an endless reciprocation"<15> - an anticipation perhaps of the "network" epistemology of Duhem and Quine. For Priestley too there is no rigid distinction between facts and hypotheses: the two are distinct at the extremes, but many propositions fall between the extremes and possess degrees of probability. Both Hartley and Priestley might have endorsed Erasmus Darwin's later maxim: "To think is to theorize". Reid, on the other side, sharply contrasts observation and "reflection" (introspection) with the deliverances of the method of analogy. Hartley's "endless reciprocation" might have been redescribed by Reid as "endless equivocation". He appeals to Newton's fourth Rule: "To argue from an hypothesis against facts, is contrary to the rules of true philosophizing".<16> For Hartley and Priestley such facts "cannot be had always", and analogy has to suffice in their absence; for both, science transcends the observable, on the basis of analogical inference from the observable.

The central disagreement in this debate concerns analogy. Hartley and Priestley, I would suggest, read the "true" and "sufficient" criteria of Rule I as simply defining the method of analogy. For them a hypothetical cause can be "true" if it resembles or is modelled on a real existent; because of such "resemblances" we can judge with some probability whether or not a "cause" will be "sufficient" to produce the "effect". Reid takes "true" to mean "observable" and on that basis reads Rule I as hostile to hypotheses. When he employs the "sufficiency" criterion it is (as we saw) typically to exhibit the "insufficiency" of some hypothesis. Priestley, on the other hand, typically contrasts "sufficient" with "superfluous", and so reads the Rule as favouring "simplicity". Priestley and Hartley will find confirmation of their reading of Rule I in Rule II: where one "effect" (E2) resembles another (E1) and the cause of El is known (C1), then we are entitled to infer that the cause of E2 (C2) resembles C1. It is less apparent how Reid takes Rule II: he might interpret "likeness" as "sameness", and thereby reduce the analogical aspect of the Rule.

2.1(iii) Applying the Rules to the mind

To return from the theory of method to the theory of mind: Priestley wishes to analyse the nature of mind in accordance with established scientific procedure, in the way that, for instance, Michell and Boscovich analysed the nature of matter. Reid, we saw from McCosh, alleged that Priestley's materialism does not follow Newton's Rules. Priestley's reasoning can be clarified by reconstructing, for purposes of contrast, Reid's attempted methodological refutation of that reasoning. But before this contrast can be drawn, a number of features of Reid's attitude to mind need to be set in perspective.

A large part of the background to Priestley's materialism lies in the radically opposed psychologies of Hartley and Reid. Hartley's psychology is a sustained attempt to illuminate the mind by the use of mechanical and physiological analogies; Reid's psychology is an equally sustained attempt to eschew, and sometimes to refute such analogies. Priestley of course is wholeheartedly Hartleian: Hartley, he says, "has thrown more useful light upon the theory of the mind than Newton did upon the theory of the natural world" (III,26). Priestley's materialism depends upon the proposition that "all the

known properties of man ... have nothing in them that is absolutely incompatible with one another...." (III,243). As a disciple of Hartley, he also holds that the properties of mind can only be elucidated by material analogies. Reid held that all such analogies could, and should, be dispelled; but to do this is not quite the same as to claim, against Priestley, that there are "absolute incompatibilities" within "the properties of man". The dualist tradition in general, Reid included, regarded the active/ passive dichotomy as one such incompatibility. But it does not appear, if McCosh's account of his response to Priestley is any guide, that Reid chose to draw any other "incompatibilities" from his anti-Hartleian (and of course anti- Humean) psychology. For Reid the mind is sui generis and possesses many properties not possessed by matter; but then, even for Priestley the mind possesses some features not shared by the rest of the material universe, notably the capacity for sentience and the possession of "ideas" which form themselves into associations. According to the Hartleian Priestley, "nothing is requisite to make any man whatever he is, but a sentient principle, with this single property [of association] (which however admits of great variety), and the influence of such circumstances as he has actually been exposed to" (III,184).

Reid nowhere suggests that dualism is one of the commitments required by common sense. Although his psychology is introspective, he does not seem to think that introspection provides any insight into the nature of mind. Priestley offers an ingenious argument to show that introspection is necessarily silent about this. He applies Locke's theory of ideas to "ideas of reflection". Just as in sensation we see only "ideas" and have to infer objects from them, so in introspection (or "intuition", as he terms it) we only meet with ideas and cannot be certain what lies behind them. "What we feel, and what we do, we may be said to know by intuition; but what we are, we know only by deduction or inference from intuitive observations" (III,293). Reid would not have been impressed to see "ideas" take on yet another role; but he would have agreed on the need for "deduction or inference" to reach ontological conclusions in this case. It is for him a matter not for common sense but for argument that the soul does, and "ideas" do not, exist.

We noted earlier Reid's claim that "reason convinces me that [my mind] is an unextended and indivisible substance".<17> The argument behind this claim probably follows the argument from Price that we will examine in Section 2.2 below. This argument is notably absent from McCosh's report on Reid. It seems, then, that Reid's reply to Priestley is necessarily in large part methodological. His dualism, which is so fundamental to his outlook, seems to have few other foundations.

For Priestley, I have tried to show, science is ontological and analogical. For Reid science deals not with the natures of things, but only with the laws of their superficial phenomena; its method is rigorously inductive, and hostile to hypotheses. As we don't have Reid's own application of this method to the theory of mind, we must follow Dugald Stewart's account of how Reid would have reasoned. Stewart, in his role as executor of Reid's intellectual estate, is considering whether Reid has any unpaid debts to settle. One of the four objections which Stewart allows might seem to have been left unanswered is, "That he assumed gratuitously, in all his reasonings, that theory concerning the human soul which the scheme of materialism calls in question".<18> Whereas Reid's lost paper on materialism was directed against Priestley, for Stewart the leading "physiological metaphysicians" are Hume, Hartley, Helvetius and Erasmus Darwin, with Priestley barely

mentioned. Nor does he address himself to Newton's Rules and their implications, though what he says about Reid can be fitted into the framework they define.

Stewart's Reid has two things to say about the nature of mind, corresponding roughly to the two desiderata of Rule I, "truth" and "sufficiency".

> That the general spirit of Dr Reid's philosophy is hostile to the conclusions of the materialist, is indeed a fact. Not, however, because his system rests on the contrary hypothesis as a fundamental principle, but because his inquiries have a powerful tendency to wean the understanding gradually from those obstinate associations and prejudices to which the common mechanical theories of mind owe all their plausibility.<19>

It might seem strange to claim the Reid's philosophy does not rest on dualism as a fundamental principle, but the reason is obvious: not being observable, the soul must be hypothetical, and Reid can not afford to appear to "feign" even this so central postulate of his system. In short, the soul is not "true". Stewart draws the Newtonian parallel for us. Reid's "inductive science of mind ... professes to abstain from all speculations concerning its nature and essence; confining the attention entirely to the phenomena for which we have the evidence of consciousness, and to the laws by which these phenomena are regulated". Reid's philosophy stands to materialism as Newton's "law of gravitation" stands to "his query concerning the invisible ether of which he supposes [gravitation] might be the possible effect".

Yet Stewart will not allow Reid to be wholly agnostic about mind, as if materialism were as plausible as dualism. Matter and mind present "two classes of phenomena ... completely and essentially different". When the false mechanistic analogies of the associationistic psychology have been dispelled, dualism will be seen to be the natural consequence, Stewart hints. Stewart's coyness about this is unsurprising, given Reid's opinion of hypotheses and true causes; but it is notable also that to argue thus for dualism breaks the ban which Reid frequently wants to impose on the method of analogy. Stewart's Reid's "argument" for dualism proceeds by demonstrating disanalogies between matter and mind, and thence implicitly concludes that materialism is an "insufficient" hypothesis to account for the phenomena (just as Reid sometimes rejects "ideas" as an insufficient hypothesis to account for perception and sensation). Reid of course can not produce positive analogues of mind, for in a world divided between matter and minds there are none.

It is hard to see how Stewart might have got Reid wrong. His account well illustrates the barely concealed tensions between Reid's official methodology and his actual ontology.<19> Priestley's ontology follows from his methodology rather more straightforwardly. The most surprising features of Priestley's case in his neglect of the vera causae doctrine, a neglect which compares ironically with Reid's predicament. Reid, the dualist, seems driven by his strict interpretation of "true" to abstain from theoretical argument for dualism. Priestley, who interprets "true" liberally, has here no need of his liberality, for the brain is "true" even on Reid's strict interpretation. And so lightly does he appear to take this tenet, that he omits it from his official statement of the Rules, and doesn't even explicitly object that the soul is not known to be a real existent. Of course this objection is implicit in the whole of his argument for regarding the soul as a "superfluous

cause". But the weight of his explicit argument rests mainly on his contention that the brain is "sufficient" for thought, from which argument it is an indirect consequence that the soul is superfluous.

Priestley has no methodological qualms about drawing ontological conclusions. He regards Newton's Rules as in fact designed to help us draw such conclusions. The Rules determine which theoretical entities to accept, and which to discard as not necessary. Where the empirical data are compatible with any two competing hypotheses, analogy (or disanalogy) is called upon to decide between them. But, as Priestley does not deny that mental phenomena are in some respects sui generis, there is no possibility of his reasoning from direct material analogies. The properties of such material analogues ought to be all of the same fundamental kind; but the properties of mind can not be wholly of the same kind as material properties. The mind, then, has to be compared with something material. Priestley is happy to allow that it is difficult to understand how mind's unique properties inhere in and arise from a material structure. It is at this point that analogy enters into his argument, because he claims that in no material case do we disallow such inherence when the conditions of "truth" and empirical neutrality are fulfilled.

Priestley is generous, even extravagant with the analogies which he lavishes on his argument. He likens the brain's powers of sensation and thought to the feet's power to walk (III,276), the eye's power to see (III,276), the tongue's power to speak (III,276), the power of a stick to give a beating (IV,25), the bell's power to produce a sound (V,219), the planets' ability to attract each other (IV,52f), and to life itself, which is the result of "circulation of the fluids, and a proper tone of the solid parts" (III,285).<20> Another illustration is reminiscent of the debate with Reid about the Theory of Ideas:

> In fact, there is just the same reason to conclude that the powers of sensation and thought are the necessary result of a particular organization, as that sound is the necessary result of a particular concussion of the air (III,244).

Even colours and textures are enlisted to exemplify his conception of powers: "In my opinion there is just the same reason to conclude that the brain thinks, as that it is white and soft" (IV,40). In Priestley's empiricism there are no empirically "given" truths - even the judgement that brains are "white" is sufficiently theoretical to be comparable with the argument for materialism. We are again reminded of Erasmus Darwin's, "To think is to theorize".

2.1(iv) Applying the Rules in science

The force of the argument from these Rules in Matter and Spirit depends not only on the philosophical cogency of the principles of method themselves. It depends also on the claim that these methods are the accepted ("universally received") methods of science. The dualist, Priestley is trying to show, must give up many of the central achievements of modern science if he wants to avoid materialism. Priestley, then, needs to exhibit a parallel between materialism and the modern theories of gravity, magnetism, electricity, optics or chemistry. These theories - particularly Newton's theory of universal gravitation - should

help us to understand the Rules, but they should also carry some of the force of Priestley's argument.

The theory of magnetism is the only analogy which is given any development.

> We are not ... in the least able to conceive how it is that a magnet attracts iron; but, having observed that it never fails to do it, we conclude, though we do not see the proximate cause or how the attraction is effected, the magnet nevertheless has that power, and must cease to be a magnet before it can lose it; so that our reasoning with respect to the result of sensation from organization is exactly similar to our reasoning concerning the attraction of iron by magnetism (III,303).

Reid seems to have been caught between wanting to deny the validity of analogical reasoning and trying to refute the actual analogies inherent in the Hartleian psychology, but Richard Price is the only critic who attacked Priestley's central analogies.

> The truth, in this case, seems to be that there are causes or powers in nature operating according to stated laws which unite themselves to substances formed as iron and a magnet are, and drive them towards one another. Perhaps, therefore, this fact might be mentioned as most similar to the union of a soul to the brain in consequence of its organization (IV,89n).<21>

Reid too alludes to magnetism, though not in refutation of materialism: in his view Newtonian principles require us to remain agnostic about the nature of magnetism.<22>

We find, then, exactly the views about magnetism that we would expect from their theories of matter: for Priestley matter and magnetism are dynamic material power; for Reid their natures are unknown; for Price, matter is monadic atoms, and magnetism is an effluvium or subtle fluid. Price's and Priestley's theory of mind can be read off from their treatment of these cases; Reid's is more complicated, but the tendency to agnosticism follows from his material theories.

Priestley's theories of mind, matter and magnetism were all controversial, though of the three the latter had found widest - but still only limited - acceptance. R. W. Home states that "until well into the 1760s, or perhaps even later, almost everyone, including the most ardent Newtonians, simply took for granted the broad outlines of the Cartesian [effluvial] theory of magnetism.... Magnetic effects were held to result from interactions between [streams of subtle ethereal matter] and samples of iron they encountered, and were brought about by contact action alone, and not by any Newtonian-style forces acting at a distance between magnetic particles or poles".<23> It seems that in the 1770s this theory lost some favour, and Priestley was well placed to observe this change through his close friendship with one leading representative of the distance-action theory, John Michell. For Priestley Newton's Rules will not permit us to use ignorance of the mechanism of magnetism as an excuse for agnosticism about the "seat" of the magnetic power. Though we do not perceive how the magnet's properties are produced, we are entitled, indeed required, to presume "some unknown bond of union" between these properties within the actual magnet itself - just as we presume "some unknown bond of union" within milk that causes it to be white, nutritious, fluid etc, though we have no idea why these properties go together as they do (III,16).

If magnetism is the analogy with mind most developed by Priestley, his writings contain allusions to a more ambitious comparison. The theory of gravitation had an immense influence on eighteenth-century thought in a variety of ways, and Reid's and Priestley's different methodologies can partly be explained by their different assessments of Newton's achievement in discovering the theory. The Rules themselves stand at the beginning of "the System of the World", Book III of the Principia, and therefore have their most immediate application in Newton's argument for universal gravitation (though they have their origin in his early work on optics). Priestley, it sometimes seems, aspired to be a "Newton of the mind" in the very literal sense of modelling his materialism on the universal gravitation argument.

What is gravity? "To us [wrote Newton in the General Scholium] it is enough that gravity really does exist, and act according to the laws which we have explained, and abundantly serves to account for all the motions of the celestial bodies, and of our sea". Newton, according to Reid, "discovered no real cause, but only the law or rule, according to which the unknown cause operates". Indeed, scientists, "when they pretend to shew the cause of any phenomenon, mean by the cause, a law of nature of which that phenomenon is a necessary consequence", and these laws can be discovered only "by just induction from experiment and observation". It was part of Newton's greatness that for fifty years he speculated on ether as the cause of gravity, and yet he continually resisted the temptation to pronounce in favour of such a theory.<24> Reid's account of science in general is modelled on his interpretation of Newton: science is not a means of advancing towards ontological knowledge (for this could only be hypothesis), but a means of uncovering broader regularities.

Priestley, as we saw, defined matter as "powers of attraction and repulsion", and by so doing incorporated the theory of gravitation into the theory of matter. Richard Price pointed out to him that, although gravity is universally associated with matter, Newton always refused to identify the two. Price quotes Newton's, "Pray don't ascribe the notion of innate gravity to me" (IV,28). Priestley could see nothing in either Newton's physics or his methodology which debarred this identification - on the contrary, as we saw, he thought that the Rules required it. Price, we might note, held a third opinion, for he believed that the true Newtonian position was not Reid's agnosticism or Priestley's dynamism, but that attraction "ought to be ascribed to some other substance within the earth, the sun and planets" (IV,63).

All this, however, concerns more the theory of the nature of gravity than the theory of universal gravitation. Universal gravitation is the precondition of the Boscovich-Priestley theory of matter as powers, for that theory can not allow that celestial motion derives from the impulsive action of a vortical ether. Newton's aim in the Principia was twofold: to refute the Cartesian vortical hypothesis, and to establish universal gravitation. Priestley claims that

> For the same reason that perception is ascribed to some immaterial substance within the brain, it seems to me that attraction ought to be ascribed to some immaterial substance within the earth, the sun &c.... (IV,52f).

And conversely, as the cause of celestial attraction is not immaterial, neither is the cause of perception. Priestley takes this analogy no further, but we are led by it to compare the gravitational account of celestial motion with the materialist explanation of mind, and to suppose that the soul somehow resembles the discredited theory of vortices.

We are required to look at Newton's Principia through Priestley's interpretation of Newton's Rules. Priestley's Newton by no means disdains hypotheses, if they conform to the Rules. "Sir Isaac Newton himself, notwithstanding the great advantage which he derived from a habit of patient thinking, indulged bold and eccentric thoughts...." Inside the Principia, Priestley might claim, there is a "bold and eccentric", but plausible hypothesis, which would have a fair claim to our assent even if Newton's mathematical "proof" had never been performed.<25>

Newton's arguments both for universal gravitation and against the vortical hypothesis involve the use of Rules I and II. Book II of the Principia attempts to determine the general properties of circular fluid motion. Newton argues that, at least on earth, fluids cannot move in elliptical paths. He then generalizes this claim to reach the conclusion (as stated in Query 28 of the Opticks) that a fine dense material fluid in space would serve

> only to disturb and retard the motions of those great bodies [the planets], and make the frame of Nature languish.... And as it is of no use ... so there is no evidence of its existence; and therefore it ought to be rejected.

The form of the argument is analogical. Newton does not reject vortices as not being "true".<26> Celestial vortices are, however, insufficient because their terrestrial counterparts are inadequate to perform actions analogous to the celestial case. To suppose vortices is, furthermore, to adopt a superfluous hypothesis, because gravity can perform all that they might perform.

Newton's argument for celestial gravitation consists of a mathematical demonstration that falling bodies and revolving planets and moons follow exactly the same inverse square law of motion. It is less clear how the Rules are supposed to contribute to this argument. They might be taken as enforcing the conclusion that, when such an exact correspondence between planetary and terrestrial motion has been demonstrated, the cause of these motions must be one and the same. Alternatively, they might contribute to the formation of the hypothesis of universal gravitation, prior to the execution of the mathematical demonstration. Newton, unfortunately, has left few clues as to how he construed the role of the Rules in supporting universal gravitation. His comment under Rule II suggests that that rule contributed to forming the hypothesis of universal gravitation, for there he gives as a case of "like effects, like causes" the example of "reflection of light in the earth and in the planets". One might infer from this that Rule II also offers some prior presumption in favour of an analogy between motion on earth and in the planets. The role of Rule I in the hypothesis seems to be to ensure that gravitation is not dismissed as an "occult entity". Although its nature is unknown, it is still to be regarded as a "true cause" (and thus a possible cause of celestial motion), for we do have at least some superficial acquaintance with it on earth.<27>

Whatever its value as history, two conclusions follow from this interpretation of Newton's achievement. One is that, contrary to Reid's interpretation, Newton's theory does not prescind from all ontological commitments in order to concentrate on the establishment of laws. For Newton, "gravity really does exist", and, whatever be its real nature, it is entitled to be considered as a real power and a "true cause". Secondly, Newton's argument is thoroughly analogical, both in attempting to exhibit the "insufficiency" of vortices and the "sufficiency" of gravitation. Both the ontological and the analogical aspects of Priestley's Newton are prominent in Priestley's materialism.

How much further the comparison between a Priestleian reading of the Principia and Priestley's materialism is questionable. Cartesian physics admits two kinds of motion, celestial and terrestrial, and explains them by two kinds of cause, vortices and gravity. Cartesian dualism ascribes two kinds of property to man, thought and motion, and explains them by reference to two kinds of entity, mind and body; and materialism reduces these two entities to one. Both universal gravitation and materialism are in this obvious sense "simpler". Both may be allowed to rest on "true" causes, gravity and brain processes. But Priestley's assumption of the sufficiency of materialism seems somewhat arbitrary. Perhaps a rigorous correlation between states of mind and states of the brain would establish the materialist case, in the way that Newton's mathematical demonstration established universal gravitation. Priestley's claim is that a partial justification can be given for the position from the correlations that we already know of. But Rule II is ambiguously relevant at this point. The Rule has two roles in Newton's theory; in Priestley's it can have only one. Priestley's correlations may resemble (no doubt very crudely) Newton's positive argument for universal gravitation. But Priestley can offer no analogues for Newton's negative use of Rule II against the vortices. To do this he would have to be able to determine some properties of "spirit" in a context detached from that of the human mind, and then show that those properties are irreconcilable with the behaviour of human minds, just as Newton determined the properties of elliptical fluid motion on earth to discredit celestial vortices.

2.1(v) Defending the Rules

Priestley's writings offer a number of clues not only to how he would defend his interpretation of Newton's rules, but also to how he would defend the Rules themselves as he interprets them. For Priestley as for Newton, the Rules have a theological sanction. Newton glosses Rule I with the remark that "Nature is pleased with simplicity, and affects not the pomp of superfluous causes". Priestley's Deity is equally Augustan in his tastes. Pope's Essay on Man is duly quoted:

> In human works, though laboured on in pain,
> A thousand movements scarce one purpose gain;
> In God's, one single can its end produce;
> Yet serves to second too some other use (III,184).

For Priestley, even more than for Newton, science is revealing the real simplicity within the apparent complexity of God's works: "the more we know of nature, the more particular facts, and particular laws, we are able to reduce to simple and general laws" (III,185).

These were the commonplaces of the age, though believed with particular fervour by Priestley. It is noticeable, however, that in Matter and Spirit it is not these, but only philosophical considerations which are employed in defence of the Rules.

Two kinds of consideration are employed, one from the nature of science, the other to do with ontology. Apart from his particular objections to Reid's philosophical psychology, Priestley thinks there is an antecedent probability against the truth of Reid's scheme. Reid has introduced "such a number of independent, arbitrary, instinctive principles" that his scheme "wants the recommendation of that agreeable simplicity, which is so apparent in other parts of the constitution of nature" (III,27). Priestley suggests that Reid's principles could never coalesce into a science: "such a theory of the human mind as that of Dr Reid ... (if that can be called a theory which in fact explains nothing)", he remarks (III,11). "The great business of philosophy [science] is to reduce into classes the various appearances which nature presents to our view" (III,25). The task of science is to devise a conceptual scheme which explains the greatest number of phenomena, and Reid, it is implied, has lost sight of this goal. Reid himself says that "There is a disposition in human nature to reduce things to as few principles as possible", which, while it adds beauty to systems whose truth is independently founded, is of no epistemic value, and in fact "has produced many a false system".<28> Priestley's "disposition" in favour of simplicity is more tempered than it might appear. He is willing to allow that "It is very possible indeed, and no person can deny it, that we may proceed too rapidly in simplifying appearances, and therefore such writers as Dr Reid are an useful and seasonable check upon us" (III,27).

Priestley hints at a more important defence of Newton's Rules. "My argument goes to prove that for the same reason that man has been supposed to have a soul, every particular substance to which any powers or properties are ascribed may have a separate soul also" (IV,63). If we are entitled to "suppose any thing within the brain to be the seat of thought", then "we may just as well suppose it to reside in something within that, and in something within that again, and so on" (IV,36). The constant co-existence of collections of properties, unless "absolute incompatibilities" intervene, is "the very reason why we believe that any property is inherent in any substance whatever" (III,244). The conclusion implied here is that Reid's agnosticism and Price's dualism are different forms of ontological scepticism: on their principles no stable conceptual scheme could ever be established. Reid's fundamental concern was to defend the mind's grasp of external reality against Hume's sceptical deductions from the Theory of Ideas. Priestley, it might be said, was concerned to preserve the integrity of natural things against the dissolving influences of Reid's "Newtonian" inductivism and Price's metaphysically-inspired dualism. And in the course of this defence he found himself concluding that man too is no more than a natural, material being. Man is, as he put it, "no more than what we now see of him" (III,256).

2.2 Systems, Beings and Powers

In the Free Discussion Price's argument against materialism comes to be dominated by a single objection arising from his presuppositions about ontology.

> It is inconceivable to me how any person can think that many substances united can be one substance, or that all the parts of a system can perceive, and yet no single part be a percipient being.

Priestley answers:

> A system, though consisting of many beings or things, is nevertheless but one system. A brain, though consisting of many parts, is but one brain; and where can be the difficulty in conceiving that no single part of a brain should be a whole brain, or have the properties of a whole brain? (IV,42).

According to Price, many beings may make one system, but one system is not one being. Systems are merely kinds of relations between beings. He therefore asks: "Is not the soul, or what I call myself, a being or substance, and not merely a mode or accident?" (IV,50). Priestley responds with an example: just as the parts of a sphere are not spherical, the parts of the brain do not think; a sphere divided ceases to be a sphere, and an embodied brain divided or dissolved ceases to be a thinking thing (III,283). Price retorts that relational properties, such as sphericity, can belong to systems without belonging to their parts, but no other properties can do so.

> Dr Priestley has observed that a compound may have properties which the component parts have not.... This is true only of such properties as denote merely an order or relation of parts.... In short, consciousness not being a mere order of parts, or an external denomination, but a quality inhering in its subject, it seems the plainest contradiction to say, that it can inhere in the whole, without inhering in the parts (IV,89n).

Priestley thinks he can produce "emergent" properties that are not relational.

> It is well known that chemical compounds have powers and properties which we could not have deduced from those of their component parts, or their new arrangement; as the power of aqua regia to dissolve gold, when neither the spirit of nitre, nor the spirit of salt, of which is it composed, will do it (IV,100).

(This is one of the very few allusions to chemistry in Priestley's philosophy.) Price does not answer this example, though he does have some examples meant to illustrate his own case: an army is nothing more than a multitude of men (IV,55), and a collection of ignorant men cannot compose a learned society (IV,88). There the exchange of examples comes to an end.

Behind Price's argument is the assumption that ontological ultimates, whether atoms or soul, must be naturally indivisible. The only coherent materialism would be one which located the mind in a single atom. In the Inquiry Reid too, as we a saw, required the mind to be "simple". This same assumption lies behind Reid's query to Lord Kames, in joking refutation of Priestley, whether "if two or three [intelligent] beings should be formed out of my brain ... they will all be me, and consequently all be one and the same intelligent being".<29> For Priestley men are no more to be counted as ultimates than are atoms. Beings require no metaphysical guarantees to preserve their identity. "I do not think that our imperfect knowledge of the nature of organized bodies will authorize the very strong

language" of "simple and indivisible essences" (IV,101). The postulate of "simplicity" (in this sense of the word) is an hypothesis required by no "appearances".

In one place Priestley contends that there are, and could be, no uncompounded ultimates. It is, he says, "even demonstrable that matter is infinitely divisible", and so powers cannot but reside in vulnerable, organized "systems" (III,270). Nature, in his scheme, is a multi-levelled set of systems, in which different powers belong to different levels of organization. In this regard his materialism can be contrasted with that of, say, J. J. C. Smart. For Smart, "Emergent properties would be just as much nomological danglers as physical entities are".<30> Smart too appeals to theoretical economy, but economy for him involves reducing not only psychology, but biology and chemistry, to physics. Priestley's interpretation of simplicity and analogy requires just the opposite: our difficulties in understanding the relation between the brain and thought are to be palliated by reference to similar difficulties in a variety of natural instances.

Priestley freely and frequently admits that, "As to the manner in which the power of sensation results from organization, I own I have no idea at all...." (III,303; cf. III,281; IV,25,141). This is, he says, the only plausible objection to materialism (III,213). Nevertheless, "It is not impossible but that, in time, we may see how it is that sensation results from organization" (III,304). But, despite our present ignorance,

> the fact of this connexion does not appear to me to be, on that account, any the less certain. Sensation and thought do always accompany such an organization; and having never known them to be separated, we can have no reason to suppose that they can be separated (III,303).

Priestley thinks there are two ways in which the power of thought may arise: it may be the necessary result of organization; or it may be "something independent of organization, but superadded or communicated to the system afterwards" by the Creator (III,302). By 1782 he had decided in favour of the former account: the living brain is necessarily capable of thought. The difficulty here is to see what the "superaddition" theory could ever have amounted to for him. The "added" power would have to be material, if it is not to be a soul; but somehow it has to be "independent of organization". Priestley says nothing to clarify this.<31>

At the completion of his argument against the possibility of interaction between matter and spirit, Priestley made a concession which relates to our ignorance of how matter might think. He asserts that, even if such interaction is not an "absolute impossibility" (as he believes it is), it would still be a difficulty "of such magnitude as far to exceed that of conceiving that the principle of sensation may possibly consist with matter" (III,163; cf. III,281). Descartes, faced with the same two difficulties, found the former the more acceptable: replying to the materialist Gassendi, he claimed that "there is more difference between ... accidents and a substance [i.e. thought and the brain] than between two substances [matter and spirit]".<32> Locke held the middle position between Descartes and Priestley: the difficulties are equally hard to accept.

> For since we must allow [God] has annexed effects [such as sensation and thought] to [bodily] motion, which we can no way conceive motion able to produce, what

> reason have we to conclude that he could not order them as well to be produced in a subject we cannot conceive capable of them [i.e. the brain], as well as in a subject we cannot conceive the motion of matter can any way operate upon [i.e. the soul]?<33>

There is no indication how Priestley might have replied to Descartes' and Locke's different estimates of these "difficulties".

2.3 The Nature of Ideas

For Priestley the powers of thought and sensation are material powers, but it is less certain whether or not for him thoughts and sensations themselves are material. His conception of nature (in contrast, say, to that of J. J. C. Smart, mentioned above) as a hierarchy of powers emergent upon different levels of organisation is a conception not unfavourable to a non-reductive approach to mental attributes. It is difficult to discover much clarity in Priestley's remarks on the nature of ideas, and the best approach is begin by chronicling these remarks.

Before he was a fully committed materialist, Priestley was of course a Hartleian: ideas, he says in 1774, "are the result of certain impressions made upon the system of the nerves and the brain" (III,153). Ideas, he also says in 1774, are "in the brain" (III,22), but this does not appear to be intended as a materialistic statement. "Vibrations in the brain may accompany and be the cause of all our ideas", he adds in 1775 (III,180). The 1777 first edition of Matter and Spirit is remarkably silent about the nature of ideas, except for the comment that

> whatever ideas are in themselves, they are evidently produced by external objects, and must therefore correspond to them; and since many of the objects or archetypes of ideas are divisible, it necessarily follows that the ideas themselves are divisible also.... If the archetypes of ideas have extension ... [their corresponding ideas] must have extension likewise; and therefore the mind in which they exist, whether it be material or immaterial, must have extension also (III,250).

This argument is not intended as a direct proof of materialism. Priestley really is allowing that minds and ideas may be both extended and immaterial, thought they also might be material.

In the Free Discussion of 1778 Price objected to the above statement that

> the idea of an object is the apprehension, view or notion of it; and how can this be divisible? Perception is a single and indivisible act. The object perceived may be divisible; but the perception of it by the mind cannot be so (IV,36).

Priestley thought Price had failed to distinguish between the act and the immediate object of perception. The act of perception, being an act, cannot be divisible, but "the thing about which the perceptive power is employed (which is not the object itself, but the idea or representation of it in the mind)" must be so (IV,36f). He remained undaunted by Price's claim that his ideas are "models or delineations of external objects ... like maps and globes

in a chamber" (IV,53). For Price, "the bare representation of such an opinion seems sufficient to confute it". Priestley didn't think so.

In the 1782 second edition of Matter and Spirit it is asserted, with rather surprising vehemence, that "It is a very gross mistake to suppose ... that the vibrations of the brain are themselves the perceptions. For it is easy to form an idea of there being vibrations, without any perceptions accompanying them" (III,286). This supporting argument is also surprising, as it seems to contravene Priestley's constant contention that "mere possibility is no foundation for any conclusion" (III,248). The dualist could just as well say we can form an idea of there being a brain without any power of thought accompanying it. In the same edition Priestley considers the objection (derived from Wollaston's Religion of Nature Delineated) "that the mind cannot be material, because it is influenced by reasons". He contends that this objection begs the question: "To say that reasons and ideas are not things material, or the affections of a material substance, is to take for granted the very thing to be proved" (III,282f). "It is acknowledged that syllogisms and demonstrations are not levers and pullies, but neither are the effects of gun-powder, and yet they are produced by a material cause".

From all this Priestley's opinion seems to be that ideas are material, but that they are not nervous "vibrations" in the brain. His position seems to be somewhere between a non-reductive materialism and the modern identity theory which reduces sensations to brain processes. Ideas somehow mirror the properties of the objects they represent, and they certainly possess extension. Somehow also, this conception of ideas has to be reconciled with Priestley's claim that Reid in the Inquiry mistook the philosophers' talk of ideas as "images",

> as if this were not known to be a figurative expression, denoting not that the actual shapes of things were delineated in the brain, or upon the mind, but only that impressions of some kind or other were conveyed to the mind by means of the organs of sense and their corresponding nerves.... (III,36).

It is a difficult position to make clear sense of.

Notes to Chapter Two

1. See David Hartley, Observations on Man, His Frame, His Duty, and His Expectations, 2 Vols, (London, 1749; repr. New York, 1971), I, 8.

2. See The Complete Works of William Hazlitt, ed. P.P.Howe, 21 Vols, (London and Toronto, 1932), XX, 237.

3. See The Works of Thomas Reid, ed. W. Hamilton, 7th ed., 2 Vols, (Edinburgh, 1872), I, 257. On this matter Price and Reid look back to Butler, who had asserted that "our organized bodies are no more ourselves, or part of ourselves, than any other matter around us"; and had used the fact that we can survive without our limbs or sense-organs to support his assertion. (The Analogy of Religion, Part I, Chapter 1.) John Tyndall, in his 1874 "Belfast Address" devised a "reply" to Butler, in which he asks: "What if you begin at the other end, and remove, instead of the leg, the brain?" See Tyndall's Fragments of Science, 8th ed., (London, 1892; repr. Farnborough, 1970), Vol. II, p. 164.

4. See James McCosh, The Scottish Philosophy, (London, 1875), pp. 206, 473. "The paper appears in no fewer than five forms, showing what pains he had taken with it", McCosh adds. "It looks as if designed for publication", and was probably read to the Glasgow literary society.

5. Reid, op. cit., p. 236.

6. Ibid., pp. 250-2.

7. Hartley, op. cit., p. 15.

8. Ibid., p. 16.

9. See Priestley's History and Present State of Electricity, 2 Vols, (London, 1767; repr. New York, 1966), II, 15.

10. See The Philosophy of the Human Mind, Chapter IV, Section II, in Stewart's Collected Works, ed. W. Hamilton, 11 Vols, (Edinburgh, 1854-1860), III, 299.

11. Reid, op. cit. "Even his queries and conjectures are valuable", he admits of Newton, p. 60.

12. Hartley, op. cit., pp. 266, 109, 343.

13. Priestley, op. cit., p. 14.

14. Reid, op. cit., 201f, 238.

15. Hartley, op. cit., p. 243.

16. Reid, op. cit., p. 132. Rule IV states that "In experimental philosophy we are to look upon propositions inferred by general induction from phenomena, as accurately or very nearly true, notwithstanding any contrary hypotheses that may be imagined, till such time as other phenomena occur, by which they may either be made more accurate, or liable to exceptions".

17. Ibid., I, 210.

18. Stewart, "Account of the Life and Writings of Thomas Reid D.D.", in Reid, ibid., p. 17f.

19. For a fuller account of Reid's and Stewart's (slightly different) "sciences of mind", see S. A. Grave, The Scottish Philosophy of Common Sense, (Oxford, 1960), pp. 130-46.

20. Priestley does not allude to the lightning/electrical discharge identification sometimes employed by recent materialists, although his History of Electricity contains one of the original reports of Benjamin Franklin's kite experiments which established that identification.

21. For Gilbert, as is well known, magnets were not just an analogy with dualism, but almost an example of it, for he ascribed a "formate soul" to magnets. See De Magnete, Book V, Chapter 12.

22. Reid, op. cit., II, 526.

23. R. W. Home, "Out of a Newtonian Straitjacket: Alternative Approaches to Eighteenth-Century Physical Science", in Studies in the Eighteenth Century, eds R. F. Brissenden and J. C. Eade, Vol. IV, (Canberra, 1979), p. 240. Priestley's friend and mentor, Benjamin Franklin, for instance, accepted the idea of a magnetic fluid - see I. B. Cohen, Franklin and Newton, (Philadelphia, 1956), p. 356f. Newton too, according to Home, was "Cartesian" about magnetism.

24. Reid, op. cit., II, 527; I, 251.

25. See Priestley, Experiments and Observations on Different Kinds of Air, 3rd edition, (London, 1781) , Vol. I, p. 258. Robert Hooke's non-mathematical hypothesis of universal gravitation might serve as the kind of theory we are after. Newton's hostility to Hooke would have to be explained on psychological, not methodological grounds.

26. Though, significantly, his more radical follower, Roger Cotes, does: he complains that vortices are made "of a matter entirely fictitious", and insists that "The business of true philosophy is to derive the natures of things from causes truly existent...." See Cotes' preface to the 2nd edition of Isaac Newton, Mathematical Principles of Natural Philosophy, trans. Motte, revised Cajori, (Berkeley, 1947), p. xxviif.

27. This, at least, is how Roger Cotes interpreted this part of Newton's reasoning, ibid., p. xxvif.

28. Reid, op. cit., I, 206.

29. Ibid., I, 201, 52.

30. See J. J. C. Smart, Philosophy and Scientific Realism, (London, 1963), p. 94.

31. See S. A. Grave, Locke and Burnet, (Perth, 1981), pp. 26-8, and Margaret D. Wilson, "Super-Added Properties: The Limits of Mechanism in Locke", American Philosophical Quarterly, Vol. 16, 1979, pp. 143-50.

32. See The Philosophical Works of Descartes, trans. Haldane and Ross, 2 Vols, (New York, 1955), Vol. II, p. 132.

33. See Essay Concerning Human Understanding, IV, iii, 6.

CHAPTER THREE: DETERMINISM

3.1 The Causal Argument

In the century-and-a-half between Hobbes and Reid, various considerations - psychological, ethical, causal, theological - were canvassed in the debates for and against determinism. Perhaps the strongest argument brought forward by the determinists (the tradition which runs through Hobbes, Collins, Hume, Hartley, and Kames to Priestley) was what we can call the causal argument. Priestley designated this the "Argument from Cause and Effect", and there is no doubt he thought it the best weapon in his own arsenal. And it is arguable that no-one (at least, no-one in the British tradition, thereby leaving out of consideration Leibniz and Jonathan Edwards) put this part of the determinist case more forcefully that Priestley did.<1> This chapter will expound his version of this argument, and show how it was received by the two leading libertarians of the time, Richard Price and Thomas Reid.

In the first edition of the Doctrine of Philosophical Necessity (1777) the crux of the casual argument was presented as follows:

> a cause cannot be defined to be any thing but such previous circumstances as are constantly followed by a certain effect; the constancy of the result making us conclude that there must be a sufficient reason in the nature of the things why it should be produced in those circumstances. So that, in all cases, if the result be different, either the circumstances must have been different, or there were no circumstances corresponding to the difference in the result; and consequently the effect was without any cause at all (III,463).

The argument was more crisply summarized in the Free Discussion (1778) in the form of two questions which Priestley put to Richard Price:

> (1) If certain definite determinations of mind be always preceded by certain definite motives, or situations of mind, and the same definite motives be always followed by the same determinations, may not the determinations be properly called necessary, necessity signifying nothing more than the cause of constancy?
>
> (2) If any mental determination, or volition, be preceded by nothing, either within the mind itself, or external to it, but what might have existed without being followed by that determination, in what does that determination differ from an effect without a cause? (IV,82)

In its simplest form, the argument is, firstly, that if there are regularities between motives and actions, then these motives must be bound to those actions by causal necessity; and

secondly, to deny that there are such regularities is to deny the principle that all events and all actions have causes.

Before trying to spell out this argument, I need to say something about the role which Priestley assigns to our ordinary observations about motives and actions and to the empirical science of psychology. Priestley did not pretend that the laws of the mind had as yet been discovered, but he did think that a promising start in that direction had been made by David Hartley. He held great hopes for Hartley's new associationist psychology. His zeal for the cause even found expression in his scorn for Hume's amateur efforts as an associationist: "Compared with Dr Hartley", he once wrote, "I consider Mr. Hume as not even a child". Priestley himself was engaged in gathering psychological "observations" in the manner of Hartley, but his efforts in this direction came to nothing, being destroyed when the Birmingham mob set fire to his house in 1791. Little remains in his writings to indicate what this document might have contained. The Philosophical Necessity is very meagre in the examples it offers of psychological laws, and sometimes unintentionally comical. (Hungry people, he tells us, are "perfectly easy and happy all the time of a necessary and expeditious preparation for dinner, till the delay begins to be more than they had expected" (III,478).) The general "law" which he distils from these examples is that "whatever appears to be the stronger, or the better reason, always determines us. In these cases, the choice and the motive correspond to an effect its cause" (III,474).

But how was Priestley to deal with the libertarians, who were bound to be less impressed than he was with his and Hartley's "empirical" achievements? He starts out by making very generous concessions to his opponents. "Produce a case", he says, "in which the mind indisputably determines itself without any motive whatever and then, but then only, shall I admit that motives have no necessary influence over its determination" (IV,208). His opponents were, on the whole, reluctant to take up this offer - they thought the battle had to be fought out at a different level - but Richard Price did, towards the end of his debate with Priestley, bring the argument back to the empirical level. Priestley was committed to the view that equal and opposite motives make action impossible. Price saw the opportunity to make of this a crucial experiment. "I may have reason for going to a certain place, but it may be indifferent which of two ways I go. Do I claims that our minds are in such perpetual fluctuation and our motives so evanescent that we can never be sure that any two courses of action are "indifferent" to us.

> [If] we consider that the force of a motive depends upon the state of the mind to which it is presented, as well as upon what it is in itself, that the state of mind is in perpetual fluctuation, and that the point of light in which we view the same thing is continually varying, we shall not be at all surprised that, in ordinary cases, when nothing of much consequence is depending, we determine with such readiness, and from motives so evanescent, that we are not able to trace the progress of our thoughts, so as distinctly to recollect the real causes of our choice, after the shortest interval of time (IV,108f).

To say this is in effect to retract the offer to judge the free-will question by the available evidence of human power. If Priestley has a real case, it is not here but at a more abstract level. His abstract causal argument depends on there being regularities between motives and actions, but if such regularities are not immediately evident, he is going to insist that they must nevertheless be obtainable by more thorough investigation.

We might have guessed that it is the abstract argument which is doing the real work for Priestley from the fact that he will allow only one instance of real freedom to count against the whole determinist case. He see freedom as an all-or-nothing matter: either we are wholly free or we are wholly determined. The reasoning underlying this claim was expressed best by Anthony Collins: "if any action whatsoever can be done without a cause, then effects and causes have no necessary relation, and by consequence we should not be necessarily determined in any case at all" (IV,295).<2> Collins' point is that, if causes are not conceptually tied to one kind of effect, then actions are not conceptually determined - determined by the nature of causal relations - in any case at all. Priestley's causal argument has to be considered as a conceptual argument, and it is to what he says about the nature of causation that we must turn.

Consider first what Priestley has to say about regularities. It is clear that he thinks observable regularities to be necessary for all causal judgements, and he thinks that there are no grounds for denying that any regularity gives evidence of a causal relation. Sometimes he slips into simply equating causal relations with regularities, but more usually he talks of causes being inferred from regularities, of regularities as evidence of causes, etc. Priestley's overall opinion is that the object of science is to discover not mere regularities but causal mechanisms, with the proviso that, when mechanisms are not to be directly found, science must take constant conjunctions as evidence of their hidden operation. As he puts it in one place:

> It is because we see that a clock always strikes when the hands are in certain positions that we must conclude it always will do so, and, therefore, necessarily must do so, or that (whether it be known or unknown to us) there is a cause why it cannot be otherwise (IV,199).

This passage implies that causes might be directly discovered after we have been guided to them by regularities. But Priestley will not allow that we can discover causes without observing regularities. "The only reason we have to believe in any cause, and that it acts necessarily, is that it acts certainly or invariably" (III,466).<3> That there might be a clash between the two - that we might explore a regularity and find that there is no real cause underlying it - is a possibility with which (here, at least) he has not reckoned. This is a point to which Thomas Reid will later return us, and we will see then whether Priestley meets the difficulty it poses.

Given the premise that all causes contain regularities, then we can quite easily see how Priestley's argument is going to proceed. His aim is to drive the libertarian into denying the principle of universal causation. Action, he claims, must correlate in some regular way with some preceding state of mind (or perhaps some bodily state, although Priestley's determinism is mainly psychological determinism, and an appeal to non-psychological causes of action would on his view only be needed when the normal psychological explanations fail). His claim is that only something like a motive or mental event could possible stand in a regular relation to actions. The underlying point is that the agent himself cannot stand in such a regular relation to his actions, because he would stand in an equal relation to any actions. If actions of kind Y are caused at all, they must be caused by events of state of kind X such that all Ys are preceded by Xs and all Xs are followed by Ys.

We cannot put the agent himself in the place of X in this formula, because he can bear no special relation to Y and must be equally related to any possible action. It is conceivable that Y might be preceded by no X at all; but the only proper description of this case is that Y is uncaused, and the principle of universal causation goes by the board.

That this is Priestley's argument is made quite clear by two examples he discusses. The examples have, however, a more important purpose: they are intended to reinforce the major premise of Priestley's whole case, the claim that causes must contain regularities.

Like many determinists, Priestley likens the mind to a pair of scales. Just as the scales cannot be tipped but by a weight being put in one of the pans, so the mind cannot be moved to action but by a motive tipping it in one direction or another. The point of this example is easily missed. Priestley is not saying that the mind is mechanical in the same way as are the scales - that would obviously be to beg the question. For the purposes of this argument his materialism has been held entirely in abeyance. In using the scales example he is trying to illustrate the nature of causation from the workings of a material object. The illustration is taken to show two things. In the first edition of Philosophical Necessity the point made concerns events or changes: just as for every change in the position of the scales, there was, and had to be, a preceding change in the contents of the scales, so too for every mental determination or volition there must be preceding mental change.

> [In] all cases, if the result be different either the circumstances [the preceding changes] must have been different, or there were no circumstances whatever corresponding to the difference in the result; and consequently the effect was without any cause at all (III,463).

In the second edition<4> the point concerns relations:

> In the case of the beam [with equal weights at either end], it is immediately perceived that, bearing an equal relation to both the weights, it cannot possibly favour one of them more than another; and it is simply on account of its bearing an equal relation to them both that it cannot do this.... [And the mind] bears as equal a relation to any determination as the beam of a balance bears to any particular inclination; so that as, on account of this circumstance, the balance cannot of itself incline one way or the other, so neither, on account of the same circumstance, can the mind of itself incline, or determine, one way or the other (III,469).

To forestall the objection that this case can be explained not from the concepts of causation and equal relations, but from the particular features of mechanical balances (which, a critic might say - and Reid did say it - are constructed to act in this way) Priestley introduced a second illustration.

> The will itself cannot be the cause of any one particular determination in preference to any other, any more than the motion of the air can be an adequate and proper cause of the wind blowing from the North rather than from the South; because the will itself, independent of motives, bears an equal relation to all particular determinations, just as the motion of the air is equally concerned in all particular winds (IV,162).<5>

The purpose of these examples is to illustrate the nature of causation, and thereby to defend one account of causation. We all agree that the scales cannot act without being acted upon. Priestley's argument is that the theory that causes must involve regularities shows us why this fact must be so. The action of the scales must be correlated with the actions on the scales, for such is the nature of causation. Any other theory of causation must leave it open as a conceptual possibility that the scales might act of their own accord. But if this is a conceptual possibility, why do we believe it to be not an actual possibility? To hold that there are ontological reasons why natural things cannot act of their own accord is, in Priestley's opinion, only hypothesis. He thinks that no-one has shown how these ontological restrictions are supposed to operate.

Priestley has of course the further task of showing that the theory of causation he extracts from these natural examples also applies in the human sphere. His reasoning seems to be this. He thinks he has shown that causation involving regularities holds sway in nature, and he thinks he has shown this without any recourse to ontological considerations. He infers from this that his examples - the scales and the wind - illustrate not one kind of causation but causation itself. Ontological considerations about the nature of man - his rational and volitional powers - cannot have any bearing on what kind of causes cause human actions, for the same reason (whatever that reason is) that ontological considerations do not have any bearing on the kind of causation operative in nature. The libertarian grants that actions are caused: he must, Priestley insists, grant also that those causes contain regularities, and that therefore actions cannot be caused by free agents.

3.2 Price and the Dual Theory of Causation

Priestley's Philosophical Necessity raised a flurry of controversy which lasted for over a decade, with at least nine writers - Richard Price, Samuel Horsley, Joseph Berington, John Whitehead, Joseph Fisher, Jacob Bryant, John Palmer, James Gregory and Thomas Reid - taking up their pens against him. Priestley's replies were copious, filling 250 pages of his Theological and Miscellaneous Works. No apparent reason is given for his failure to answer his last, fullest and greatest critique, Reid's Essays on the Active Powers of the Human Mind of 1788. We can only assume Priestley had said all he had to say in his earlier replies, notably those to Price and Palmer. The remainder of this chapter will describe Priestley's actual debate with Price; state Reid's position and construct a Priestleian reply to it; and investigate more fully Priestley's theory of causation.

Priestley and Reid agreed that causation is a unitary concept (there is only one kind of causation) and they both held that its nature is independent of ontological considerations. They differed over the nature itself. Price held causation to be a dual concept, the two parts of which are distinguished by reference to ontology. Fundamentally, Price was a dualist, and he drew a distinction between physical causes and moral causes to correspond to his distinction between matter and mind.

> In the operation of physical causes, it is always implied that there is not in any sense a power to produce, or a possibility of producing, any other effect than that

> which is produced; but the contrary is true of effects dependent on the wills, and occasioned by the views of free agents (IV,70).

He accepted that we can reason validly from regularities to necessities in the case of physical causes, but he denied the validity of this inference in the moral, human sphere.

Price subdivided moral causes into two parts, the action of the will, and the presence of agent's ends or "views". He thought motives somewhat akin to sight. To classify motives as efficient causes is, he thought, "the same with ascribing the action of walking not to the feet (or the power which moves the feet), but to the eye, which only sees the way" (IV,69). Motives are final causes of actions. Sometimes he took his as far as making motives only occasions of actions; more often, he spoke of them as "influencing" action. In either case, he regarded them as non-coercive. Yet while they are resistible, they are not redundant, and every action requires some motivation. For Priestley, motives are necessary and sufficient conditions of action; for Price, they are necessary but not sufficient. For Price, they are necessary, but not necessitating. To act one requires a motive, but having a motive does not require one to act. Priestley could no more accept Price's view of motives as occasions than he could accept Reid's theory of objects as merely the occasions, and not the causes, of perception.

Priestley denies that the distinction between final and efficient causes, however applicable to motives, can make any difference as to whether a necessary connection obtains between motives and actions. He says in his Letter to Dr Horsley that he "will allow as much difference as you can suppose between moral and physical causes.... That there are any laws, and that there are any causes to which the mind is subject is all that my argument requires". If final causes do operate, then there is "in no case any more than one way in which the mind can put itself in motion, or only one direction that it can take, which is all the necessity I contend for" (IV,153f). Priestley challenges Price to give some intrinsic reason why final causes might not be regularly bound to their effects quite as much as are efficient causes, and the challenge is not answered. Price thinks that "The best that can be done in this case is, to state the question distinctly and intelligibly, and leave the decision to common sense" (IV,71). Priestley's view is that the inference from regularity to necessity is valid in all cases if valid at all. Price asks, "Who sees not that these certainties, having different foundations, have a totally different nature?" (IV,69). Priestley cannot see it. To him, they are alike in both implying necessities.

Price has a second line of defence, designed to block the second part of Priestley's attack. "Dr Priestley often says that self- determination implies an effect without a cause. But this cannot be justly said. Does it follow that because I am myself the cause, there is no cause?" (IV,68). At first sight, this rejoinder seems both effective and obvious. Men are the efficient causes of their actions. Price's strategy is a defensive one. Against Priestley's argument from a theory of causation-as-including-regularities, he simply sets up an agency theory of causation. Price's version of the agency theory has an ontological basis - it pertains to men, but not to nature. He tries to shift the onus onto Priestley to show why the regularity theory must be preferred to the agency one.

Priestley's reply to this criticism seems at first curiously weak. He appears to merely deny that we have "any reason, from fact or observation, to conclude that a man can move himself" without motives (IV,72), and he seems thereby needlessly to give up the argument from causation. In fact his reply is tailored specifically to meet Price, who, at this stage, has agreed with Priestley that all actions must be preceded by motives, though he denies that these motives are causes. Priestley cannot see how, if motives must precede actions, motives do not cause actions. On Price's reasoning (he thinks) we would be entitled to say that a stone moves itself, even though we know it to be invariably influenced by gravity.

It was only after this reply that Price came around to denying that "fact and observation" reveal to us motive-action regularities. We have already noted his claim that a man can choose between two "indifferent" courses of action. Price finally holds that this sort of example is stronger evidence that we are free than Priestley's conceptual argument that we cannot be free. For Priestley the conceptual argument is the central consideration, but he also believes that the "empirical" evidence supports his conceptual scheme.

3.3 Reid and the Agency Theory of Causation

In contrast to Price, Reid saw clearly that the strength of Priestley's determinism derived from his account of causation, and he thought it strategically appropriate to answer that account by providing a rival, equally general analysis of the concept modelled not on natural causes but on human and superhuman agency. Reid was a shrewd and resourceful critic of determinism and he defended libertarianism on a wide variety of grounds, but a careful reading of his Active Powers shows that he thought the nature of causation to be at the heart of the matter. Strangely, he tells us little of the historical context in which he saw libertarianism. Hobbes, Leibniz and Priestley are the names which appear most frequently, though Priestley usually appears as merely "a late zealous advocate for necessity".<6> (This is no doubt a sign of prickliness on Reid's part, in response to the strident air of superiority adopted in Priestley's Examination.) The number of these references are proof that Priestley was in the front of Reid's mind. It is, above all, Priestley's theory of causation which Reid seeks to rebut. With Reid and Priestley, the free- will debate becomes largely a contest between different conceptions of causation.

Reid, like Priestley, distinguished between empirical and causal defences of determinism, and, like Priestley, he thought the latter more important than the former.<7> Even so, he was more forthright than Price in urging an empirical case against determinism, and we can briefly consider this case before turning to his rejection of the causal argument. We are never inhibited, Reid insists, by having to choose between identical objects. We can easily pick one shilling out of many in order to make a payment. Reid laughs at those schoolmen who thought that Buridan's ass, "torn between two equal bundles of hay, would stand still till it died of hunger".<8> Priestley, as we saw, claimed that apparent cases of equality would turn out to contain unseen inequalities. Reid held that, although we can often reason "with great probability" about men's motives, we can never do so with "absolute certainty", and consequently we can never hope to frame psychological laws. Priestley, on the other hand, believed this "great probability" adequate to assure us that there are such laws, even though we can't say exactly what they are.

Reid is famous for his sharp attack on the vague determinist notion that, amount competing motives, the strongest motive always prevails.<9> He requested that a clear test be given for the strength of a motive, and argued that, on any known test which avoids the circularity of measuring strength by prevalence, it is obviously untrue that the strongest motive does always prevail. Reid could see only two possible tests, felt strength (or animal strength, as he called it) and rational strength. A motive has felt strength if we can yield to it easily and resist it only with difficulty - yet, he thinks, we often act contrary to the strongest of our felt desires.

Priestley does not discuss why it is that one motive will prevail over others. He usually just asserts that for any kind of action there will be one corresponding category of motives at work. For Reid, while one motive might regularly prevail, it may still be true that there are other, stronger (more tempting or more convincing) motives being suppressed by the will. A man may frequently overcome very strong evil inclinations in favour of weaker, good ones, yet this fact could not show up in Priestley's would-be empirical psychology.

Reid's argument is a strong one, and Priestley, who never replied to Reid, has nothing to counter it. It may be that Reid himself supplies the best answer to it, an answer close to the spirit of Priestley's determinism. Reid acknowledges that we judge weights not directly but by their effects. If the heaviest weight is the one that tips the scales, why may it not be that the strongest motive is the one on which we act? This would be to treat the rational force or the felt strength of a motive as unreliable guides to its actual strength, just as the size or feel of an object is a bad guide to its weight. Reid rejects this analogy because "it takes for granted that motives are the causes, and the sole causes, of actions".<10> However, Reid needs a stronger argument than this: he needs an independent reason why the analogy with weights is invalid, just as Priestley needs an independent reason why the real strength of motives is not to be measured by their rational force or their felt strength. Neither Reid nor Priestley supplies this vital link. Reid gives us an alternative to the analogy with weights when he likens contrary motives to "advocates pleading the opposite sides of a cause at the bar", but he is not able to make anything more than an metaphor of it.<11>

Reid defines the liberty he is defending as follows:

> If, in any action, [a man] had power to will what he did, or not to will it, in that action he is free. But if, in every voluntary action, the determination of his will be the necessary consequence of something involuntary in the state of his mind, or of something in his external circumstances, he is not free....<12>

For Reid, this definition expressed both a conceptual truth and a truth endorsed by common sense. The conceptual claim had been also advanced by Price, and is based on a special conception of action. "That there is a real distinction, and perfect opposition, between acting and being acted upon, every man may be satisfied who is capable of reflection", says Reid. Anything which is acted upon cannot, in turn and as a result, act. It follows conceptually that motives cannot put a man into action by acting upon him. The determinist who says that motives cause our actions should really say that it is not we but our motives which act. Priestley could not see any conceptual basis for this conclusion; to him, it begged the question (IV,109).

Unlike Price, Reid held that the freedom of the will is one plank in the platform of our common sense beliefs. We have, he says, "a natural conviction or belief that we act freely - a conviction so early, so universal, and so necessary in most of our rational operations that it must be the result of our constitution, and the work of Him that made us".<13> Priestley's disagreement with this claim is as unproductive as his rejection of the conceptual claim. It is true that in his youth he was a libertarian (while still at grammar school he had defended free-will in a correspondence with the deist Peter Annet) but after his conversion to the position of Collins and Hartley he felt entirely at home in determinism. He wrote of himself as "one who firmly believes the doctrine of necessity to be true, and at the same time to abound with the most glorious consequences, who imagined he feels it favourable to true elevation of mind, leading, in an eminent manner, to piety, benevolence, and self-government" (IV,186).

Priestley believed the determinist to be as much (if not more) entitled to speak of "self-government" as is the libertarian. Reid believed the determinist could give no account of such mental operations as deliberating and resolving. We only deliberate about what we believe we can do, he notes. Deliberation for the determinist must be a process in which motives come to take effect on us. The problem then, is to see how we can believe ourselves able to do anything before the competing motives have given us the power to act. When Priestley tries to explicate "self-government" he usually insists that determination does not make men indolent or indifferent, because determinism shows action to be necessary if ends are to be fulfilled. Simply being apprised of "the mechanical structure of our minds" can change neither our ends nor our efforts (IV,158). However, this does little to answer Reid's objection. Priestley's scheme entails that the ultimate motives from which we act are outside our control. He nevertheless insists that this fact makes no difference to the degree of apparent freedom we experience when we make a choice. We do not necessarily feel the constraining force of our motives. (However, we do perhaps feel our beliefs being caused, for it is "impossible but that we must judge of all things as they appear to us" (IV,128).<14>)

Reid's response to what they both regard as the central issue in the debate, Priestley's causal argument for determinism, begins unpromisingly. He notes the appeal to the example to the pair of scales, and comments that "This argument, though urged by almost every writer in defence of necessity, is so pitiful, and has been so often answered, that it scarce deserves to be mentioned". It "is not reasoning, but begging the question".<15> Reid fails to see that Priestley is not trying to draw a resemblance between weights in scales and motives in the mind, but only to illustrate the nature of causation. For Priestley the scales are not an analogy but an example.

One might expect, then, that Reid would miss the point of Priestley's argument. In fact he saw the point clearly, and took it seriously. Priestley, we saw, maintained that power over both motives and actions would imply "an effect without a cause"; any self-determining power, "bearing an equal relation to any two different decisions, cannot be said to be a proper and adequate cause with respect to them both" (IV,170). Reid appears to have accepted this argument as a valid one. What he attacked was its main premise, and it was in doing this that he made his greatest amendment to the libertarian strategy.

> I acknowledge that if [Priestley's account of causation] be the only definition that can be given of a cause, it will follow that an event not preceded by circumstances that determined it to be what it was, would be (not an effect without a cause, which is a contradiction in terms, but) an event without a cause, which I hold to be impossible.

Reid followed Price in wanting to make the self a cause of actions, but he was heavily committed on common sense grounds to the principle of universal causation. He accepted that that principle, combined with the belief that causes can only act in a regular manner, would make self-determination absurd. If the mind were governed by laws, a man's actions would be "a necessary consequence of something involuntary in the state of his mind". Reid tried to break this deadlock by rejecting the view that causes must contain regularities. To Priestley's argument, he said,

> it may be briefly answered, that a free action is an effect produced by a being who had power and will to produced it; therefore it is not a effect without a cause.<16>

Like Price, then, Reid presents libertarianism as self-determination and not as indeterminism; but, in contrast to his predecessors, he gives a much clearer account of the causation in self-caused actions. In working out a general account of causation, he was implicitly rejecting the assumption of Price, and of Samuel Clarke before him, that the non-physical status of the mind or the claim that it is governed only by final causes could ward off inductive evidence that actions are determined by motives. Clarke, Price and Reid were all dualists, but only Reid (who, in general, was preoccupied by Humean problems and so was not called upon to defend dualism) believed that neither a dualism of substances (matter and spirit) nor a dualism of causes (efficient and final) could be assumed as part of the defence of liberty. In arguing from a single conception of causation and power, he was in effect paying a tribute to Priestley. Reid's relation to Priestley can be expressed in a mild paradox: he thought that Priestley could be easily answered, but only making a major reappraisal of the concept of causation.

Reid's definition of an efficient cause as "a being that has power and will to produce the effect" has four essential features: causes are always beings, and never circumstances or events; these beings must be conscious and capable of forming intentions, that is, they must be human, angelic or divine; they are never confined to the production of a single class of effect; and their effects are always produced by causes, and do not simply attend them. Reid thought that all four features were directly opposed to Priestley's definition of causation. The fourth, however, opposes Hume's definition, but not Priestley's, although Reid thought Priestley a Humean in all four respects.

Having sketched his definition, Reid could then charge Priestley with having begged the question by not having considered alternative general accounts of causation. But, in order not himself to beg the question, he needed to show the superiority of his account over Priestley's. He thought that, as Priestley's account was Hume's, Priestley would fall victim to the sceptical consequences Hume had drawn from that account. In particular, Reid thought, there were four consequences that would do the damage. One of these was that the creation of the world, being a singular event, could not figure in a regularity of any

kind, and so its cause could not be known. This theological consequence will be discussed in Section 4.6.

Reid's three other objections to what he saw as the Hume-Priestley account of causation were, briefly, that is could not defend the principle of universal causation; that it could not distinguish real connections from accidental generalizations; and that it excluded the possibility of reasoning from effects to causes. Hume, of course, had announced these "defects" as signally a victory over the metaphysicians; for Reid they were serious deficiencies to be made up for with common sense and the agency theory of causation.

4.4 The Theory of Causation

4.4(i) Universal causation

Reid maintained that Priestley's empirically-based account of causation, on which his determinism depended, could not provide any support for the principle of universal causation, on which his determinism also depended; "for", said Reid, "innumerable events happen when it cannot be shewn that there were certain previous circumstances that have been constantly followed by such an event". Even if the cause of every known event had been discovered, "it would not follow that every event must have a cause" - we can not reason logically from contingent to necessary statements. Universal causation is a belief "upon which the whole conduct of human life depends", and it is believed by all but a few philosophers to be a necessary truth.<17>

There are three main sources for Priestley's views on causation and related philosophical questions, apart from Philosophical Necessity. One is the section "Of Philosophical Theories in General...." at the head of his concluding discussion of the contemporary theories of electricity in his History and Present State of Electricity (1767). His Introduction to Hartley's Theory of the Mind deals with the relation between psychology and causal inferences. The third is his discussion of Hume in Part I of his Letters to a Philosophical Unbeliever (1780), where he comments briefly on universal causation.

In our experience of regularity, the Philosophical Unbeliever maintains,

> we have never failed to discover, whenever we have been able to make any discovery at all, that the event [whose cause is being investigated] could not have been otherwise.... In consequence of this experience, it is indelibly impressed upon the minds of all men that all events whatever, and all productions whatever, must have a necessary and adequate cause, so that nothing can begin to be without a cause foreign to itself (IV,399).

Priestley's commitment to universal causation, and the necessity of it, is obvious enough. In his defence of it, he clearly means to say that we are determined ("indelibly impressed") by our experience of causes in a multitude of cases to expect causes in every case. He continues: "let every man pretend what he will, he must himself (in consequence of the impressions to which he, together with the rest of mankind, has uniformly been exposed)

have come under the influence of [this experience of causation], and of course, have the same persuasion [of the truth of universal causation]".

Priestley also means that our success in discovering causes can be taken as reasonable inductive grounds for inferring that causes are always to be found. He did not accept the now familiar contention that beliefs based on reasons cannot be beliefs we are caused to have (thus, if reasons are not causes then our rational beliefs are apparently uncaused). For Priestley our belief in universal causation is both determined by experience and inductively reasonable.

The reasonableness of the belief depends on the premise that "we have never failed to discover, whenever we have been able to make any discovery at all, that the event [whose cause we are investigating] could not have been otherwise". This amounts to saying that, in examining regularities, we can discover causes, and as a matter of fact we never fail to discover them, if we discover anything. At first sight, this claim would seem to be refuted by any widely experienced but accidental generalization - here we would have a regularity but not a cause. However, Priestley's statement is carefully worded, and he might have had a reply to this objection. The phrase "whenever we have been able to make any discover at all" suggests he might have denied that accidental generalizations are counter-instances on the grounds that in them we do not discover that there is no cause at work, only that we do not yet know (from the evidence of these particular cases) what the cause is. If this argument is acceptable, then Priestley's case is strengthened. He can then advance an inductive argument for universal causation to which there are no clear counter- examples.

The form of Priestley's argument is what J. S. Mill was to call "induction by simple enumeration": many caused events warrant belief that all events are caused.<18> The issue between Reid and Priestley turns on whether this induction is strong enough to measure up to the strength of our conviction that all events have a cause.

3.4(ii) Accidental generalizations

Viewed in this light, the question of universal causation is closely related to Reid's second criticism, that the regularity theory of causation can not distinguish between accidental generalizations and real laws. Reid's famous example is night and day, which he thinks the regularity theorist must regard as alternating causes of each other. Priestley regards cause-and-effect not (in Hume's fashion) as mere regularities, but as inferred from regularities; consequently, he leaves open the possibility of arguing that, for some reason, the inference ought not to be made in cases such as night and day.

Priestley does seem committed to denying that any generalizations really are "accidental". How he would handle Reid's objection is not clear, though much of his system depends on it. We know that night does not cause day because we know that night is not a causal mechanism. Priestley believes that we can discover mechanisms only by inferring their existence from regularities. As night is regularly related to day, he seems to have no ground for denying that it is a causal mechanism. However, his account of

inductive reasoning is not as simplistic as this implies. Concerning the methods of induction, his position is anticipation of Mill's methods of agreement and difference:

> in order to trace those circumstances in which any appearance in nature is certainly and invariably produced, it is chiefly useful to observe what there is in common in the circumstances attending similar appearances; for on those common circumstances, all that is common in the appearances must depend. And the easiest possible method, by which we can trace out the connection of causes and effects in nature, is to begin with comparing those appearances which are most similar, where the difference consists in a single circumstance; the whole effect of which, in different appearances, is thereby perfectly known.<19>

Following these methods of reasoning, if night depends causally on the circumstances which always precede it, then it depends on both day and the setting of the sun. There are two regularities in the case, not one. Priestley still needs to show that the real mechanism lies in the motion of the earth, not the changing of the light; but this he does not supply.

3.4(iii) Reasoning from effects to causes

Reid's (and Hume's) third attack on the rationality of the regularity theory of causation is that it implies that "anything may be the cause of anything, since nothing is essential to a cause but its being constantly followed by the effect". "All reasoning from the nature of the effect - to the nature of the cause, and all reasoning from final causes, must be given up as fallacious".<20> The brevity of these criticisms, and the difficulty of the matters touched on, makes it hard to bring Reid and Priestley into close correspondence. Their relation to Hume is the obvious point of departure.

When he is being careful, Hume is of course quite explicit that causation, as a relation between things (a "philosophical relation"), is nothing more than constant conjunction.<21> Reid quotes Priestley saying that causation must be defined as "such previous circumstances as are constantly followed by a certain effect" (III,463)<22> and takes him to be a pure Humean. It is true that occasionally Priestley does speak of regularity as what is meant by causation. However, in his most common and most careful formulations, he describes regularities as entailing causation or as evidence (often he says it is the only evidence) of causation. Priestley, in other words, agrees with Hume that causal relations are "constant" but denies that they are merely "conjunctions". He goes on to say that constancy makes us conclude "that there must be a sufficient reason in the nature of things, why it [constancy] should be produced in those circumstances". This strongly suggests that we infer from regularities to something about "the nature of things", and no consistent Humean could have used these words. According to Hume, we discover the nature of things only by direct impressions received from them, never by observing their causal activity.

Priestley's Philosophical Unbeliever is in fact severely critical of Hume's account of causation. He says that he found the discussion in the Enquiry concerning Human Understanding of Hume's "favourite topic", causation, "laborious and tiresome" (IV,398). His main contention is that "the inference from effects to causes, whether Mr. Hume will

call it reasoning or not, is, in many cases, as safe as any reasoning whatever" (IV,404). (Reid does not seem to have noticed this passage; it is unclear whether he read the Philosophical Unbeliever.) Priestley's own discussion of these matters is certainly too brief and dismissive, but we are given some clues as to where he differs from Hume.

Priestley asserts against Hume that, "When we say that two events, or appearances, are necessarily connected, all that we can mean is that some more general law of nature must be violated before those events can be separated" (IV,403). Hume, however, could have accepted this simply by replying that the general laws of nature are themselves only regularities. Priestley's difference from Hume emerges more clearly further on:

> The idea annexed to the term 'cause' or 'necessary agency' ... represents the impression left in the mind by observing what is common to numberless cases in which there is a constant conjunction of appearances or events, in some of which we are able to see the proximate cause of the conjunction, but with respect to the rest we can only presume it from the similarity of cases (IV,404).

This passage is at once both Humean and non-Humean. It is Humean in its associationistic aspect; but the theory of causation underlying the associationism is quite different from Hume's.

It was an associationist tenet shared by Hume and Priestley that numberless cases of constant conjunctions impress a feeling of necessity upon us, and we discover this impression by reflection, not by observation. In Priestley's view it is a law of psychology that "two sensations or ideas present to the mind at the same time will afterwards recall each other" (IV,402). He thought that Hume had allowed this doctrine to lapse into a mere "Custom or Habit" by which the mind is "naturally led" from one idea to another. To do this, Priestley thought, is to take the necessity out of the process, and also to take out its rationality. "Leaving the question in this state, [Hume] may, with superficial readers, have weakened the foundation of our reasoning from effects to causes, as if it was no reasoning at all ..., but only an arbitrary, and perhaps ill-founded, association of ideas" (IV,403).

According to Priestley, then, the law of associations ensures that we know the laws of nature when we experience them. But can he justify his claim that the process of discovering the laws of nature is a rational one? Priestley says three things which might be taken as answers to this question. The first is his insistence that we discover causes from "numberless cases", or, more accurately, by seeking out what is constant in a great variety of cases. He maintains against Hume that "the idea of power is far from being, what some take it to be, a simple idea". On the contrary, "it is one of the most complex ideas that we have, consisting of what is common to numberless impressions of very different kinds" (IV,398). We get the idea of power, he had maintained earlier in the Introduction to his edition of Hartley, from our own exertions, from observing the exertions of others, and from the invariable effects we see in nature, as for instance when "a rope sustains a weight, a magnet attracts iron, a charged electrical jar gives a shock, etc."

> [The] idea of power is acquired by the very same mental process by which we acquire the idea of any other property belonging to a number of bodies, viz. by

> leaving out what is peculiar to each, and appropriating the term to that particular circumstance, or appearance, in which they all agree (III,191).

On this view, Hume's search for a direct and simple impression of power must be futile. As we can see here, Priestley is a conceptual empiricist: for him the concept of power is built up from experience, although not from any simple experience. For him also, the process by which we find actual causes has a parallel complexity. The method for finding causes which Priestley advocates is not made clear in his discussion of Hume. It is expressed more clearly in his book on electricity, and, as we saw, it is a version of Mill's methods of agreement and difference.

These methods, Priestley would have it, are "in many cases, as safe as any reasoning whatever" (IV,404). Whether Hume's attacks on the rationality of causal inference can be answered with these criteria for separating causes from circumstances is a matter for debate. In Hume's view, the only thing added by experiencing constancy in a wide variety of circumstances is that the observer "now feels these events to be connected in his imagination, and can readily foretell the existence of one from the appearance of the other".<23> Priestley holds that this constancy in variety can only be explained by the operation of a necessary connection between cause and effect.

Priestley believes that Hume's argument against inductive knowledge of future events rests on a fallacy. His reply to the Humean argument is actually directed against Reid, who he thought had uncritically imbibed this aspect of Humean scepticism. "How come we to believe that the future will be like the past?", Reid had asked.<24> As we have had no experience of the future, we cannot know that in the future cold will freeze water. In Priestley's opinion, "It only puzzling the question to consider time as past or future in this case" (III,57). Contrary to the opinion of Reid and Hume, we have had experience of the future, for "what is now time past, was once future". And this experience of the "future" has not deceived us in our expectation that cold will freeze water. Consequently, we "cannot have any suspicion of being deceived in a similar expectation in other instances" of future time.

A second way in which Priestley tried to exhibit the rational character of causal inferences concerns the use of analogy in forming hypotheses. There is a problem in the methods of agreement and difference of how to set limits, amongst the multitude of circumstances which attend some phenomenon, to the circumstances which can reasonably be considered as possible causes of the phenomenon. Priestley follows Hartley (and both follow Newton's Second Rule, as they interpret it) in maintaining that analogy sets the limits:

> a man who acts from design, and not absolutely at random, would never think of trying the influence of any circumstance in an appearance, unless, from some other analogies in nature, more or less perfect, he had formed some idea what its influence must probably be.... That is, in other words, every experiment, in which there is any design, is made to ascertain some hypothesis. For an hypothesis is nothing more than a preconceived idea of an event, as supposed to arise from certain circumstances, which must have been imagined to produce the same, or a similar effect, upon other occasions.<25>

Priestley's third comment on causal relations concerns the "necessary connections" between cause and effect which Hume denied to exist. Priestley interpreted "necessary connection" as "proximate causes", the mechanism which binds cause to effect. He gives two illustrations. It has long been known that air frequently breathed is fatal to animal life. It is only recently, he adds, that we have discovered why this is so. Experimental analysis has shown that, in being breathed, the composition of the air is changed, and this in turn causes fatality.<26> Similarly, it has been well known that parallel strings can, by being plucked, cause one another to vibrate. By placing the strings in a vacuum and finding the effect to fail, we conclude that the phenomenon is due to vibrations transmitted through the air.

These examples show that for Priestley science is not only concerned to discover natural laws: it also aims to find the mechanisms by which the operation of causes is made more intelligible. "And though, in these cases, we have discovered only a nearer, and never the ultimate cause of an appearance, yet there is an invariable experience in favour of some real and sufficient cause in all such conjunctions" (IV,399). Hume's reply to this would be, of course, that, in finding mechanisms, we only uncover a more complicated series of constant conjunctions. This move would identify "necessary connections" with "ultimate causes", the fundamental forces. Priestley admits that we do not know for certain what these forces might be, but he has no doubt that science is progressing steadily towards their discovery.

Priestley's overall view is, then, that we discover causes using the methods of agreement and difference, with the aid of analogy in forming hypotheses; and we strengthen our understanding of causes when we have found the mechanisms by which they act on their effects. Whether Reid wished to adopt a radical Humean scepticism regarding the rational validity of these procedures is difficult to tell. What Priestley provided may not have been what Reid wanted, but it would be wrong to overlook it, nevertheless. It is, he thinks, the established method of science. Priestley nowhere discusses the relation between his determinism and Newton's Rules. There would seem to be a close connection between the theory of causation as necessarily law-like and Rule II. The claim that "To the same effects we must, as far as possible, assign the same causes" might seem to be just an alternative version of the principle that causal relations hold essentially between kinds of things and not between individuals, but this interpretation of the issue requires two caveats. Clearly, the principle of law-like causation entails the doctrine "same causes, same effects" as much as it entails "same effects, same causes". In excluding (with Rule II) a plurality of causes, it excludes equally a plurality of effects (the libertarian's position). Secondly, the law-like theory of causation seems to leave little room for the second Rule's important clause "as far as possible". On a strict interpretation of that theory there can be no possibility at all of anything other than "same effect, same cause". The "as far as possible" clause only makes sense if "same" means not identical but "similar". Interpreting "same" as "similar" would make Rule II not a variant of the law-like theory nor a corollary of it but perhaps in some sense an extension from it.

Priestley's use of proximate causes as intelligible mechanisms is most controversial in his discussion of Reid's views on perception discussed in Section 1.2(i). This issue probably gives us the best case study of what Reid was looking for when he deplored the absence in

Priestley of "reasoning from effects to causes". In general, Priestley thought that Reid had allowed himself to be too easily convinced by Hume.

> I could have no conception that a professed enemy to scepticism, as Dr Reid is, should himself be so sceptical as he is with respect to many of the most uncontroverted maxims of philosophy .... He is so eager to find arbitrary connexions between objects and sensations, and between sensations and judgements that he sometimes overlooks the most necessary connexions of things. He says that "the material impression upon the retina, by means of the rays of light, suggest colour, and the position of some external object; but no man can give a reason why the same material impression might not have suggested sound, or smell, or either of these, along with the position of the object. And since there is no necessary connexion between these two things, it might, if it had so pleased our Creator, have suggested one of them without the other".... But, it is obvious to remark, that then rays of light must not have been made use of, for these necessarily suggest both colour and form (III,58f).

Reid's claim in the passage which Priestley quotes here is that there is nothing intrinsic to the retinal patterns caused by light rays which ensures that the patterns are always followed by the perception of colour and position. The patterns might equally well be associated with smell or sound. The conclusion towards which Reid is leading here is that the retinal patterns and nervous impulses associated with perception cannot act as causes of perception.

Priestley does not directly question Reid's view of the role of the retina, but he tries to challenge Reid's tacit conclusion by arguing that light rays can transmit only colour and form, and not sound and smell. Light rays are, therefore, proximate causes of visual perception. For him, it would follow from this, together with the theistic assumption (which Reid shares) that natural processes are fitted by God to serve overall purposes, that the retina and the optic nerve must also play a causal role in sight.

The interesting thing here is whether Priestley can establish that light rays "necessarily suggest both colour and form". Reid might agree that light rays are conditions of perception without accepting them as causes. If light rays striking the eye are universally associated with visual perception, then Priestley's principles must heavily incline him to accept them as causes. Reid, however, would argue that no man can give a reason why light rays might not, in a different world, have suggested sound or smell. On the other hand, Reid does not give any reason to show that, in another world, they would suggest sound or smell.

Reid's concern for what would happen if the Creator had ordered things differently suggests that, for Reid, something can only be regarded as a cause if it would be associated with a subsequent event under every conceivable set of circumstances. By contrast, Priestley takes regularities as sufficient evidence of causes if they hold good under all known circumstances. Priestley's kind of causes can be tested and established experimentally. On Reid's view, experiment is an aid to discovering causes, but experimental results are apparently subject to the veto of intuitions which tell us whether those putative causes would hold under any imaginable circumstances. In the present

example, Reid judges that the conditions of perception disclosed by science are not adequate to account for perception itself. This act of judgement seems to be the best available illustration of what he means by "reasoning from effects to causes". As Priestley did not accept the view of causation it presupposes, he did not see the need for this reasoning. By his methods, Priestley can find "necessary connections" between objects and our perception of them; by his, Reid can not.

3.5 Metaphysical and Natural Causes

One large difficulty with Reid's position is that it has the consequence of denying the existence of natural causes. The denial follows directly from his equation of causality with human or supernatural agency. The main argument that he uses to support that equation is a conceptual one:

> Power to produce any effect implies power not to produce it. We can conceive no way in which power may be determined to one of these in a being which has no will.

Reid agrees with Hume that in nature "we neither perceive the agent, nor the power, but the change only...." The scientist sees very much what Hume said he saw: mere conjunctions. What we see, Reid calls the "physical cause". Real efficiency belongs only to the "metaphysical cause", "the agent behind the scene". He defends inductive reasoning, but only from empirical evidence to natural laws, not to causes. This distinction between a science which discovers mere laws and a metaphysics or natural theology which discovers efficient causes he regards as "one of the great discoveries of Newton". Newton's third law of motion that (in Reid's words) "All action of bodies is mutual and reciprocal, and in contrary direction" is interpreted by Reid as showing that the apparent actions of matter are not real agency because they are always reciprocal.<27>

Reid illustrates his denial of natural causes with the example of magnetism. If a magnet is brought near a mariner's compass, an unlearned sailor confidently asserts that the magnet caused the needle to move; a Cartesian philosopher ascribes the movement to a magnetic effluvium of subtle matter; whereas a Newtonian philosopher can see no evidence of this hypothetical effluvium and denies that science can decide the question. "The man who knows most [Reid says] is he who is sensible that he knows nothing of the matter. Yet all three speak the same language, and acknowledge that the cause of this motion is the attractive or repulsive power of the magnet".<28>

Conveniently, Priestley also discussed magnetism and gravity, in a passage from which we have already quoted. The idea of power or causation, he says,

> is an idea that all men have, and corresponds to something real in the relation of the things that suggest it. It is true that all we properly see of a magnet, and a piece of iron, is that, at certain distances, they approach one another, and of a stone, that, in certain circumstances, it invariably tends towards the earth, and we cannot give a proper or satisfactory reason why either of these effects should take place in these circumstances. Yet, we have always found that in a similar constant conjunction of

> appearances, we have never failed to discover, whenever we have been able to make any discovery at all, that the event could not have been otherwise. And though, in these cases, we have only discovered a nearer, and never the ultimate cause of any appearance, yet there is an invariable experience in favour of some real and sufficient cause in all such appearances (IV,399).

Here Priestley is siding with Reid's sailor against both Reid and Hume: causation is "something real in the relation of the things". In allowing that there are ultimate causes of natural phenomena, he is careful not to secularize nature altogether, but he does not hand over all explanations to metaphysics and natural theology. Although we cannot see the efficiency of the magnet, we cannot deny that the magnet is the real cause, as the sailor believes.

From Priestley's point of view, then, it is Reid and not himself who eliminates all reasoning from observation to causes. There is a double irony here: Reid the Common Sense philosopher, turns to Newtonian science to support his libertarianism; Priestley, the Newtonian scientist turned philosopher, for whom all causes are law-governed, seems to speak more clearly than Reid for men untouched by science or philosophy, if only in his affirmation of natural causes. Reid saw himself as taking Newton as his guide to nature and common sense as his guide to human matters. Yet this very distinction drives him in the direction of Price's dualistic interpretation of causation. Priestley's determinism is based on a strenuous rejection of this dualistic assumption.

Notes to Chapter Three

1. Admirers of Hume will protest at this judgement. My claim (which I can not defend here) is that the determinist tradition before Priestley did not fully articulate the considerations Priestley puts forward at the end of this section. Priestley saw himself more as an heir than an innovator in the tradition, but he did hope to "illustrate" the argument. In my view these illustrations are more than just pictorial - they embody crucial reinforcements of the whole position.

2. Quoted from Collins' Philosophical Inquiry Concerning Human Liberty and Necessity, (London, 1714), from the Section entitled "The Perfection of Necessity".

3. Priestley reiterates this claim many times against his critics: cf. IV,109, 151, 175-8, 199f, 207f.

4. This edition is dated 1782 on the title page in J. T. Rutt's edition (III,447), but must have first appeared in 1778 or 1779 as we know that Priestley in 1779 referred John Palmer to the passage from which we quote here (cf. IV,170, 218).

5. This example comes from an Appendix which Priestley added the second edition of Philosophical Necessity; it occurs again at IV, 170 and 218.

6. Curiously, the Scottish context is not at all prominent. Nothing is said of Hume's idiosyncratic "reconciling project" (Enquiry concerning Human Understanding, Section VIII) in which the necessity which other deterministsregarded as binding motives to actions is shifted by Hume into the mind of the observer of constant conjunctions between (other people's) motives and actions. Reid had earlier answered the determinism of his friend, Lord Kames, in a series of letters to Kames (see The Works of Thomas Reid, ed. W. Hamilton, 7th ed., 2 Vols, (Edinburgh, 1872), I, 50-61).

7. Ibid., p. 87. Reid is discussing, in a letter to James Gregory, an Essay on Philosophical Necessity, (1793) by Alexander Crombie, a follower of Priestley. Crombie, Reid suggests, was original only in being able to "claim the merit of adding the word "Libertarian" to the English language, as Priestley added that of Necessarian" (ibid., p. 88). Reid considered the terms equally barbarous. The Oxford English Dictionary attributes the coinage of "libertarian" to Priestley's best-known English disciple, William Belsham, in his Essays, Philosophical, Historical and Literary of 1789. The OED confirms Reid's attribution of "necessarian" to Priestley.

8. Ibid., II, 609.

9. Ibid., pp. 610-12.

10. Ibid., p. 610.

11. Ibid., p. 611. At times, unaccountably, he approaches a casual view of the role of motives almost as strong as Priestley's: "in all determinations of the mind that are of any importance, there must be something in the preceding state of the mind that disposes

or inclines us to that determination. If the mind were always in a state of perfect indifference ... our active power ... would be given in vain" (ibid., p. 533).

12. Ibid., pp. 599, 606.

13. Ibid., p. 616. Reid distinguishes this conviction from a consciousness of liberty. "It is only the operations of our own mind that we are conscious of. Activity is not an operation of mind; it is a power to act. We are conscious of our volitions, but not of the cause of them". Ibid., I, 82f.

14. Reid himself endorsed a similar view about beliefs when he wrote: "It is not in our power to judge as we will. The judgement is carried along necessarily by the evidence which appears to us at the time". Ibid., p. 434.

15. Ibid., II, 628, 616.

16. Ibid., pp. 626f, 599.

17. Ibid., pp. 627, 521f.

18. A System of Logic, 1843, Bk. III, Chap. 21. Mill argued here against the Common Sense philosophers in the same vein as Priestley, although with greater sophistication. He held that all the methods of induction other than simple enumeration presupposed universal causation, and that only simple enumeration could stand as the foundation for universal causation.

19. The History and Present State of Electricity, 2 Vols, (London, 1767; repr. New York, 1966), II, 13.

20. Reid, Works, II, 627.

21. At other times Hume would hold that nature works by hidden causes or that there are no causes in nature, only conjunctions.

22. Ibid.

23. David Hume, Enquiries concerning the Human Understanding, L. A. Selby-Bigge ed., (Oxford, 1912), p. 75f.

24. Reid, op. cit., I, 197f.

25. Priestley, History of Electricity, op. cit., II, 14. See also David Hartley, Observations on Man, Proposition 87.

26. It was Priestley himself who, two years earlier (1776), had first shown this. He had very early suggested that dephlogisticated air (air rich in oxygen) might be medically useful. Experiments and Observations on Different Kinds of Air, 2nd ed., (London, 1776), Vol. II, Section V.

27. Reid, op. cit., II, 523; I, 67, 76. Price subscribed to much the same theory of causation as Reid. See John Stephens, "The Epistemological Strategy of Price's Review of Morals", Enlightenment and Dissent, No 5, 1986, pp. 39-50.

28. Ibid., II, 526.

CHAPTER FOUR: THEISM

4.1 Hume's Dialogues and Priestley's Philosophical Unbeliever

Priestley's defence of belief in God is largely to be found in his Letters to a Philosophical Unbeliever (Part I) of 1780 and the Additional Letters of 1782. The letters are addressed to a fictional youth who, through his reading and the company he has kept ("especially on your travels"), has found his mind "unhinged with respect to the first principles of religion" (IV,326). His own travels on the Continent in 1774 with Lord Shelburne had acquainted him with the fashionable atheism of Baron D'Holbach's circle. Priestley thought that the cure for this condition lay mainly in a restatement of the Argument from Design.

Priestley's account of the Argument from Design is, on the whole, more a restatement that a revision of the Argument. Some touches to his version are peculiarly Priestleian, following from his determination and materialism, and for that reason they cannot be appropriated by the conventional theist; but most of his version can be regarded as a contribution to mainstream theism. He gives a sketch of the Argument, rather than a detailed picture (such as Paley was later to paint) of the natural phenomena that might be taken as evidence of Design. His approach here resembles his approach to the philosophy of mind: just as he thinks he has inherited from Hartley the details of human psychology which make determinism and materialism plausible, so too he thinks he has inherited the detailed evidences of Design. His own job he takes to be to show that the ordered complexity of the world must be interpreted as the work of a Designer.

Priestley must have known that D'Holbach and others were employing materialism and determinism to destroy theism, yet his confidence in the Design Argument is total. He sees no antagonism between the orthodox theism the Argument supports and his own materialism and determinism. Even more strikingly, he is quite unmoved by the wholesale attack on the theory of Design in Hume's Dialogues concerning Natural Religion, published posthumously in 1779 by Hume's literary executor Adam Smith. It is more to the Dialogues than to D'Holbach that Priestley's Philosophical Unbeliever is directed; his response is one of the earliest, and one of the few, that we have to so important a work. The response is cursory and dismissive; but Priestley was not one to overlook or evade such a challenge, and his attitude to the Dialogues can be reconstructed.

In general (as we have noted when discussing causation), Priestley's opinion of Hume, both as a philosopher and as a man, is very uncomplimentary. When Hume wrote in his My Own Life that he had sought literary reputation, Priestley took this as a confession that his object had not been "the pursuit of truth, or the advancement of virtue and happiness...." (IV,367). He thought Hume had adopted scepticism because "it was much more easy to make a figure by disturbing the systems of others than by erecting any of his own". Priestley would allow that "when the merits of any question were on his side, few men ever wrote with more perspicuity, the arrangement of his thoughts being natural, and his

illustrations peculiarly happy" - he presumably had in mind mainly Hume's determinism - "yet", he added, "I can hardly think that we are indebted to him for the least real advance in the knowledge of the human mind". In saying this, Priestley was not implying opposition to everything in Hume, but only denying that Hume was original where Priestley thought him right. Priestley certainly thought that Hume's attack on Design was one occasion in which the merits of the question were not on Hume's side.

Priestley admitted some admiration for the literary qualities of Hume's Dialogues, saying that it was "artfully and ingeniously conducted". He had no doubt that Hume's overall purpose was an atheistic one, and that Philo was Hume's spokesman.<1> Hume, he thinks, was dissembling in the famous ending of the Dialogues:

> when, at last, evidently to save appearances, he relinquishes the argument on which he had expatiated with so much triumph, it is without alleging any sufficient reason, so that his arguments are left, as no doubt the writer intended, to have their full effect on the mind of the reader. Also, though the debate seemingly closes in favour of the theist, the victory is so clearly on the side of the atheist (IV,368).

In the Dialogues Hume had adopted the strategy of setting one kind of theist against another. In arguing from the analogy of human productions to a divine Designer, Cleanthes - Hume's exponent of Design - naturally presupposes some similarity between the human and the divine mind. His fellow-theist, Demea, speaking for the tradition of the via negativa, denies the possibility of any such similarity on the grounds that analogies between God and man must degrade our conception of Deity. Philo, the sceptic, sides with Demea, though for epistemological rather than religious reasons. "Rational" theism, he attempts to show, defies all the established rules of reasoning in philosophy, much as Priestley thinks belief in free-will and immaterial minds does so, though Philo makes no explicit reference to Newton's "Rules". Eventually Philo succeeds in forcing Cleanthes to concede that the Design Argument can at most support only a conception of a finite Creator. Priestley belongs to the same tradition as Cleanthes, but he attempts to defend that tradition without falling into the traps Philo sets for Cleanthes. The task he sets himself is to establish both the rational and the religious credentials of the Design approach. For all his unorthodoxy in other respects, Priestley holds firmly to the traditional understanding of the Deity, as infinite, self-existent, and changeless. There is no suggestion that he might compromise on these essential attributes, though this is what Hume's argument aims to achieve.

The Design Argument, we generally think, was at the height of its career in the latter half of the eighteenth century. It is curious, then, to observe how little discussion was aroused by Hume's brilliant attack on the Argument. A similar silence greeted Priestley's defence of Design. There was, however, one reply which requires to be rescued from oblivion here. In 1782 there appeared an Answer to Dr Priestley's Letters to a Philosophical Unbeliever. The author gave his name as William Hammon, a name unknown to Priestley. This was an alias; the author was Matthew Turner, whom Priestley did know. It was Turner who first introduced Priestley, then a young tutor in languages, to the study of chemistry when he had served as a visiting lecturer to Warrington Academy in 1762.<2> Turner's pamphlet took up a pantheistic position against Priestley's orthodox theism, a fact which can be used in the next chapter when we examine Priestley's attitude to pantheism. His objections to

Design are not easy to characterize, because he wishes to think of nature both as exhibiting a design-like order and as itself the source of such order. His position provides a useful contrast with both Hume and Priestley.

The Design debate, in discussing the origins of natural order, leads readily to a discussion of the origins of life and the maintenance of order in the biological realm. Hume and Turner have their own views on this subject, and sometimes seem to be moving towards a theory of evolution. Priestley's fellow-scientist, Erasmus Darwin (Charles' grandfather), was the most vigorous English evolutionist of the time, and in the last years of his life Priestley clashed with him about this question. The contrast between Priestley and Darwin will complete this survey of views on the scientific credibility of the Design theory.

Sections 4.4 and 4.5 will consider Priestley's reply to the more purely philosophical, and more strictly Humean, objections that no general account of the origins of the natural order can succeed because there is only one universe, and therefore nothing with which to draw comparisons and form analogies; and that, because the object to be explained is finite, the theory of Design at best can suggest only a finite cause of order. Finally, Section 4.6 will discuss the relation between Design and determinism.

4.2 The Argument and its Difficulties

Priestley's defence of Design begins naively enough. He sets out a variety of cases which are meant to serve as analogues of divine creation. We see men construct houses and furniture and write books.

> This constant and indisputable observation lays the foundation for such an association of the ideas of chairs, tables, houses and books, with that of men as the makers of them, that, whenever we see a chair, a table, a house or a book, we entertain no doubt but, though we did not see when and how they were made, and nobody gives us any information on the subject, yet some man or other did make them (IV,330).

Similarly, we associate honeycomb with bees, webs with spiders, and nests with birds, although in these cases, he adds, we make allowances for the fact that some animals can imitate the productions of other animals, and men can imitate most animal creations. (Priestley presents his case in the Humean language of "constant associations", but, as we have seen, for him such associations are evidence of causation, not causation itself.)

Observations of this kind prove two things, Priestley contends: that "all effects have their adequate causes", and that these "proper causes ... must be capable of comprehending the nature and uses of those productions of which they are the causes, and so far as they are the causes of them" (IV,331). The last point here is illustrated in this way: "A carpenter may know nothing of the texture of the wood on which he works, or the cause of its colour, etc. for with respect to them he is no cause; but being the proper cause of the conversion of the wood into a chair, or table, he ... must have an adequate idea of their nature and uses [i.e. the nature and uses of chairs and tables]." Priestley's defence of

Design is, then, governed by a general maxim about the relation between causation and order, which he summarizes in this way:

> whenever there is a fitness or correspondence of one thing to another, there must have been a cause capable of comprehending, and of designing that fitness (IV,331).

If this maxim is acceptable, then, Priestley concludes, we need only the uncontentious further claim that there is some order in nature not produced by humans or animals, to prove a divine Designer (or Designers). "If a table or a chair must have had a designing cause capable of comprehending their nature and uses, the wood, or the tree, of which the table was made, and also the man that constructed it, must likewise have had a designing cause...." (IV,332).

Priestley is quite aware that additional support is needed before the Argument can be regarded as secure. He is conscious that his maxim - "no proper causes without comprehension" - is open to various criticisms. One point of vulnerability lies in the fact, which he notes, that plants and animals produce offspring without comprehending the "nature and uses" of what they produce. Priestley also sets out four other objections which he takes to be "the principal difficulties that have been started on the subject" (IV,334). These are (1) that to postulate a designer would lead to an infinite regress, because the designer himself or the design in his mind would also need to be designed; (2) that order might arise from the fortuitous concourse of atoms through eternal time; (3) that the analogy from human artisanship to divine creation would seem to require God to have an analogue to the human brain; (4) that the order in the universe might have arisen from purely natural causes if the universe itself possesses special order-conferring powers merely by virtue of the arrangement of its parts (analogous - he says - to the way in which organization in the brain is supposed by materialists to confer on it the power of thinking). The other two objections which Priestley comments on are that the Design Argument does not exclude polytheism and that it cannot prove God to have infinite knowledge and goodness.

Objections (1) - (4) here provide a useful framework in which to consider the broader aspects of Priestley's theism. The objections give us a starting-point for discussing how his determinism, his materialism, and his alleged pantheistic tendencies, affect the conventional picture of God as Designer to which Priestley was wholly committed. Objection (1) is discussed in Section 4.6 below and objection (2) in Section 4.3(iv). Objections (3) and (4) will be considered in the next chapter (in Sections 5.2(i) and 5.2(ii) respectively).

4.3 The Hypothesis of Design and its Rivals

Hume's central contention is that "so minute, so weak and so bounded a principle" as reason is low on the list of possible world- hypotheses.<3> It is obvious that Priestley thinks Design is the only serious contender as the explanation of the natural order. There are two ways in which he might come to hold this: he might think that human works are the only instances where we really see order being produced within nature, and so mind is

the only real hypothesis to explain the general order of nature; or he might think we are acquainted with many limited principles of order but, for some independent reason, mind has priority in explaining the general order. It is the former approach which predominates in Priestley. In his view, "numberless fitnesses of things to things" attest to the truth of Design. He invokes the standard comparison between the eye and the telescope, and seems to imply that any other natural structure would require an external explanation as much as does the eye.

To weigh the issue between Hume and Priestley, then, we need to consider the rival explanations that Hume has to advance. He suggests that there are or may be numerous such explanations, but in practice he cites four and expounds three of them. The four are instinct, vegetation, generation and chance. Instinct is mentioned but not discussed. "Chance" - the idea that order might arise by the random shuffling of atoms - will be examined in Section 4.3(iv) below. For the moment, "vegetation" and "generation", Hume's terms for the principles of life, have to be considered.

4.3(i) Hume and "generation"

Philo contends that "The world plainly resembles more an animal or a vegetable, than it does a watch or knitting-loom".<4> He teases Cleanthes by proposing that comets might be seeds from which worlds have sprung by some vegetative process. Priestley retorted, that "Had any friend of religion advanced an idea so completely absurd as this, what would not Mr. Hume have said to turn it into ridicule" (IV,374). Hume's point is of course that the supposition is no more ridiculous than the supposition of Design. Priestley insists that the comet- theory is wholly absurd: comets do not travel from star to star; no account is given of how they might vegetate when they arrive at the site of a new world; any anyway it is known that land, water, earths and metals cannot be encapsulated within a seed "containing within it the elements of all [a world's] innumerable parts".

Whatever the merits of comets as the vehicle of worlds, Hume does have a serious objection to Design as the principle of the order of the world, if the world does resemble a living thing as much as a machine. He sketches this resemblance as follows:

> A continual circulation of matter in [the world] produces no disorder: a continual waste in every part is incessantly repaired: the closest sympathy is perceived throughout the entire system: and each part or member, in performing its proper offices, operates both to its own preservation and that of the whole.<5>

In so arguing, he assumes that life constitutes an independent and distinct "principle", a self-sufficient source of order. When Demea asks Philo to "anatomize that fine internal structure" on which the operations of plants and animals depend, the request is turned down on the ground that we know the outward effects of life but not its essence.<6>

Priestley's view on living beings is very different. He regards it as almost self-evident that only a "superior", intelligent cause could explain the phenomena of life, and quotes with approval Demea's question: "how can order spring from any thing which perceives

not that order which it bestows?" (IV,373). In his view, generation and vegetation "necessarily imply design or reason as the cause of them"; they are, he thinks, some of the prime evidence for believing in Design. His answer to Hume is brief, but one can see why he thinks as he does. He thinks of the "fine internal structure" as essentially mechanical, and not as an independent principle. It follows that there must be either an external or a reductionist explanation of life, and he can see no physical explanation to serve the purpose. The physical realm is certainly orderly but it lacks the "adjustment" of living beings. The very features which lead Hume to think of life as an independent principle - the adjustment of parts to one another, and the orderly circulation of matter through the whole - are what seem to him to resemble a machine, and thus drive the design-theorist to seek an external explanation. How else do animate things come to possess properties and structure so strikingly different from those of the inanimate realm?

4.3(ii) Turner and "generation"

This question is brought again to the fore in Priestley's reply to Matthew Turner. Turner, as a pantheist, had maintained that God is nothing more than the visible universe, and that living beings arise out of nature by what we would normally call physical means, although he wanted also to think of it as a kind of design. Priestley wishes to separate God from nature, and to deny that life could, plausibly, have had merely natural origins. He contends that design arising from natural forces has no explanatory advantage over conscious external design. He asks Turner:

> can you say that you have any proper idea <u>how</u> this exquisite design, that we see in the formation of plants and animals, etc. can possibly result from the conjoined action of such things as the sun, moon and stars, earth, air and water, etc. of which the visible universe consists, any more than of its belonging to a being that is not the object of the senses? (IV,429).

And later:

> "The energy of nature", - "with which", you say, "every difficulty vanishes", is a fine expression; but when we come to realise our ideas, and to conceive in what manner this energy of nature is to be exerted, we are just as much at a loss how to connect it with the things to be produced by it, as if no such energy existed (IV,431).

It was the absence of any natural explanation of how life might arise which made Priestley think, against both Turner and Hume, that an external mind must be the cause of order. On his view, the Design hypothesis lacks any real rivals: unlike its opponents, Design can be backed by analogies such as the eye and the telescope, and thereby some account can be given of how the putative cause connects with the effect. Priestley's determinism and his causal theory of perception both rely on the principle that mere constant conjunctions, without any known mechanism, are strong evidence of causation; but he also believes that hypotheses, to be of any value, must embody intelligible mechanisms, which we arrive at by reasoning analogically from the causal agents with which we are better acquainted. There is no specific reference to Newton's Rules, but

Priestley might well have objected that Turner's "energy of nature" is no "true cause", being neither discoverable in itself, not modelled analogically on any known agency.

4.3(iii) Hume, Turner and "eternal generation"

Both Turner and Hume bring up a stock objection to theism which appears at first unrelated to Design, but which Priestley answers by reference to Design. Turner says boldly that "to suppose an infinite succession finite causes" is "so far from being difficult" that "a mind not afraid to think, will find it the most easy contemplation in the world to dwell upon" (IV,424). When Hume's Demea puts forward the Cosmological Argument, Hume has Cleanthes take a similar line: an eternal succession of objects requires no overall explanation, no more than does a mere collection of objects.<7> Turner, however, happens to illustrate the point by taking horses as his example, and this gives Priestley the opening to refer the matter to Design-type considerations. Turner says:

> It is probable if one horse had a cause, all horses had. But will not the argument be more consonant to itself, in supposing all horses had the same cause; and as one is seen to be generated from a horse and a mare, so all were, from all eternity? (IV,425).

(In saying this, he is going back on his own physical explanation of life-origins. He is in fact offering something much closer to Philo's first theory, that the phenomena of life need no deeper explanation.)

Priestley answers Turner in two ways. He holds that species' do possess some properties which cannot be accounted for merely by an account of procreation; namely, those properties by which each species is distinctively adapted to its natural surroundings. To deny that species' as a whole require a special explanation is, he thinks, like trying to explain a city such as London as a mere collection of independently-caused buildings:

> the whole race of animals [such as horses or men] shews the same marks of design in the relation they bear to other parts of the system [i.e. the surrounding environment] that the several parts of any individual being [such as London] bear to the rest of its particular system [e.g. geography, commerce] (IV,425).

They syntax here is confusing, but the point is clear enough. London came about not merely by a multitude to house-building ventures but in part by virtue of its situation; and each species exists not merely due to many acts of procreation, but because the species as a whole possesses attributes well-suited to a certain environment. Eternal generation does not explain how species possess these attributes.

Priestley's second counter-argument is that reproduction itself calls for explanation by Design:

> there is nothing in any plant or animal that is even capable of comprehending its own structure; and much less have they the additional power of properly producing

> any thing like themselves, and of enabling one of the species to produce another (IV,423).

The passage may appear, first, to merely assert dogmatically the principle "No proper causes without comprehension" (and thereby beg the central question), and secondly, to claim absurdly that animals cannot reproduce. Priestley would not have held anything quite so absurd as the latter claim. Whether here and elsewhere he exhibits a sheer metaphysical preference for explanations invoking intelligence over physical explanations is less clear. His wording does suggest this interpretation, but the requirements of consistency would count against it. The claim that all causation is conscious agency is just the doctrine he combated in Reid's libertarianism (see Section 3.5). Priestley may not be consistent here; but alternative interpretations should be considered.

Paley's comment on the spider and its web may provide a clue to Priestley's reasoning.

> The spider lives upon flies, without wings to pursue them; a case one would have thought of great difficulty, yet provided for, and provided for by a resource which no stratagem, no effort of the animal could have produced, had not both its external and internal structure been specifically adapted to the operation.<8>

In viewing reproduction as he did, Priestley perhaps also distinguished between the structure of an animal (its reproductive apparatus) and the powers which are properly to be attributed to the animal (which Paley terms its "stratagems" or "efforts" - behaviour, in our terms). Much of the reproductive process takes place, as it were, automatically, given adequate nutrition, etc. The animal itself can provide nutrition, but it does not control the internal processes of the foetus' growth. If one identifies an animal's "powers" with its range of behaviour (as, I suspect, Priestley and Paley did), then reproduction falls largely outside those powers. Animals do not <u>make</u> their offspring. They can reproduce because they are structurally adapted - "designed" - to do so. Whether these considerations can account for Priestley's views is, however, still conjectural.

I remarked earlier that to appeal to eternal succession as an explanation of life-forms, as Turner has done here, resembles Hume's denial that life require a deep or external explanation. Philo confirms this point. He contends that "generation" might be the fundamental source of order in the living world. Animals and plants bestow order and organization on their offspring, he says: "To say that all this order in animals and vegetables proceeds ultimately from design, is begging the question...."<9> The facts of reproduction seem to Priestley to be as much evidence of Design as anything else in nature, because he denies that animals and plants do bestow, in any important sense of that word, order and organisation on their offspring. To Hume, the facts of reproduction seem a possible basis for denying all Design in the biological realm.

4.3(iv) Hume and the "Epicurean hypothesis"

Turner may have been groping towards an evolutionary hypothesis. (Evolutionary theories were of course no novelty by mid-century, though they were more common in French than in English speculation.) He remarked that extinct species', whose existence was known

from recent discoveries of bones, "must have perished from an alteration in the system of things taking place", and he conjectured that the return of those original conditions (mainly temperature, he thought) would restore the lost species' to the earth. He seems to have thought the ultimate beginnings of life no more extraordinary than the seasonal regeneration of plants - both are put down to as a "plain effect of the influence of the sun" (IV,431). Priestley corrected him:

> We can only judge of powers by observation and experience.... If the sun has this power, why is it not sometimes exerted, so that we should see plants spring up by means of heat only, without their proper seeds? (IV,432).

Turner seems to have had no inkling that it would take eons of gradual development to recreate a plant or animal species. This weakness in Turner is not remarked upon by Priestley. As we shall see in the next section, he himself rejected evolution mainly because it seemed committed to spontaneous generation, and because any would-be explanation of species transformation had to attribute a spontaneous vitality to matter which he believed matter could not possess.

The most that Hume does to defend a genuine evolutionary theory in the Dialogues is to be found in his discussion of what he calls the "Epicurean hypothesis".

> A finite number of particles [Philo contends] is only susceptible of finite transpositions: and it must happen, in an eternal duration, that every possible order or position must be tried an infinite number of times.

Random motion will, "for many ages", only result in a "continued succession of chaos and disorder".

> But is it not possible that it may settle at last, so as not to lose its motion and active force (for that we have supposed inherent in it) yet so as to preserve an uniformity of appearance, amidst the continual motion and fluctuation of its parts?<10>

This solution, he says, "affords a plausible, if not a true solution of the difficulty", which, he implies, is more than can be said for any other theory. The Epicurean hypothesis is not in itself an evolutionary theory - as stated here it contains nothing about the transformation of species - but can easily be adapted to support an evolutionary theory. Life, it might be supposed, began by the chance synthesis of complex organic molecules, and the simplest organisms developed into the higher species by random mutations.

Priestley deals with Hume's "Epicurean" speculations as one of the "principal difficulties" of the Design hypothesis.

> It was said by the atheists among the ancients, that the universe might have been formed by the fortuitous concourse of atoms, which had been in motion from all eternity, and therefore, must, they say, have been in all possible situations (IV,338).

Priestley's reply to this is brief. He regards it as highly improbable that matter might be either self-moving or self-arranging "in a manner expressive of the most exquisite design". So improbable is this that he doubts "whether any person was ever really satisfied with the

[Epicurean] hypothesis...." In the Institutes he had remarked that "there are so many adaptions of one thing to another in the system of nature that the idea of chance is altogether excluded" (II,12). In neither place does he give any consideration to the age of the earth as a means of measuring the amount of time within which chance might have operated. For the eighteenth-century Design theorist the weight of probabilities is overwhelmingly against a random explanation of order.

Besides this conventional rejection of the hypothesis, the Philosophical Unbeliever adds that the theory of solid atoms has given the hypothesis a false allure - "those who advanced it were not philosophers enough to know what atoms are". Now that it has been shown that matter must possess powers, the universe is even more obviously God-dependent, for "what reason have we, from experience, to suppose it possible that these small masses of matter [i.e. particles] could have those powers without communication ab extra?" (IV,438). The traditional theory of matter defined atoms as self-sufficient entities, but the new Boscovichean theory of powers has shown the falsity of this definition.

4.3(v) Erasmus Darwin and the origins of life

In writing about biological matters, neither Hume nor Turner could claim to be expert. Twenty years after the Philosophical Unbeliever, Priestley crossed swords with an old friend who was a leading biologist of the time, Erasmus Darwin. (Both had been members of the Lunar Society; Darwin had carried forward some of Priestley's work on photosynthesis). Darwin's position is difficult to summarise: he was apparently a Deist and spoke of nature as declaring the glory of God, and yet he was attracted to some of the speculations in Hume's Dialogues. In particular, he took up Philo's hypothesis of the biological order having been generated by a primordial living principle. Darwin thought that the First Cause had endowed with life a single "filament", and that through immense eons this filament had generated the whole external crust of the earth. In support of this conception, he argued that limestone, chalk and marble had resulted from deposits of fish and shells, and clay, sandstone, ironstone and coal from decomposed vegetation. A good deal of inanimate matter was, on his view, literally dead matter.<11>

Priestley maintains that Darwin's evolutionary story contains nothing that would entitle it to displace the hypothesis of Design. He believes that the world is infinitely old, but the notion that it has evolved significantly in all that time is absent from his thinking. Darwin had held that life was to be explained by "fibrils with formative appetencies" (or "molecules with formative aptitudes", as he also called them).<12> These particles were held to be the active agents in reproduction, and the driving force in the generation of new life-forms. To this suggestion Priestley replies:

> Dr Darwin speaks of his organic particles as possessed of certain appetencies, or powers of attraction. But whence came these powers or any others, such as those of electricity, magnetism, etc? These powers discover as much wisdom by their adaption to each other, and their use in the general system, as the organic bodies which he supposes them to form; so that the supposition of these powers, which must have been imparted ab extra, only removes the difficulty he wishes to get quit

> of one step further, and there is left in as much force as ever. There are still marks of design, and, therefore, the necessity of a designing cause.<13>

Darwin's thesis contains elements of both Hume's and Turner's positions. Hume's Philo declares that life might require no external explanation. Turner seeks the explanation of life in purely physical terms. Darwin, like Turner, wishes to explain life by the "particles" which compose it, but his particles are themselves "organic". He seems not to think of the particles as themselves living, but he attributes to them the power of producing life, and he thereby resembles Hume in explaining life by reference to something possessing the power of life. Priestley's objection to this is that explanation cannot stop there: some account must be given of how organic particles come to possess special powers which matter in general lacks. Darwin thinks there is no difficulty here. He remarks that rubber, for instance, possesses powers of elasticity which cannot be accounted for by the law of gravitation, and he sees no reason why the organic particles of dead animals may not regain some degree of vitality under the influence of adequate moisture and warmth. The debate between Priestley and Darwin on the nature of life turns, then, on the question of spontaneous generation. It was necessarily a debate mainly about microscopic life and Darwin could point to the experimental work of Buffon, Reaumur, Ellis and Ingenhouz in which "animalcules" had been supposed to have arisen in sealed containers of boiled veal broth.<14>

In his rejoinder to Darwin, Priestley reaffirms his answer to Turner: in nature, organization can only be bestowed by a being which is itself already organized, and seeds or sperm and ovum are necessary to the transmission of organisation. He conducted experiments to check Darwin's claims, and concluded that growth takes place in dead organic matter at a rate proportional to the perfection of sealing of the containers being used, which, he thought, indicated that invisible spores floating in the air are the probable causes of seemingly "spontaneous" generation. His experiments were backed by some philosophical considerations. He did not of course deny that organic matter nourished life, but he argued that, because the same organic matter could act as a host for many different forms of life, the matter itself could not sufficiently account for the life which it supported. His reasoning here is identical to that which made him a determinist. The will, he thinks, cannot explain actions because it is equally related to all possible actions; similarly, the same organic matter is known to support various kinds of life, and cannot thereby explain why one kind occurs rather than another. Only motives can produce actions, and only seeds or spores can produce life. Priestley concludes that Darwin's hypothesis involves an "effect without a cause", and this familiar phrase is a sure sign that he was conscious of the similarity between the two cases. In both cases the possibility of spontaneity is held to be incompatible with universal causation.<15>

In Priestley's view, Erasmus Darwin's evolutionary speculations suffer from the same defect as his theory of spontaneous generation, in that both require an appeal to spontaneity. Darwin had held that the "higher" animals had reached their present state through many ages of development. Priestley thinks there is no positive evidence for species transformation, and that Darwin can offer no more than talk of "spontaneous vitality" to make the hypothesis intelligible. He objects that to think of living beings as graded according to degrees of perfection is to present a picture biased in favour of evolution: it leads one to think of more complex species as arising out of simpler levels of

being. On the contrary, all species possess perfections of their own, all are highly complex, and their complexities are all finely adjusted to their natural circumstances. Priestley believes that the "lower forms" from which species are supposed by Darwin to have evolved are "lower" only on a superficial examination.<16> In all this, he is simply defending the dominant opinion of his time, which viewed the biological realm as atemporal but structured in such a way as to serve divine ends.

4.4 Uniqueness and Design

Priestley is fighting the common cause of the rational, empirical theist of his century - defending Design as a well-formed and plausible hypothesis. However, his position is idiosyncratic in one respect. He met combined opposition from Hume and Reid on one point. We saw in Section 3.4 that Reid thought Priestley would fall victim to the sceptical consequences that Hume drew from the regularity theory of causation which, in Reid's view, Hume and Priestley shared. One of those sceptical consequences was theological. As Reid put it:

> From this definition of a cause, it would follow that we have no reason to conclude that there was any cause of the creation of this world: for there were no previous circumstances that had been constantly followed by that effect.<17>

Reid did not wish to call in question Design, and must have thought that an agency theory of causation is able to accommodate analogical reasoning. His objection to Priestley is that the regularity theory can permit analogical inferences only from one known cause to another postulated cause of exactly the same type or species.

Reid's point is closely allied to one which Hume had made, not only in the Dialogues but also in the first Enquiry.

> It is only when two species of object are found to be constantly conjoined, that we can infer the one from the other; and were an effect presented which was entirely singular ... I do not see that we could form any conjecture or inference at all concerning its cause.<18>

In the Dialogues various considerations are put forward to show that the order of nature is unlike human productions by showing that the origin of the universe must be sui generis. Philo emphasises the disparity of scale - "Does not the great disproportion bar all comparison and inference?" It is denied that any part of the universe can be used to explain the whole. The "slow and deliberate steps" of science could never enable us to reach cosmic conclusions. And Demea alleges, with Philo's approval, that the "perfect immutability and simplicity" of the Deity would destroy the analogy between the divine and human minds.<19>

Priestley thinks that analogical reasoning is strong enough to bridge these difficulties. He does not deny that a genuine singularity would be inexplicable; he holds, rather, that the Creation is not an entirely singular event. We can see this best in his comments on Section XI of the Enquiry. There Hume's main contention had been that natural religion can give

us no grounds for hope or fear about the future. He claims that, even if something can be known about God from the make-up of the world, nothing can be inferred about God's future intentions. Hume makes and dismisses the reply that because the world of which we are a part has the half-finished appearance of a building- site, we may reasonably expect it to be brought to some sort of completion. Priestley finds this an entirely satisfactory reply. Hume (in his guise as an admirer of Epicurus) will not allow it, for the same reason that in the Dialogues he will not allow inferences about the origin of the universe: both are cases in which analogical reasoning is stretched beyond breaking point. Priestley's comment expresses his view on both matters:

> But if the Deity be an intelligent and designing cause (of which the universe furnishes abundant evidence), he is not, in Mr. Hume's sense, an unique, of a genus or species by himself, but is to be placed in the class of intelligent and designing agents, though infinitely superior to all others of that kind.... (IV,380).

His answer to the point made in the Enquiry is that the analogy with human constructions can tell us something about the likely future course of this non-yet-completed universe. His answer to the point in the Dialogues is simply that God need not be conceived of in such a way as to make analogies impossible.

The answer proposed to these questions is not ad hoc: a general confidence in the power of analogical reasoning is characteristic of Priestley, and comes down to him from Hartley. As we have seen, one of his main quarrels with Reid's Common Sense position was that it was unduly restrained in employing analogy. We have also seen him appealing to simplicity and analogy, as sanctioned by Newton, in support of his materialism. Someone who holds that the peculiar features of human thought are sufficiently like natural happenings to make materialism plausible is perhaps unlikely to be at a loss to find common ground between the Creation and human productions. Hume rejects Design, and Reid rejects materialism, partly because they both take a more limited view than Priestley of the scope of analogical reasoning.

Hume and Priestley are not the only ones implicated in the issue here: Charles Darwin's evolutionary theory may also have a stake in the outcome. In the Introduction to his edition of the Origin of Species, J. W. Burrow writes:

> Hume demolished the logical basis of the argument from design, the case of Natural Theology, in his Dialogues on Natural Religion, but it was Darwin's provision of an alternative theory which caused such a widespread intellectual crisis.<20>

But it may be that some of the logical tools used by Hume would tell against any wide-ranging theory based on analogy, Darwin's theory included - if indeed Hume's claim does "tell" at all. Darwin's analogy is from domestic variation to species transformation, Priestley's from human manufacture to divine creation. Both have a gulf to bridge. There was no direct evidence of transitional forms, either domestic or in the fossil record, available to Darwin. Such hybrids as there were from cross-breeding between species were usually infertile, and the theory demanded that they should be fertile. The success of Darwin's theory depended much on the force of the analogy from domestic variation, and it seems that Hume's reasoning would not credit any force to the analogy.

4.5 Divine Infinitude and Design

In the Dialogues Philo, the sceptic, points out that Cleanthes' version of the Design Argument has provided only limited evidence of divine wisdom and power; appealing to the principle that "the cause ought only to be proportioned to the effect", he then goes on to insist that Cleanthes' evidence must be evidence only of a limited deity. Hume has Demea welcome this attack: to his mind it proves that the hypothesis of Design is "altogether useless" for religious purposes and "totally precarious and unsatisfactory" from a philosophical point of view. This then forms one of the main bonds in the alliance between Philo and Demea which Hume preserves almost to the last. Cleanthes is also affected by the force of Philo's argument. His immediate reply to Philo is equivocal, but later in the Dialogues Hume has him concede Philo's point almost with enthusiasm. The word "infinite", as used by theologians, seems to him to "savour more of panegyric than of philosophy", and would be better replaced with the terms "admirable", "excellent", "superlatively great", "wise" and "holy".<21>

As a defender of Design, Priestley is in the broad tradition which Hume has Cleanthes represent. However, Priestley's theism cannot so easily be impaled on the fork which pins down Cleanthes and Demea. His adherence to Design retains a commitment to divine eternity and infinity. He summarizes his position in this way:

> I do not pretend to prove a priori that, without any regard to the supposition of an external world, there must have been what may be called a self-existent Being; but only that, having first proved, from the phenomena of nature, that there must have been an eternally existing intelligent Being, we cannot help concluding (at least according to the strongest probabilities) that, in consequence of being originally existing, and the intelligent cause of all things, he must be infinitely knowing and powerful, fill infinite space, and have no equal (IV,344).

The Design Argument, understood as Cleanthes understands it, is here taken as showing that there must be a Being at least sufficiently "intelligent" to comprehend the order of nature. Priestley then wants to show that this Being, or some Being superior to it, must be eternal, and to do this he reasons in the matter of the Cosmological Argument. In what follows we see him partly supplementing the Design Argument from the resources of the other orthodox argument, and partly employing his deterministic, associationist assumptions to the same end.

> If this Being, the immediate maker of the universe, has not existed from all eternity, he must have derived his being and powers from one who has; and this originally existent and intelligent Being, which the actual existence of the universe compels us to come to at last, is the Being that we call God (IV,339).<22>

Priestley's next step is to try to show that this eternal, intelligent Being possesses unlimited power and wisdom.

> Since the reason why we cannot help concluding that a man, or any other being that we are acquainted with, could not be this originally existing Being, is the limitation of his knowledge and power (not being capable even of comprehending anything equal to himself), and since this must have been the case with respect to any other being, how great so-ever, who had not this self- comprehension, the originally existing Being must necessarily have this power [of self-comprehension]. A Being perfectly comprehending himself and everything else cannot have knowledge less than what may, in one sense at least, be termed infinite, for it comprehends everything that exists. Admitting this, we cannot suppose that it does not likewise extend to everything that necessarily follows from all that actually exists; and after this, we shall not know how to suppose that he should not be able to know what would be the result of any possible existence, for we cannot think this to be more difficult than the former. Besides, in pursuance, in some measure, of this argument, we cannot help concluding that a power capable of producing all that actually exists (so immense and wonderful is what is known of the system of the universe!) must be equal to any effect that is possible in itself.... Nay, having arrived at the knowledge of a Being who must have the power of self-comprehension, and also that of producing all that exists, we seem to require some positive cause of limitation to his knowledge and power; which external positive cause we look for in vain (IV,340f).

The argumentation here is meant to be persuasive, not demonstrative. Priestley hopes only to show that it is easier to advance from finitude to infinity than to find grounds for remaining with a finite God. There are two parts to what he says. In the first place, he maintains that the "system of the universe" gives evidence of Design in all its parts and at every level. There is nothing in nature, he implies, which can be interpreted as recalcitrant to the wishes of a Designer; the Designer has left behind no positive evidence of his own limitations.<23> Consequently, it is at least possible that he has unlimited powers, and to infer that he has such powers is not as difficult as it might at first appear. Priestley, of course, believes that the microscope, the telescope, the atomic theory and the theory of gravitation have multiplied the evidence available to the theist. The Dialogues, when it would allow nature to be ordered at all, would allow the order to be only an epiphenomenon in an otherwise anarchic universe. Hume's Philo tried to turn the tables on his scientifically-minded opponents by claiming that scientific advances were increasingly revealing a world animated by principles uncongenial to the analogy of human creations.<24>

The second important aspect of the passage quoted is Priestley's reference to "self-comprehension". This calls for some elucidation. He is trying to establish that only a being with complete self- comprehension could be the ultimate Designer of the universe. Observing the limitations of human knowledge and power, we are easily persuaded that the Designer could not have been a man; but we might well be puzzled by Priestley's attempt to shed light on these limitations with his remark that men cannot even comprehend anything equal to themselves. How is our lack of "self-comprehension" supposed to be related to our limited grasp of the structure and workings of nature?

In the Dedication to Philosophical Necessity, Priestley declares:

> We ourselves, complex as the structures of our minds and our principles of action are, are links in a great connected chain, parts of an immense whole, a very little of which only we are as yet permitted to see, but from which we collect evidence enough that the whole system (in which we are at the same time both instruments and objects) is under an unerring direction.... (III,450).

He is here talking mainly about the teleology of history, but what he says applies also to his view of man's place in nature: the complex structure of our minds is part of an "immense whole", and is thereby part of the evidence of order and Design in the universe. It is, of course, the whole purpose of Priestley's determinism to show that our minds and principles of action are governed by laws. Our minds are complex, but our knowledge of them can be improved, and this knowledge is, in his view, of practical value. He seems to think that it is men's inadequate grasp of the principles by which their minds work which sets limits on their abilities to order and design things in the world around them; a superior grasp of the workings of the mind would bestow superior mental abilities, and thereby superior powers of design. Knowledge is power, Bacon remarked; in Priestley's scheme, power also comes from psychological knowledge or "self-comprehension".

The notion of self-comprehension, then, is introduced into the Design Argument because Priestley holds that a being's powers of design are proportional to its self-comprehension. He denies, then, that any finite being could be the Designer because such a being would lack self-comprehension. But if the order of the universe is itself finite, why may not a finite being be able to cope with the task of creating it? His reply to this is that a finite being, lacking complete self-comprehension, could not stand as an adequate explanation for the order which its own mind exhibits in its activity as a designer. Priestley's determinism asserts that all minds are law- governed, and his Design Argument asserts that the existence of laws (whether natural or mental) implies a law-giver or Designer. The conflict between these two claims can only be resolved by either rejecting determinism or Design (or both), or asserting that there exists one non-finite mind, the Designer, who is somehow both law- governed and self-comprehending.

Priestley's reply to D'Holbach's Syste`me de la Nature employs a similar strategy.

> A human body may be, and probably is, the seat of all the powers that are exerted by man; but there is in the constitution of man (of whatever materials he may consist) marks of a design and intelligence infinitely superior to anything that is found in man [i.e. superior to anything man-made]. He, therefore, must have some superior cause, and so must every thing else that, like man, is finite. Proceeding in this manner, we come at last to a Being whose intelligence is properly infinite, and then (besides that we are under a necessity of resting there), it [this Being] ceases to be in the predicament of a man, or a plant, which must necessarily be dependent on something superior to themselves; though, for that very reason, it ceases to be the object of our conceptions (IV,384f).

There are obvious difficulties in Priestley's position. Philo's principle that "the cause ought only to be proportional to the effect" - a principle close to the spirit of Rule I - appears to have been sacrificed, for the Creator, being infinite, is far more than "proportionate" to his Creation. By this criterion either naturalism or a finite Deity would seem

preferable to orthodoxy. Priestley has to hold that this case is an exception to Philo's principle. But even if God's infinitude does suggest that he can be both self-comprehending and law-governed, Priestley also lacks any explanation of how God (unlike all other beings) can be both self-comprehending and law- governed. If God is unique in this regard, then, following Rule II, the analogy between the divine and human minds must be to some degree weakened. Priestley will not allow these difficulties to overawe him.

> Though it is acknowledged that these conclusions are above our comprehension, they are such as, by the plainest and the most cogent of reasoning, we have been compelled into, and therefore, though, on account of the finiteness of our understanding, it may be said to be above our reason to comprehend how this original being...should be himself uncaused, it is a conclusion by no means properly contrary to reason (IV,335).

Priestley thinks that Philo's principle of causal reasoning can be legitimately overruled in the case of God. He also thinks that Hume's other causal doctrine, that there are no "necessary connexions", the connection between causes and effects being "arbitrary", was also a prop for atheism. In rejecting this aspect of Humean causation, Priestley tried to provide a second line of defence for divine infinitude, this time making use of the Cosmological Argument. The atheistic conclusion drawn from Hume's theory of causation is that, "for anything we know to the contrary, the universe may have existed from eternity without any superior cause" (IV,398). Priestley's interprets Hume as claiming that, if individual causes only attend their effects and do not produce them, then "such things as we have usually called effects may take place without any such thing as we have usually observed to correspond to them, as their causes". In other words, Hume's denial of necessary connexions undermines the doctrine of "like causes, like effect", and thereby takes away any reason for thinking of the cause of the natural order as analogous to any cause within that order. By such reasoning, Priestley asserts, Hume feels himself entitled to deny the need for any "superior cause" of the succession of finite causes.

Priestley, by contrast, upholds the principle of universal causation, and thinks that the Cosmological Argument holds good as a consequence of that principle: every existing thing must have been caused to exist, and the universe must have had a cause as much as the things that comprise it. In some places he appears to hold that an eternal succession of finite causes is self-evidently incapable of explaining the origin of the world. More usually, he presents the Cosmological Argument in tandem with the Argument from Design. We see the absurdity of going back through finite causes in infinitum, because only an uncaused, intelligent Being could explain the world we see around us (IV,370).

Priestley was acquainted with a third line of argument for theism, the view that God exists by logical necessity, but he was unconvinced by the reasoning given to support it. Strangely, he does not connect the argument with the names of Anselm, Leibniz or Spinoza. In one place he mentions it in connection with Descartes (III,351), but elsewhere he thinks that it "originated with Dr Clarke, and is, I imagine, peculiar to this country". He adds that "it does not ever appear to have given general satisfaction; though some very eminent metaphysicians are still attached to it" (IV,392). Among these latter-day metaphysicians was Richard Price. (One less-than-eminent metaphysician who held this view was Hume's Demea.) Samuel Clarke had maintained that "The only true idea of a

self-existent, or necessarily existing Being, is the idea of a being, the supposition of whose non- existence is an express contradiction" (IV,393).<25> Priestley simply objects to this that there is no manifest contrariety or incompatibility between the ideas of God and non-existence such as there is between the ideas of black and white or between different numbers. In this respect like Hume, he believes that "Of necessity a priori it is impossible we should know any thing" (IV,114).

Priestley does not wish to deny that God is "self-existent" or "necessarily existent" - he quarrels only with Clarke's defence of these claims. He thinks divine self-existence can be established in a manner compatible with empiricism. The necessity of God's existence, he holds, rests in the fact that he can have no cause:

> we come to the knowledge of this necessity ... in a different manner [from that of Clarke]. It is by beginning a posteriori, finding that, in consequence of the actual existence of beings that must have had a cause, there must have been some being that could not have had a cause, though we are altogether at a loss to conceive, a priori, how or why he should exist without a cause.... (IV,397).

To sum up, Priestley has two arguments against supposing the Designer to be finite: the magnitude of the order in nature approaches infinity; and any finite Designer would lack self-comprehension, and so must have been designed by a superior Mind.

The immediate bearing of these arguments on the Argument from Design is obvious. Infant or superannuated deities, worlds which might have been botched or bungled on the way to the creation of our world, the "numerous society of deities" who might have collaborated at the creation - Priestley dismisses these Humean hypotheses as "unworthy of a philosopher, and miserably trifling on so serious a subject" (IV,371). The necessity of God's existence rules out young or old deities: "It is ... little, if at all, short of the force of a demonstration that the same natural necessity by which he has always existed must, of course, prevent any change whatsoever" (IV,342). And divine infinitude excludes polytheism: "There seems to be something hardly distinguishable from a contradiction in the supposition of there being two infinite beings of the same kind, since, in idea, they would perfectly coincide" (ibid.).

4.6 Design and Determinism

Of the four "principal difficulties" in the theory of Design that Priestley acknowledges, the most important, he says, is the claim that

> for the same reason that the universe requires an intelligent cause, that intelligent cause must require a superior intelligent cause, and so on ad infinitum, which is manifestly absurd. We may just as well, therefore, it is alleged, acquiesce in saying, in the first instance, that the universe had no cause, as proceed to say that the cause of the universe had none (IV,334).

There is no reference to determinism in the objection as here stated, but we will find that it leads, by a very short route, into the wider question of whether Priestley's determinism does not subvert his defence of Design.

This objection is, of course, one made prominent by Hume. In Hume, however, the objection is conjoined with another, slightly different objection. Hume thinks that the Design theorist only transfers the difficulty of explaining order from the material world to the world of ideas in the mind of the Designer. "An ideal system [he contends] arranged of itself, without a precedent design, is not a whit more explicable that a material one, which attains order in a like manner; nor is there any more difficulty in the latter supposition than in the former".<26> Hume's concern is mainly how a plan in God's mind could explain the world-order; Priestley's is how God can explain the world at all. The distinction will show its relevance shortly.

Hume, himself a determinist, does not directly say that his argument is freighted with deterministic assumptions (although he comes close to saying it). It is not obvious that his objection bears against the libertarian advocate of Design any force that has not been already spent in the prior debate between determinism and liberty. Someone such as Reid can reply to Hume that, as a free agent, God simply can mentally plan a world without there needing to be "precedent designs" to make his mental plan explicable. The argument does, however, carry some special force against Priestley. Reid's remark that for Priestley men are governed by a "lucky concourse of motives" is true at least to the extent that he thinks men do not control their own motives. If God, too, is determined by such a "lucky concourse", then we would want a "higher" explanation of how the motives came to be as they are - and, failing this, we would have no reason to go beyond the world for explanations. Priestley, then, has the problem of showing either how God can be master over his own motives or how he can be motive-governed and yet master and creator of everything.

There is one particular difficulty involved in this second supposition which the libertarians used to press home their argument against Priestley. (Here Price and Reid were following in Clarke's footsteps.) If God is governed by motives, then he must face, with an absolute severity which men are perhaps unlikely to experience in earthly conditions, the problem of choosing between indiscernibles. As Price put it

> Supposing the universe finite, it was indifferent where in infinite space it was placed. But was it, on this account, impossible to place it anywhere? (IV,93n).<27>

The libertarian's claim is that motives could not completely determine the original act of creation. Hume's objection is from quite a different quarter, and yet it joins forces with Price's: motives could not explain the act of creation without causing a demand for further explanation.

In attempting to meet these objections, Priestley's approach is partly to balance the difficulties of his position against the whole weight of the Argument from Design:

> to acquiesce in saying that the universe had no cause is ... absolutely impossible, whatever be the consequence. If, therefore, there be ever so little less difficulty on the other side of the dilemma, viz. that the cause of the universe had no cause, it is to that that we must incline (IV,334).

By having it bear the burden of this difficulty it may seem that the case for Design has been weakened; but there is perhaps a sense in which Priestley's position in relation to Design is stronger than the libertarian's. As a determinist, he believes that neither natural events nor human actions are fully explicable in natural or human terms, for both are law-governed and suggest a law-giver. Not only the order of nature but also the order in human actions calls for some theoretical explanation. His position here is parallel to his claim that the human brain is prime evidence of Design. In his scheme, then, the observable realm fails doubly to explain itself, and the demand for some source of explanation (not necessarily a theistic one) is all the greater.

Priestley then goes on to contend that whereas the world is most implausibly regarded as a complete explanation of itself, there are independent grounds for thinking that God is possibly a complete explanation of himself and the world. Hume would accept the first part of this claim; he only denies that God is better placed that the world. Priestley holds that God's distinctive attributes make him potentially a better explanation than the world, and, if these attributes be granted, then he must be thought of as a better explanation, although he is not directly known to be such.

Priestley puts his case best in his reply to Matthew Turner. The adaptation of means to ends in the animal kingdom, he is there arguing, can only be explained as the work of a self-comprehending being.

> And this being must be so essentially different from all others that, whereas they must be derived, this may be underived; and if it may, it will follow from other considerations, it absolutely must.

That God is "essentially different" from all other beings is to be shown not a priori but analogically. Priestley thinks that God's status as self-comprehending and infinite give us grounds, by analogy, for also ascribing "self-existence" to him - at least in preference to positing a self-existent world. "Other considerations" - the considerations adduced by the Design and Cosmological Arguments - seem to indicate that God does exist; and, in order not to override this evidence, we are forced to conclude that he does exist in the only way that he can exist - as an "uncaused" or "self-caused" being.

> It is not pretended, as I have said, that we can conceive a priori that a being possessed of self-comprehension, must have been uncaused: but as the mind cannot rest till it arrives at such a being, and this is a circumstance essentially different from that in which we find every other being, it may be capable of self-existence, of which the others are not. Any real difference in the condition of these beings may be sufficient to interrupt the analogy between them, so that we cannot be authorized to conclude concerning the one, what we do concerning the other (IV,426).

Priestley's reasoning does presuppose that the Design Argument is prima facie a powerful one: without this presumption neither the notion of divine self-comprehension nor the credibility of divine existence could be appealed to in judging whether self-existence can be ascribed to God. However, this is not question-begging, at least not against Hume. The particular argument of Hume's which is being answered denies, not the apparent marks of design in the world, but only the explanatory adequacy of a divine plan. Hume holds that neither the world nor God can serve as "complete" explanations because any would-be complete explanation is swept away by our unstoppable demand for further explanation. Priestley thinks that the quest for explanation can find a resting-place, although not one that permits a full account of all that we want to know.

We have see Priestley trying to answer the difficulty he posed for himself, but has he answered Hume? He thinks that he has: "All that Mr. Hume says on the difficulty of stopping at the idea of an uncaused being is on the supposition that this uncaused being is a finite one, incapable of comprehending itself...." (IV,369). Earlier we noted a difference between Priestley's problem and Hume's. Even if it is plausible to think of God as the "source" of his own existence, how might this help us explain God's actions as creator? Won't there still be a regress of explanation, a demand for something "higher" to explain God's motives and mental plan? Priestley does not note that Hume's problem pertains directly to God's motives rather than simply to God's existence. However, his attempted answer to Price may perhaps supply him with some answer to this feature of Hume's criticism.

The libertarians, as we saw, thought that determinism left God unable to choose where to place the world he wants to create. When the obvious question of whether God is subject to determinism is first alluded to by Price, Priestley begins by arguing in defence of divine freedom. (The question had to be raised by Price because, remarkably, it had not been considered at all in the Philosophical Necessity.) Priestley's reasoning here follows the pattern of his defence of self- existence. Just as self-comprehension is supposed to support self- existence, so self-existence is taken to support divine self- determination.

> Motion and existence cannot be eternally derived, and actual existence and actual motion necessarily lead us to some self- existing, and consequently self-moving being. Though the idea be ever so incomprehensible and confounding to our faculties, we must acquiesce in it; for to stop short of this, or go beyond it, is equally impossible (IV,73).

To say this is to clear the way for human freedom, Price retorts.

> Beings may have a self-determining power, as, according to Dr Priestley's concession, the Deity has; and yet they may be always guided, as the Deity certainly is, by a rule or end. I know that Dr Priestley will not allow me to argue thus from the Deity to inferior beings. But this method of arguing appears to me fair; and, in the present case, it seems decisive. It is only the manner in which God possesses his attributes that is incommunicable. We may justly say, God possesses power. Therefore he may give power. But we cannot, without a contradiction, say, God is self-existent; therefore, he may give self- existence: for this would be to say that he can make a derived being underived (IV,76).

Price's attack is a forceful one. It leaves Priestley having to say that it is the manner in which God holds his attributes which makes those attributes incommunicable; such attributes, he is committed to saying, can only be held by a self-existent being.

Whatever the outcome of this exchange, it is clear that, so far, Priestley is defending divine freedom. And yet he immediately goes on to deny that God could act independent of motives:

> a determination of the mind in circumstances in which a regard to different objects is equal, is an impossibility. This must be universal, and respect the supreme mind as well as others (IV,77).

The reader had been led to think that perhaps the "supreme mind" is not governed by this principle. However, Priestley is not happy with divine determinism either, for he concludes with the observation that "we soon lose ourselves in speculation concerning the first cause".

Price later tries to press home his advantage. "Would one not think that if God is a self-moving being, self-motion cannot imply an effect without a cause?" (IV,96). Priestley, however, claims that in speaking of God as self-existing and as self-determining "I mean nothing more than to express my total want of conception concerning the cause or reason of the existence, and if I may say so, of the original action of the Deity" (IV,113). The conclusion he wants to reach is that the free/determined dichotomy breaks down in relation to God, and he thinks that the peculiar (but indispensable) notion of self-existence supports such a conclusion.

Priestley's position is clarified a little by his reply to John Palmer, who wanted to reinforce Price's case. When the point is made by Palmer that God must have been entirely free before the Creation, Priestley answers:

> But then there never can have been a time to which that observation applies, because there never can have been any time in which the Deity did not exist, and consequently act. For, supposing him not to have been employed in creation, etc. (which, however, I think we can hardly avoid supposing), he must at least have thought, and thinking you will not deny to be the acting of the mind. The origin of action, therefore, in your sense of the word, that is, the origin of self-determination, is the same as the origin of the Deity, concerning which we know nothing at all (IV,200).

Because God must have always been active, the relation between motives and will in him is an insoluble problem, and cannot be appealed to in support of human freedom.

Priestley thinks there must be a "self-moving" first cause, and yet his causal argument for determinism seems to apply as much to God as to man. He denies that there is a contradiction here on the grounds that (1) in a self-existing being, self-determination is likely to be as peculiar and obscure as the notion of self-existence; and (2), because God is

eternally active, the origins of his actions must be inscrutable. He holds, then, that, in some unknown way, God is both self-determining and motive-governed.

We have seen Priestley's reply to Price and Palmer. He did not directly meet Hume's challenge, which, I have suggested, is allied to Price's. Hume had held that to explain the creation by the Creator's motives only provokes a demand to have those motives explained. A self-determining deity might be free from this objection, but Priestley's deity, who is also motive-governed, is less obviously so. However, Priestley does not depict a straightforward dominance of motives over will in God, and this might be thought to take the edge off Hume's and Price's attacks. Even so, his reasoning here is shaky, and he seems unsure of what he wants to say. It is remarkable that an enthusiastic theist such as Priestley should have felt uncertain about whether God was subject to the determinism which he had been espousing for twenty years.

Notes to Chapter Four

1. This had also been the opinion of the Monthly Review's reviewer when the Dialogues first appeared. The opposite opinion, that Cleanthes speaks for Hume, does not seem to have emerged until Dugald Stewart put it forward in 1821. See the Monthly Review, Vol. 59, December 1779, p. 343.

2. See R. E. Schofield, A Scientific Autobiography of Joseph Priestley, (Cambridge, Massachusetts, 1966), p. 9 for this identification.

3. David Hume, Dialogues concerning Natural Religion, ed. N. Kemp Smith, (Oxford, 1935), p. 183f.

4. Ibid., p. 218.

5. Ibid., p. 211.

6. Ibid., p. 219.

7. Ibid., p. 234.

8. William Paley, Natural Theology, 10th ed. (London, 1805), Chapter 16, Section 5, p. 305.

9. Dialogues, op. cit., p. 221.

10. Ibid., pp. 224, 227.

11. This view is first put forward in the third edition of Darwin's Zoonomia, (London, 1801), and it is to this edition, as well as to The Temple of Nature, (London, 1803), that Priestley replied. For a discussion of Darwin and Priestley, see Harold J. Abrahams, "Priestley Answers the Proponents of Abiogenesis", Ambix, 1964, pp. 44-71. My account of this part of Priestley's thought is dependent on Abrahams' article.

12. Zoonomia, op. cit., II, 304. The theory came from Buffon, and in earlier editions of Zoonomia Darwin had rejected it.

13. "Observations and Experiments relating to equivocal, or spontaneous Generation", American Philosophical Transactions, Vol. 6, 1809, p. 129. Quoted in J. G. McEvoy and J. E. McGuire, "God and Nature: Priestley's Way of Rational Dissent", Historical Studies in the Physical Sciences, Vol. 6, 1975, p. 373.

14. Erasmus Darwin, The Temple of Nature, (London, 1803), Additional Notes: Spontaneous Vitality of Microscopic Animals, Section IV.

15. Priestley's reasoning reappears in the history of biology sixty years later when J. H. Stirling criticised T. H. Huxley's theory of protoplasm. Stirling alleged that the "effects"

of Huxley's protoplasm were altogether too protean to be accounted for by their "cause". See Thomas S. Hall, Ideas of Life and Matter, Vol. 2, (Chicago and London, 1969), p. 310.

16. Cf. Abrahams, op. cit., p. 67f.

17. Reid, Essays on the Active Powers of Man, in The Works of Thomas Reid, ed. W. Hamilton, (Edinburgh, 1872), II, 627.

18. Hume's Enquiries concerning Human Understanding, ed. L. A. Selby-Bigge (Oxford, 2nd ed., 1902), Section XI, p. 148.

19. Hume's Dialogues, op. cit., pp. 182, 196. Cf. also p. 181 for Philo's concurrence. Whether on this last point Hume is relinquishing his empiricism by assuming a priori knowledge of God is difficult to judge; in the light of Philo's later strictures against assuming God to be infinite, this last passage must look like a device to hold together Philo and Demea.

20. "Editor's Introduction" to Charles Darwin, The Origin of Species, ed. J. W. Burrow, (Harmondsworth, 1968), p. 43.

21. Ibid., pp. 210, 249.

22. Priestley's phrase, "the immediate maker of the universe", is open to one criticism. Qua designer, God (it might be said) can only be a craftsman and not a creator. Kant was to raise this point in the Critique of Pure Reason, published the year after the Philosophical Unbeliever. Strangely enough, the objection plays no part in Hume's Dialogues. Priestley did not read Kant, and does not seem to have felt the difficulty. Priestley believed that the world was of eternal duration (see Section 5.4(i)), and this entails that creation was not ex nihilo in a temporal sense. Nevertheless, he was adamant that creation is not a process of emanation from God, and in denying that he was asserting ex nihilo creation in an atemporal sense.

23. One might object that evil and suffering are prima facie evidence of God's limitations. Priestley claims that some evils necessarily attend any possible world. He also thinks that natural evils are prescribed by God to serve a moral purpose (IV,344-63). Naturally, he can not show that the world's evils are necessarily and precisely related to these "purposes". A full discussion of Priestley's theodicy is presented in Chapters Six and Seven.

24. Hume, op. cit., pp. 205-7.

25. Quoted by Priestley from Clarke's Demonstration of the Being and Attributes of God, (London, 1705; repr. Stuttgart, 1964), p. 30.

26. Hume, op. cit., p. 203.

27. See also Reid, op. cit., II, 623f.

CHAPTER FIVE: AGAINST PANTHEISM

5.1 Pantheism and Atheism

If Priestley's Philosophical Unbeliever was one of the very few replies to Hume's Dialogues, his own venture into speculative metaphysics was equally little discussed. The general opinion of his attempt to reconcile and combine materialism, determinism and theism has been unfavourable, the result being no more than an "unnatural alliance", in Leslie Stephen's phrase. However, it is indifference rather than hostility that has been the dominant attitude, and much of the relevant material has never been considered.

Curiously, Priestley has been criticized more often for fostering pantheism than for conducing to atheism. "Atheism" and "pantheism" were often employed indiscriminately as terms of theological abuse in the eighteenth century, though it is possible that by Priestley's time this style of denunciation was going out of fashion. The preference for the "pantheist" accusation is strange both because it has persisted to the present day, and because it is not prima facie the more obvious objection to raise. On the face of it, the theoretical deletion of the soul would seem to suggest a similar deletion of the Deity. Perhaps this is not the natural construal. Priestley's materialism does not delete the mind, nor does his determinism eliminate free-will; in both cases he purports to offer revised accounts of what these things amount to. In any case, much of the subsequent debate, such as it has been, has concerned mainly the relation of God to the world. Coleridge, who is a main source of the view that Priestley was (or tended to be) a Spinozistic pantheist, tried to encapsulate the difference between Spinozism and orthodoxy in a simple formula. For Spinoza (as he puts is) "the World without God is an impossible idea" and "God without the World is so likewise". The "Hebrew or Christian scheme" shares the first conviction but denies the second: "God without the World is God the self-subsistent".<1> This elementary distinction was well understood in Priestley's time, and well understood by Priestley. Is God, according to his account, identical with the world (as in pantheism), does he incorporate the world (as in panentheism), or is he entirely distinct from it (as is the orthodox view of Judaism, Islam and Christianity)? This will be the main subject of this chapter.

Those who have presented a case for regarding Priestley as a pantheist have appealed to aspects of his thought which are incidental to, or at best only ancillary to the theory of Design. It might be claimed that Priestley's materialism, his determinism or his dynamic theory of matter lead to pantheism. We shall examine each possibility in turn. It turns out to have been the latter two rather than his materialism which have fuelled the pantheistic interpretation, but it is with the implications of his materialism that we shall begin.

5.2 Atheism and Materialism

It is an obvious and important question to put to Priestley, whether the principles which lead him to dispense with the soul ought not also to issue in atheism? The three pillars of his materialism - his denial of interaction between totally dissimilar substances, his preference for simplicity, and his appeal to the Boscovichian theory to support a more capacious view of the possible powers of matter - each have a bearing on the case. In the controversy stirred up by Matter and Spirit, the relation between these principles and theism received surprisingly little discussion, though enough to shed some light on the issues involved.

Richard Price was the first to challenge Priestley's consistency, asking explicit questions about simplicity and interaction and casting doubt on the theological propriety of the theory of matter. (Discussion of the nature of matter will be postponed to Section 5.5 below, so that the complexities of that issue might not obscure the main outlines of Priestley's position.) Price says:

> It seems evident that Dr Priestley's principles go to prove that the Deity is material, as well as inferior beings. He would otherwise have no common property with matter, by which it would be possible for him to act upon it (IV,42).

And vis-a-vis simplicity, he maintains that to equate the mind with the brain

> is not unlike resting our ideas in this visible world, and supposing it the same with the Deity who made, and actuates, and governs it. The laws of nature seem to terminate in matter. But is it philosophical, in order to avoid multiplying causes, to conclude that they have no other cause than matter itself; and, with the French philosophers, to make nature the only Deity? (IV,51f).

Despite the passing suggestion that pantheism may be the outcome of Priestley's principles, Price's allusion to "the French philosophers" shows that he thought the result to be virtually atheism, and he goes on to say as much shortly afterwards. John Whitehead, a Quaker critic of Priestley's was more concise: "Materialism must terminate in Atheism" (IV,145).<2>

The fullest exposition we have of Priestley's views on whether God is material had in fact already been given in Matter and Spirit. Price and Palmer were quite correct in implying that the Philosophical Necessity had not explained whether God is subject to determinism; but their criticisms in the present case meet a Priestley more sure of his own mind regarding "this very difficult subject" than we saw in the case of determinism. He puts forward a number of grounds for denying that the Deity is simply material. He takes it to be part of God's nature that "he must be capable of producing or annihilating any thing" and that "he who made and continually supports all things, must equally attend to all things at the same time". Also, "the divine essence cannot be the object of any of our senses, as everything that we call matter is" (III,298). From these considerations he concludes that

> no proof of the materiality of man can be extended, by any just analogy, to a proof or evidence of a similar materiality of the Divine nature....

He adds that the term "immaterial" is unobjectionable if by it "we simply mean to denote a substance that has powers and properties essentially different from those of created matter...." However, in arguing thus, he has not overlooked the bearing of the principles which lead him to materialism. He denies emphatically that God could be "a substance that has no property in common with matter, and that even bears no relation to space". Such a being would be "necessarily cut off from all communication with, and all action or influence upon his own creation". Whatever else he is, then, God cannot be a Cartesian mind; and yet he is also "essentially different" from created matter.

There is another complication to be taken into account. Price was partly justified in wanting to ascertain Priestley's opinion, because the denial that God is a Cartesian mind is sometimes overshadowed by agnosticism about the divine essence. "We are absolutely confounded, bewildered and lost, when we attempt to speculate concerning it....", Priestley can say (III,300), with a force that counteracts his denial of immateriality. In this mood he resembles Hobbes, who frequently wrote to the same effect.<3> In Priestley's case, agnosticism about God's essence derives both from a general (Lockean) agnosticism about essences - even matter is known only by its powers - and from regard for the peculiar properties - as creator and sustainer of all things - which make God so different from any other being. Underlying this second point is the principle that "the powers and properties being different, the substance or essence ... must be different also" (III,298). On this basis he reasons that it must be difficult to fit the Creator into any of the ontological categories that obtain within the creation. At the same time he is aware that this denial of similarity between God and the world must not be pushed so far as to break the analogy between human and divine creative activity, on which Design depends.

Despite all this, Priestley is not wholly the cautious agnostic. When his agnosticism is subtracted from both sides of the question, he is clearly more inclined to regard the Deity as a material than an immaterial being. It is the problem of interaction - the problem of "how an immaterial being, not existing in space, can create, or act upon matter" (III,323) - that tips the balance for him, and in that respect his theism and his materialism are guided by the same principle. He thinks that the main difficulty in regarding God as a material being, the difficulty of having nature filled by an infinite material substance, is obviated by the Boscovichian hypothesis - if impenetrability is not essential to matter, then the interpenetration of substances becomes possible. He makes this point on two occasions: the first time he says he is writing for the benefit of any person who should "on account of the very few circumstances in which the Divine nature resembles other natures, think [it] proper to apply the term material to both..." (III,299); and it appears again later, but this time without any such qualification, as if he himself thought God could be described as material (III,300f). There is this element of ambiguity in the text, but it can be easily explained. Priestley's hesitation is about whether the term "material" is so bound to <u>created</u> matter as to be unable to encompass a non-created kind of matter. He is not allowing the possibility that God might be a dimensionless, immaterial spirit.

Richard Price so misread Priestley as to be able to say "I know that Dr Priestley asserts the immateriality of the Deity" (IV,56). He asked, "would there not be something shocking in saying of the Deity, that he is nothing but a power of attraction and repulsion?" (IV,42). Priestley agreed that this would be shocking, and in agreeing to this he seems to concede that God is therefore immaterial; but, in the light of the foregoing, his final word in the

debate with Price is clear enough. If the Deity does act on matter, as he does, then he must possess the power of attraction and repulsion, "and therefore [he must possess] one power in common with matter, though he be possessed of so many other powers of which matter is incapable" (IV,57). God is material like natural things, but, by virtue of his other powers, he is much more than that. These other powers are hard to describe, but they are probably best described as "material" in some greatly extended sense of the word - at least, the term is preferable to its opposite. If this is allowed the problem of interaction is alleviated, but so too is the problem of simplicity, for it means that Priestley's ontology does not admit radically opposed kinds of substance.

If a materialized Deity seems religiously offensive Priestley can claim (on the authority of Beausobre, his guide to the Patristics) that Tertullian, Clement of Alexandria, Origen and Gregory of Nazianzen either held or entertained a view of God as material, as "a very pure luminous air, diffused every where" (III,346-8); and he can point out that Cudworth was prepared to regard this as not atheism but still a kind of theism (III,327). The conception of "the divine material essence penetrating other matter", he says, "is much more consonant to the idea the sacred writers give us of his filling all in all, than that of a being who bears no relation to space, and therefore cannot properly be said to exist anywhere, which is the doctrine of the rigid immaterialists" (III,301). He seems to recognize that his account of divinity is incompatible with the Scholastic doctrine that God is "toti in toto; toti in singulis partibus", or as he puts it, "infinite (with respect to immensity) and yet wholly contained in the smallest particle of dust or point of space" (III,350). This is for him no loss, for the doctrine contradicts itself, though he does not specify where the contradiction lies.

5.3 Pantheism and Materialism

As a shorthand convenience we will speak of Priestley's God as a "quasi-material" being. The question immediately arises as to how he is related to the world. Priestley's position approaches a monism of attributes - all things are material, even (in some sense) God, who has at least one property in common with created matter. Does he also commit himself to a monism of substance, so that natural things are in some way a part of God? It might be alleged that his materialism leads to a monism of attributes and that a monism of attributes is tantamount to a monism of substance. However, for whatever reason, no-one seems to have prosecuted this line of argument. Priestley, at least, believed that the Boscovichian theory of matter, which licenses the possibility of interpenetration without loss of identity, thereby makes possible a clear-cut ontological distinction between God and the world. The question of whether "Materialism must terminate in Pantheism" (to adapt Whitehead's dictum) is not raised in Matter and Spirit, but it is faced in the Philosophical Unbeliever and its sequel the Additional Letters.

Priestley divides the question into two parts, corresponding to the distinction between pantheism - in which the world constitutes the "brain" of God - and a peculiar version of theism in which God has a brain but that brain is separate from the world. So important does he regard the challenges presented by these two positions that he counts them as two of the four "principal difficulties" attending Design. Priestley provides specific replies to both difficulties, but before describing these we need to observe that any study which did

find him to be a genuine pantheist would have to admit that this conclusion contains a remarkable incongruity. There are good and obvious general grounds for expecting him to be quite opposed to pantheism. Nothing is more basic to Priestley's theism than the Argument from Design, and the Argument itself has a built-in bias against identifying God with the world. Priestley reasons that, just as a telescope cannot design itself, so neither can the eye: both require a maker. The order possessed by these "instruments" suggests that the maker must be a mind. And, he adds,

> This mind must be entirely foreign to the telescope, and consequently to the eye; it being as contrary to appearances that the eye should make any part of this mind as that the telescope should (IV,423).

If the world exhibits order, then analogy suggests that the ordering Mind must be external to the world. Priestley endorses this conclusion quite as firmly as does any dualist exponent of the Design Theory.

5.3(i) The world as the brain of God

However, when Priestley comes to answering the challenge from pantheism, he makes little of this point, and attempts to supply an answer which does not assume the truth of Design. In the Philosophical Unbeliever he represents the pantheist position as challenging Design by arguing that order is produced by a wholly immanent Mind. The possibility of such a Mind is made plausible by pointing to analogous instances where whole systems possess properties which their parts lack:

> it may be said, that a whole may have properties which the parts have not, as a sound may proceed from the vibrations of a string, the component parts of which could not produce any, or as a faculty of thinking may be the result of a certain arrangement of the parts of the brain, which separately have no thought (IV,336).

Priestley's answer to this criticism, and consequently his answer to the third of the "principal difficulties" faced by Design, is that

> it cannot but be that every whole must have some properties which do not belong to the separate parts, but still, if all the separate parts require a cause, the whole must; and whatever peculiar powers belong to a whole, as such, they must be such as necessarily result from the arrangement of the parts and the combination of their powers. But no combination or arrangement whatever of caused beings can constitute an uncaused one. This affects us like a manifest contradiction (ibid.).

Here he does not deny that organized bodies exhibit emergent properties (as Price had done in attacking Priestley's materialism); but he does insist that emergent properties must have causes in the parts and their arrangement. The point of this observation is, of course, to contrast the immanent Mind of pantheism, who owes his being to the world, with the orthodox Deity, who is uncaused or (what amounts to the same thing) self-caused. If effect, Priestley rejects the theory of an immanent, emergent Mind because (he thinks) such a Mind cannot meet the requirement of divine self-dependence which is central to the Cosmological Argument.

Whether the pantheist viewpoint Priestley sought to rebut here was purely hypothetical, or whether he had an opponent in mind, we can not tell. As it turned out, the only published rejoinder to the Philosophical Unbeliever set out to defend just the position set up by Priestley for the purpose of refutation. In Section 4.3(ii) we noticed Matthew Turner in his guise as an exponent of would-be naturalistic explanations of biological order. To hold that the biological hierarchy has natural causes is not incompatible with holding that that hierarchy is designed by an immanent Mind, if that Mind is in some way equated with nature. Quite likely Turner had only a mild interest in the religious consequences of his pantheism. (He retained some hope of a future life.) What is noteworthy is that he drew back from outright atheism. God, on his account, is identical with the vis naturae.

> I mean to distinguish this active, intelligent and designing principle, inherent as much in matter as the property of gravity, or any elastic, attractive or repulsive power, from any extraneous force or design.... (IV,413)

In his Additional Letters Priestley confronts this theory of an intelligent, self-designing universe with various objections. He emphasises, in the first place, that the truth or falsity of Turner's hypothesis must be an entirely theoretical matter, for no observations could be made which would count for or against it. Turner had claimed that his own conception of nature is more easily intelligible than the claims of orthodox theism. Priestley replies that Turner's view of an eternal, self-creating nature shares just the same difficulties as theism: "look a little into your own mind, and say whether you have any clearer idea of nature, than you have of the author of nature having had no beginning" (IV,428).

How then does Turner's pantheism fare as a theory? Priestley develops the attack begun in the Philosophical Unbeliever. The visible universe must have a cause and cannot be uncaused or self- caused. If self-dependence is possible at all (and he sees no a priori reason to deny the possibility), then the self-comprehending Deity is the only being who can, plausibly, possess it. The notion of self-dependence is difficult, but not self-contradictory; whereas (he thinks) Turner's theory is blatantly circular. Turner, Priestley objects, makes "the same thing to be, at the same time, cause and effect with respect to itself".

> If it be the marks of design in the visible universe that compel you to admit there is a principle of intelligence belonging to it, this principle must be the cause of those marks of design.... Here an orderly system presupposes intelligence, and yet this intelligence arises from the order. If this be not arguing in a circle, I do not know what is (IV,428).

Priestley claims that Turner's hypothesis is "contrary to any analogy in nature". He goes on to discuss whether the brain is analogous to Turner's God-World.

> The brain of a man, or of any other animal, is a homogeneous connected mass, and may as well be endued with the properties of sensation and thought as a stone with that of gravity, or a load- stone with that of magnetism; there being only an equal difficulty in conceiving how such powers can belong to, or depend upon, their respective substances. But in the visible universe there is no such homogeneity or connexion of parts (IV,429).

Priestley, the materialist, aims to show that thought is an emergent property in the brain but not in the world as a whole. From the evidence of the brain, he takes it that homogeneity is essential to structures which generate thought, although he admits that he cannot say how homogeneity plays its part. So "disjointed a system as the material universe is", he writes elsewhere, cannot have "a principle of thought belonging to it" (IV,386). If the world is a mind, then many other structures which resemble the brain more closely than does the world must also be accounted minds. On this reasoning, he notes, a town should have a principle of intelligence (IV,429). It is rather surprising, however, to find Priestley representing the material universe as so much out of joint. As an exponent of Design he is forever praising the craftsmanship of the Creator. His objection to Turner cannot succeed: exactly the same considerations that favour Design also favour pantheism. The order of the universe is at once both proof of divine wisdom for the theist and evidence of a divine brain for the pantheist.

5.3(ii) God's brain distinct from the world

Priestley, then, rejects Turner's pantheism for two reasons: it is circular in making the world to be both the cause and the effect of intelligence; and the world, as a matter of fact, does not resemble a brain. But does it not follow from this second argument that God must in some way bear a strong resemblance to the brain? This problem is raised by Priestley himself as the fourth of the "principal difficulties" faced by Design.

Priestley formulates this difficulty in the following way:

> it will be said that, as all the intelligence we are acquainted with resides in the brains of men and animals, the Deity, if he be a being distinct from the universe, must, whatever be his form, have in him something resembling the structure of the brain (IV,337).

Priestley thinks this objection can be easily turned, with two considerations. He argues first that, because God is not the object of our senses, "Therefore the seat of intelligence, though it be something visible and tangible in us, is not necessarily and universally so". Analogical reasoning suggests that God must have a brain, but this analogy can be met with a counter-analogy: God is invisible and man is not, therefore God need not possess a thinking apparatus in any way like that of man. This is an argument from disanalogy, as was the earlier contrast between "homogeneity" and "disjointedness". Priestley speaks as if the visible/invisible disanalogy provides a proof that God does not need a brain, whereas at most it can only counter- balance the analogy which suggests that God must have a brain. Further, the disanalogy only shows that God may not have a "visible and tangible" brain. It gives no reason for denying that he might have an invisible and intangible brain, a supposition which would be quite consonant with his being somehow quasi-material, made up of something like a Boscovichian force-field.

Priestley goes on to add a second, more general consideration to reinforce his argument from disanalogy.

> Many things have common properties that are very dissimilar in other respects. If we had known nothing elastic besides steel, we might have concluded that nothing was elastic but steel, or something equally solid and hard; and yet we find elasticity belong to so rare a substance as air, and altogether unlike steel in every other respect. The divine mind, therefore, may be intelligent, in common with the mind of man, and yet not have the visible and tangible properties, or any thing of the consistence of the brain (IV,337).

Once again, this reasoning can only show that God may not have a brain - and Priestley seems to acknowledge that this is all he can show when he concludes only that the divine mind may not be brain-like.

The question of whether God has a brain is both important and troublesome for a materialistic theism such as Priestley's. (A dualist can argue that the brain is only an adjunct to human thinking, and consequently not at all essential to the divine mind.) On inspection it seems that Priestley's second argument against Turner conflicts with his second argument against the thesis that God must have a brain. The proposition that "Many things have common properties that are very dissimilar in other respects" can be appealed to, as Priestley does, to show that God need not have a brain; but it could also be used by Turner to support the view that the world, despite its lack of "homogeneity" and its "looseness" of structure, does in fact constitute a brain. Priestley assumes, in arguing against pantheism, that because the world and the brain are dissimilar in certain respects, they cannot possess the common property of thought. If this reasoning was generalized, it would follow that steel and air could not both be elastic, and the human brain and the Deity without a brain could not both be minds.

Priestley's position seems to issue in a dilemma: either allow that God does possess a brain-like structure, or concede that the world may constitute a brain. To take the first course may well blur the distinction between God and the world that Priestley is trying to uphold. An infinite being who contains internal physical differentiation would, presumably, thereby contain finitude; the complexity of such a being would either merge with or include the lesser complexity of the world. It is also hard to see how events in the world could be immediately present to such a mind; one would expect that "messages" would need to be relayed around inside such a brain.

To take the second course and concede that analogy affords us no grounds for denying that the world may constitute a brain, is not necessarily fatal to Priestley's version of theism. At the level of general principle, it amounts to accepting that analogy is not always a reliable guide. Analogy suggests that air could not be elastic; experiment proves otherwise. It does not follow that analogy is never to be trusted, and it may still be the case that, on balance, it is better to trust analogy than to adopt agnosticism in areas where experience and experiment cannot reach. In the case in hand, the concession would leave Priestley with no strong argument from analogy to show that the world does not constitute a brain. The predicament is ironic. It is just his faith in the power of analogy that supplies him with much of his answer to Hume's assault on Design. The combination of materialism, Design and the principle of analogy seems to carry with it unwelcome consequences about the nature of the Designing Mind. The Designer must "have in him

something resembling the structure of the brain". Yet if this is accepted, it is hard to see how the traditional understanding of transcendence can be upheld.

Priestley's attempt to refute Turner is poorly argued. When he presents disanalogies between the world and the brain, he threatens to undermine analogy; when he admits that the evidence of analogy supports Turner but tries to disallow Turner's reasoning, he abrogates the principle of analogy, the basic assumption behind the theory of Design. Nevertheless, he may not be forced to accept pantheism. Priestley holds that Turner's pantheism is circular in wanting the world to be both cause and effect of the natural order. For the Design theorist the separation between maker and made is fundamental. Whenever we see order coming into being, as for instance in human production, the product and the producer are ontologically distinct. By analogy the same separation should be expected in the case of the general order of nature. For the pantheist the maker/made distinction is negotiable. To make his position intelligible he needs some analogy for his account of divine causation from amongst natural causes. He may consider that materialism supplies just such an analogy. The brain, for the materialist, produces thought without being ontologically distinct from the thought it produces. Priestley rejects this reasoning; indeed, he thinks it can be turned against the pantheist. As a materialist, he holds that material structures such as the brain can possess remarkable powers like the power of thought, but as a theist he denies that mere matter in general can by itself produce such structures. The human brain is, on his view, prime evidence - perhaps the supreme piece of evidence - in favour of Design.

In one place the question arises of whether, if materialism is true, the human body does not present greater evidence for Design that it would do under a dualist theory? - but Priestley eschews this conclusion, remarking only that "there is in the constitution of man (of whatever materials he may consist) marks of a design and intelligence infinitely superior" to that presented by any human artefact (IV,384). Priestley is emphatic that structures like the brain must have an external designer. The cry of "atheism", he had declared in 1778, is especially feeble against the materialist.

> In this case, I think, there is something unusually absurd and ridiculous in the charge, because it supposes that less power is requisite to create and animate mere matter and even to make matter intelligent, than to give life and intelligence to a spiritual and immaterial substance; that the former may start up into existence of itself, but that the latter requires an author (IV,13).<4>

Priestley does not deny that, when structurally organized, matter can be the cause of various powers - we have already noted his assertion that "whatever peculiar powers belong to a whole, as such, they must be such as necessarily result from the arrangement of the parts and the combination of their powers...." (IV,336). What he denies is that matter is self-organizing.

Suppose further, as the pantheist does, that the world constitutes an immense brain: this very fact would, Priestley claims, lead us to seek an external cause of this order. Such a world-order would have "so much the appearance of other works of design that we must still look out for its author, as much as for that of man" (IV,386). A world-brain would be, if it existed, the greatest possible evidence for an external Designer. The pantheist's

world-brain, although it could think and act just as does the human body, could no more design itself than could the human brain. The pantheistic hypothesis is circular for the same reason as is the supposition that the human brain does not need an external cause. The principle of analogy may require that the Divine Mind be somehow cerebral, though Priestley does not see this; but it also, Priestley thinks, runs counter to the pantheist's theory of immanent causation. This point will be developed more fully when we come to consider Priestley's relation to Spinoza.

Yet if analogy at least partly vindicates the theist, there is still Newton's other desideratum, simplicity, to be considered. Priestley is committed to holding that the principle of simplicity tells against the soul but not against God. To reduce his monism of attributes to a monism of substances would seem like a simplification. Whether this claim can be explicated in terms of Newton's more detailed criteria, "truth" and "sufficiency", is questionable. If God is a "true" cause it must be by analogy with the human mind, for his mind can not be directly known (unless, rarely, by religious "experience"). Being omnipotent, he is presumably a "sufficient" cause. Theism is "sufficient" not just because God is almighty; it also has analogical evidence for its sufficiency that naturalism perhaps lacks. What naturalism requires here, in Priestley's opinion, is some evidence that matter by itself can produce order, and he will not allow that the materialist theory of the mind is any such evidence. Priestley favours materialism because dualism cannot show the soul to be sufficient, and its exponents such as Reid seem to concede its lack of "truth" (either direct or analogical evidence of its existence). Naturalism can claim to be "true" in a more straightforward sense than can theism, for God is known to be "true" only analogically. But Newton's Rules, on this interpretation, are not directly reductive or automatically simplificatory. God is, for Priestley, necessarily the uncaused cause of natural things - his argument for theism is in that respect different from any argument about the mind. This is to presume the central assumption of the Cosmological Argument, that there must be ultimate "self-caused" causes, an assumption which the atheist, and perhaps some pantheists, will reject.

Priestley's reply to Turner, if it proves nothing else, proves at least that he did not wish to be considered a pantheist. Perhaps some of those who have thought him to be a pantheist have believed that the inconsistencies in his argument are so great as to leave him with no defences against an avowed pantheist like Turner - if so, I have not seen this interpretation put forward.

5.4 Pantheism and Determinism

The ascription of pantheism to Priestley has been made not because he rejects mind-body dualism but because his determinism pits motives against will in his account of the nature of God and man (and also, as we shall see in Section 5.5, because of some features of his theory of matter). This interpretation has likened Priestley to Spinoza as common opponents of free-will. It has been held by a variety of scholars that a theistic determinism such as Priestley's must logically issue in "Spinozism"; and by this claim it is presumably intended (although this is not always made explicit) that it must issue in an identification of God with Nature. Usually it has been said that Priestley drew back from the full implications of his determinism, but despite this it is affirmed that the general tendency of

his thought is in the direction of Spinozism. Coleridge is the originator of this interpretation. On one occasion, in a marginal note, he remarked with colourful sarcasm that "10 x 10 Dr Priestleys piled on each other, would not reach the calf of Spinoza's leg".<5> The remark epitomises both the great revival of Spinoza's reputation amongst the Romantics, and also the Romantic tendency to deprecate their eighteenth-century philosophical forbears. Nevertheless, Coleridge could not help but compare Priestley to Spinoza, thinking them to be fundamentally similar even if so different in merit. The difference, he thought, was that Spinoza pursued the logic of his deterministic premises to their final pantheistic outcome, whereas Priestley lacked the courage to be fully consistent. It needs also to be noted that, for all his admiration of Spinoza as man and thinker, the mature Coleridge wrote from a position radically opposed to Spinozism and passionately committed to Christian orthodoxy.

J. G. McEvoy and J. E. McGuire, in their recent study, adopt an interpretation of Priestley's theism which is in essentials similar to Coleridge's, although they have a higher estimate of the merits of Priestley's position than Coleridge (of whom they make no mention). They try to show that "Priestley's views on divine causation, matter, theory of knowledge, and the doctrine of man's moral ascent" can be "clarified by reference to the more systematic thought of Spinoza". It is the first of these, divine causation, with which we are at present concerned. "The core of Priestley's cosmological Christianity [as distinct from his biblical Christianity] is", they say, "his view of God's attributes and God's causal relation to the created world", and this view they characterize as "universal determinism". They argue that Priestley here approaches Spinozism by, as it were, narrowing the gap between God and the world. This is said to occur in two ways, both of which are consequences of determinism. First, God's actions are presented by Priestley as the products of "sufficient reasons". Secondly, he holds that because God is governed by reason and not by will, God's creation, the world, must be infinite in duration and extent. On both counts, then, the world must be less radically dissimilar to God than it is taken to be by the voluntarist tradition within Christianity, which, McEvoy and McGuire maintain, includes St Paul, Augustine, Scotus, Ockham, Luther, Calvin and Bucer. According to voluntarism, they say, "the sole attribute of God that the human mind can comprehend is his omnipotence. Nature is the unconditional result of the sheer and arbitrary power of divine will".<6>

There can be little disagreement with McEvoy and McGuire's interpretation insofar as they set out to document the differences between Priestley and what they call the voluntarist tradition. My own account of Priestley on the relation between reason and will in God is given in Section 4.6. There it was argued that the best sense that can be made of Priestley's reasoning on the question of whether determinism applies to God is to say that for him the free/determined dichotomy breaks down in relation to God. McEvoy and McGuire seem to agree with this when they comment that for Priestley, "will, power, and intelligence are identical in God, though their identity is incomprehensible to the finite mind" (a statement which many of the Scholastics would have endorsed).<7> For them also Priestley is not wholly self-consistent in this area. "Priestley's mature thought", they say, "evinces a mixture of rationalist and voluntarist theism."<8> The voluntarist aspect is apparent when he speaks of God as the "one will in the universe" which, "exclusive of all chance, or the interference of any other will, disposes of all things, even to their minutest circumstances, and always for the best of purposes...." (III,451). But this "one will" is not

an arbitrary will, and they rightly emphasise the general dominance of reason over will in Priestley's theism.

5.4(i) The doctrine of the infinite world

McEvoy and McGuire regard Priestley's doctrine of the infinity of the world as a consequence of his rationalistic theism. Priestley finds it contrary to reason that God's creative activity should be bounded in either space or time. They say that this doctrine is first expressed in the 1782 second edition of his Institutes, and they represent it as the penultimate step towards Spinozistic pantheism in Priestley's rationalistic progress - although they allow that the final step was never quite taken. However, they seem to be wrong in the dating, for the doctrine seems to have appeared in the first edition of the Institutes in 1772. If this is the case,<9> it greatly weakens their view that Priestley's ideas advanced towards rationalism in the period from 1772 onwards. Priestley, it would seem, was always pretty much a "rationalist" in his view of divine causation.

The infinite world doctrine is certainly a consequence of his rationalistic determinism, as the passage from the 1782 Institutes shows:

> if we admit that there ever was a time when nothing existed, besides the Divine Being himself, we must suppose a whole eternity to have preceded any act of creation; an eternity in which the Divine Being was possessed of the power and disposition to create, and to make happy, without once exerting them; or that a reason for creating must have occurred to him after the lapse of a whole eternity, which had not occurred before; and these seem to be greater difficulties than [the difficulty of conceiving "how creation should have been coeval with its Maker"]. We shall also find no greater difficulty in admitting that the creation, as it had no beginning, so neither has it any bounds; but that infinite space is replenished with worlds.... (II,5)

The world, then, is the necessary product of God's rational nature and is, therefore, "coeval with its Maker".

But does this infinite-world doctrine bear the Spinozistic significance that McEvoy and McGuire ascribe to it? Before going on to indicate the main reasons why Priestley's system cannot be assimilated to Spinozism, it will be useful to place this doctrine in a more moderate and traditional perspective than they have given to it. In the first place, as Priestley well knew, the doctrine was not the peculiar property of "rationalists" or determinists, but had been held by a variety of thinkers in the libertarian tradition. When (in 1778) one of his critics, John Whitehead, expressed incredulity at the notion he replied that "many philosophers and divines maintain the very doctrine that you think not to exist. It was the opinion of the Platonists [the Cambridge Platonists, presumably], it is asserted by Dr Hartley, it is what I have given in my Institutes, and I believe it is the opinion of Dr Price, who is far from thinking with me on the subject of the Disquisitions [Matter and Spirit]" (IV,148). Secondly, Priestley advances the infinite-world theory as a probable speculation rather than a necessary truth, and he makes it quite clear that it "is by no means

a necessary part of the system of natural religion. The belief of the existence of a God, and of a providence, may very well be held without it" (IV,342n, 441).

These two points do not quite refute McEvoy and McGuire's claims about the infinite-world doctrine, but they do show that if this doctrine was Priestley's penultimate step towards pantheism, he took it very falteringly. It is still perhaps possible that the doctrine was thought by him to leave belief in God's existence unaffected and yet to re-shape our conception of God's nature after the model of Spinoza's Deus sive Nature. McEvoy and McGuire contend that this re- modelling did take place, in the following way. "If God's will is eternal action", they say, "the world is the necessary effect.... If nature devolves from a necessary creative act, natural philosophy will give content to our conception of God.... Contrary to the voluntarists, Priestley does not conceive of God as having greater perfection and power than his creation: God is fully actualized in the act of creating".<10> As a result, they can speak of Priestley's "monistic interpretation of reality". But a monism of substance, for a theist, can only be pantheism. They allow that Priestley will not, as they put it, "embrace Spinoza's view that nature is strictly contained in God", but they nevertheless think that, after his acceptance of the infinite-world theory, he "may have become more disposed ... to the opinion that there is a universal substance of which everything existent is a mere mode".

5.4(ii) Design, determinism and pantheism

There are some very striking reasons why Priestley can not be classified as a Spinozist. The first and most obvious is that whereas Priestley was wholeheartedly committed to the Argument from Design, Spinoza was passionately opposed to it. Spinoza's hostility to Design matches Hume's, though they are moved by very different considerations. McEvoy and McGuire - and Coleridge before them - write as if Design is so much part of the eighteenth-century milieu as to require no mention at all. To make Priestley a monist, as they do, is to overlook his efforts to preserve divine transcendence by means of the Argument from Design, the efforts which we described earlier in discussing his relation to Turner. In Priestley's own words,

for the same reason that the maker of the table ... must be different from the table, it is equal certain that the maker of ... the universe ... must be a being different from ... the universe; which is a sufficient answer to the reasoning of Spinoza, who, making the universe itself to be God, did, in fact, deny that there was any God (III,324).

What needs to be shown more fully is why and how Priestley differed so markedly from Spinoza on the question of transcendence.

There are two general ways in which Spinoza might have come to deny that the world can exhibit Design. He might have argued that Design is incompatible with determinism, on the assumption that determinism requires all causes to be efficient causes and not final causes. Or he might have argued that Design is incompatible with some feature of the nature of God. In the Appendix to Part I of his Ethics, where he launches his all-out criticisms of the Argument from Design, both procedures are evident.

Spinoza begins by trying to show why the "prejudice" that "God himself directs all things to some end" is so commonly embraced. His diagnosis is that men think themselves free because they are conscious of having wishes and appetites, and they succumb to the illusion of Design when they project similar wishes and appetites onto a cosmic ruler in order to "explain" obscure features of the universe. Here we see the first of the two procedures at work. Spinoza does not directly assert that men's wishes and appetites do not explain their actions, nor does he directly deny that final causes exist; but his whole diagnosis (paragraph two of the Appendix) would make no sense as the analysis of a "prejudice" if he were not implying that human purposes and free will are illusory.<11> In contrast to this, Priestley's determinism is indifferent to the question of whether or not there are final causes. He maintains that all causal relations must be law-like, but he sees no reason why final causes cannot be just as law-like as efficient causes. His libertarian opponents such as Price tended to claim that, because actions are purposive, they must be free, but Priestley could not agree with them. Nor would he agree with Spinoza's implicit claim (if this is his claim) that, because actions are determined, they cannot be caused by desires and purposes. Consequently, he could see no clash between determinism and Design of the kind that Spinoza suggests.

Indeed, Priestley does not even see that Spinoza regards Design and determinism as incompatible. Spinoza, he says in his General History of the Christian Church, "admitted a principle of intelligence, and did not deny that of benevolence to exist in the universe". Consequently,

> he could not properly be termed an atheist; because he acknowledged all the attributes of divinity, in whatever substance they were supposed to reside, and he could not deny that these are perpetually active. There was, therefore, nothing in his doctrine that was necessarily inconsistent with a belief of a Providence, and a moral government of the world, or consequently with that of a state of retribution after death. He might have been, though it is probable he was not, a believer in the Jewish and Christian revelations. All that can in strictness be said of him is that he fell into a metaphysical absurdity, in supposing the same thing to be a cause and the effect (X,430f).

In the Appendix to Part I of the Ethics, Spinoza goes on to produce direct arguments against the possibility of Design, and the most important of these follows the second procedure outlined above: that is, he argues against Design from premises concerning the nature of God, and not from the denial of final causes. If, in developing this second line of reasoning, Spinoza gives up the attempt to maintain a ban on all final causes, then he appears to leave himself open to criticism from the defenders of Design. This is a point which Priestley tries to make against D'Holbach. In attacking Design, D'Holbach had held that "Nature has no intelligence or object. It acts necessarily, because it exists necessarily. It is we that have a necessary object, which is our own preservation" (IV,338).<12> The notion of Nature employed here resembles that which we find in Spinoza, except that D'Holbach strenuously denied that any suggestion of divinity attached to the notion. D'Holbach and Spinoza agreed that Nature is blind and that particular beings are (in some sense) its product. Priestley replies to D'Holbach's assertion that Nature has no object by arguing that, as a determinist, D'Holbach

> supposes man to act necessarily; so that merely acting necessarily is not incompatible with having an object. Consequently, nature, though acting necessarily, may, according to his own mode of reasoning, have an object; and that nature, or the Author of nature, has had various objects, is just as evident as it is that man has objects (IV,338f).

However, Spinoza's main attack on Design is independent of the question of human purposes, and so can not be met in the way that Priestley meets D'Holbach. Spinoza's concept of Nature, unlike D'Holbach's, is the concept of an immanent Deity; and he holds that it is contrary to the nature of a perfect Being to use means to achieve ends. It is one of the basic principles of his philosophy that "that effect is most perfect which is immediately produced by God, and in proportion as intermediate causes are necessary for the production of a thing it is imperfect" (Appendix to Part I). The connection between this principle and his pantheism is easy to see. A perfect Being, he would reason, can only produce a perfect world; but there can not be two perfect, infinite beings; consequently, the world must somehow be incorporated into God.

This radical argument is nowhere answered directly by Priestley. He regards the world as ordered throughout in a remarkable way, but he does not pretend to show that the order of nature is somehow a perfect order. The difficulty Spinoza presents is certainly a severe one for him. As a determinist, he must hold that the world is a necessary product of the divine nature; but if the world is imperfect, then its imperfection would seem to originate in the nature of God.

The closest Priestley comes to meeting this problem is (to anticipate a theme of the next chapter) in his discussion of evil. There, to avoid the implication that God is imperfect, he wants to claim that

> the actual happiness of the whole creation may be considered as infinite, notwithstanding all the partial evil there is in it. For if good prevail upon the whole, the creation being supposed infinite, happiness will be infinitely extended; and in the eye of a being of perfect comprehension, such as the Divine Being must be, capable of perceiving the balance of good only, it will be happiness unmixed with misery (IV,356).

This happiness is, however, not infinite in quite the same sense as God's happiness is. "That any dependent being should at all times be infinitely happy must necessarily be impossible, for such a being must be infinitely knowing and powerful, that is, in fact, equal to the Divine Being himself" (IV,351).

We can fairly assume that Priestley would use an argument parallel to his treatment of evil to meet the objection that a designed universe must necessarily be imperfectly ordered. Priestley's view would be that there are some ends which can, by their very nature, only be achieved by using means, just as there are some goods which can only be achieved by permitting partial evils. For him, if there is to be a creation at all (and Spinoza at least does not challenge the creativity of God), it must necessarily contain limitations - even if it is infinite in extent.

McEvoy and McGuire write that "Priestley's view of the necessity of God's creative act implies the realization of every possible effect in nature".<13> This is true, but he also argues (in his treatment of evil) that it is not possible for the world to partake directly of God's own perfection. Consequently, it is not the case that God himself is (as McEvoy and McGuire would have it) "fully actualized in the act of creating". In contrast to Spinoza, Priestley holds that God is fully actual quite apart form the world he creates, even though creation is an act which arises necessarily from his nature. God judged (timelessly) that an imperfect world is better than no world, and the reasons which informed his judgement caused him to act.

Both Spinoza and Priestley, then, are universal determinists; but, for Priestley, nature is designed by God to serve various purposes, whereas Spinoza excludes all final causes in his account of divine causation. Both Spinoza and Priestley hold that nature is infinite in extent and duration; but Spinoza subscribes to the doctrine of a perfect world-system conceptualized by his equation Deus sive Nature and his doctrine of one Substance, whereas Priestley's ontology allows room for a non-perfect world created by God. To say this is perhaps to say the obvious, that Spinoza was a pantheist and Priestley a theist; it needs saying only because the natural assumption that Priestley was not a pantheist has been frequently challenged. From our examination it appears that the claim that Priestley's ostensible theism slips into unwitting pantheism has not yet been successfully defended. The case for saying that Priestley's determinism leads him into pantheism breaks down once we make the distinction between universal determinism, which is compatible with a rationalistic theism, and pantheism proper, which is characterized by the doctrine of one Substance.

5.4(iii) Divine causation and pantheism

This point is reinforced if we take up again Priestley's central objection to Turner's pantheism, and consider the way in which Spinoza's Deus is causa omnium rerum. Spinoza's God is both the efficient and the immanent cause of all things.<14> Any pantheist needs to give some account of God's immanence without simply conflating God and particular things (or "finite modes", as Spinoza calls them). Such a conflation would result in naturalism, for it would be hard to see how God could serve any causal function in this scheme. Spinoza did offer some argument to avert this consequence and preserve his pantheism, but there is nothing remotely like his argument in Priestley, a fact which suggests that Priestley was not a pantheist in the first place.

Spinoza likens the relation between Substance and finite modes to the relation between the blood stream and its components. Just as "the universal nature of the blood" controls the parts of the blood, so also natural bodies are "mutually determined to exist and act in a definitely determined relationship...."<15> This "definitely determined relationship" is conceived of as embodied in "the Whole", a key term which he uses interchangeably with "Substance" and "God". "The Whole", for him, is certainly not merely the sum of its parts. Perhaps the best that can be done to clarify its status is to say that the Whole determines its parts the way form determines matter in Aristotle's philosophy. On this point H. A.

Wolfson says that Spinoza's God is the internal cause of all things in the same way "as the genus is the internal cause of the species or the species is the internal cause of the particulars...." He produces evidence that Spinoza had in mind the Aristotelian doctrine of form and matter to explain his notion of immanent causation.<16> Obscure though the relation between Whole and parts may remain, there is no doubt that Spinoza thought immanence could be made intelligible. What is significant for us here is that Priestley had no account of immanence in terms of form and matter, nor any other account to serve the same purpose. From this we can safely conclude that he had no notion of ontological immanence, and that he retained the ontological distinction between God and the creation.

Priestley did, of course, conceive of the human and natural world as forming a unified Whole. We are, he says, "parts of an immense whole ... from which we collect evidence enough that the whole system (in which we are, at the same time, both instruments and objects) is under an unerring direction, and that the final result will be most glorious and happy" (III,450). There could be no clearer proof than this of the goal-directedness of his "whole system", and it was just this goal-directedness which Spinoza found most objectionable in ordinary theism. There seems, then, no need to mark the distinction between Priestley and voluntarism by trying to find common ground between Priestley and Spinoza. The fact that Priestley was, like Spinoza, a universal determinist explains rather less about his conception of God that has sometimes been supposed.

5.5 Pantheism and the Theory of Matter

Perhaps the best case for ascribing pantheism to Priestley can be made out from some of his statements relating to the nature of matter. This line of interpretation also dates back to Coleridge, who claimed that Priestley "asserts in three different places, that God not only does but is, every thing". The statement that "God is every thing" is a paraphrase of one part of Priestley's discussion of matter (III,238). Coleridge adds "But if God be every thing, every Thing is God -: which is all the Atheists assert -".<17> This adverse comment is the first crack in Coleridge's youthful attachment to Priestley (the date is March, 1796), and was to slowly widen into a gulf. However, the interpretation which Coleridge gave of Priestley's views (as favouring atheism, or, as he would later emphasise, as favouring pantheism) is certainly one-sided, and a more careful analysis shows it to be implausible.

What was the theological import of Priestley's theory of matter? In the first edition of Matter and Spirit, he asserts that the dominant natural philosophy and natural theology of the century (which we can label "Newtonian theism") had set up a dualism of passive matter and active force, in which force had to be conceived of as the result of spiritual agency. The leading spokesmen for this dualism, Priestley maintains, had unwittingly shown it to be untenable by incorporating powers into their working definitions of matter. He holds that it follows from Andrew Baxter's equation of force with divine agency "that there is not in nature any such thing as matter distinct from the Deity and his operations" (III,225). He had read in the Examen du Fatalisme an account of the opinions of Giordano Bruno, which included the proposition that "All the motions which strike our senses ... are the effect of the immediate action of God" (III,226); and this led him to suggest a resemblance between Baxter and Bruno. Although he does not say anything here directly

about Baxter's theology, it seems natural to assume that a theory which leads to the denial of matter would not have Priestley's approval.

The only direct theological comment here is Priestley's insistence that, although powers are "essential to the being of matter", they are not "self-existent in it" (III,224).

> All that my argument amounts to is that from whatever source these powers are derived, or by whatever being they are communicated, matter cannot exist without them; and if that superior power, or being, withdraw its influence, the substance itself necessarily ceases to exist, or is annihilated.

There seems nothing pantheistic here. The powers of matter are "derived" or "communicated". Although distinct from the Deity, they are nevertheless dependent on his "influence" for their continued existence.

In the second edition (1782), Priestley felt called upon to defend his views at greater length. Here he distinguishes between the general character and the internal structure of matter. He is strongly committed to denying that solidity and impenetrability are part of the general character of matter; but he is much more cautious about how the powers which compose matter are distributed and disposed at the microstructural level. He expresses his caution in this way:

> In what manner matter, penetrable or impenetrable, is formed, with what interstices etc., and how far the powers which we ascribe to it may be said to inhere in, or belong to it, or how far they are the effect of a foreign power, viz. that of the Deity, concerns not my system in particular. And whatever difficulties may be started as resulting from these considerations, the very same I think or greater, may be fairly charged upon the opposite system (III,238).

The "opposite system" is Baxter's "Newtonian theism". Priestley's claim is that the Newtonian theists can not object to his use of powers or Divine agency (if indeed he must bring in this agency) in his account of matter, because they also have recourse to this procedure.

Priestley does, however, permit himself a speculative discussion of the microstructure of matter. Boscovich had held that matter consists of indivisible, physical points possessing infinite powers of repulsion and surrounded by shells of attractive and repulsive forces; and Priestley comments, without committing himself to it, that "this hypothesis will account for all the phenomena of nature" (III,240). It is here that the suspicion of pantheism first arises, and it is raised by Priestley himself. "The principle objection to this [Boscovichian] hypothesis is that matter is, by this means, resolved into nothing but the Divine agency, exerted according to certain rules". There follows the most important of the passages which caught Coleridge's attention.

> On this [Boscovichian] hypothesis every thing is the Divine power; but still, strictly speaking, every thing is not the Deity himself. The centres of attraction etc. are fixed by him, and all action is his action; but still these centres are no part of himself, any more than the solid matter supposed to be created by him. Nor,

> indeed, is making the Deity to be, as well as to do every thing, in this sense, anything like the opinion of Spinoza; because I suppose a source of infinite power, and superior intelligence, from which all inferior beings are derived; that every inferior being has a consciousness distinct from that of the Supreme Intelligence, that they will ever continue distinct, and that their happiness or misery to endless ages will depend upon their conduct in this state of probation and discipline.
>
> On the other hand, the common hypothesis is much less favourable to piety, in that it supposes something to be independent of the Divine power. Exclude the idea of Deity on my hypothesis, and every thing except space necessarily vanishes with it, so that the Divine Being, and his energy, are absolutely necessary to that of every other being. His power is the very life and soul of every thing that exists; and, strictly speaking, without him, we are, as well as can do nothing. But exclude the idea of Deity on the common hypothesis, and the idea of solid matter is not more excluded than that of space. It remains a problem, therefore, whether matter be at all dependent upon God, whether it be in his power either to annihilate it or to create it; a difficulty that has staggered many, and on which the doctrine of two original independent principles was built.

To say that God's power is "the very life and soul of every thing that exists" and that "all action is his action" certainly has a pantheistic ring to is, and McEvoy and McGuire take this whole passage as leading evidence of Priestley's "monism". However, this reading has its drawbacks. Their view that "Priestley does not conceive of God as having greater perfection and power than his creation..." is contradicted when God is spoken of as "a source of infinite power, and superior intelligence, from which all inferior beings are derived".<18> The causal language here is emphatic: inferior beings are derived from God and distinct from God. Spinoza can also speak of God as the efficient cause of finite modes, but the absence in Priestley of any doctrine of immanent causation leads us to think that for him causation entailed an ontological distinction between cause and effect. Elsewhere in the second edition of Matter and Spirit, he claims that "upon no system whatever [other than his own] is the great Author of Nature more distinct from his productions, or his presence with them, and agency upon them, more necessary" (III,302).

Must we conclude that Priestley is confused, or can a consistent reading of this whole passage be found? His main point is that finite things are constituted by divine power, but in what way does he envisage this as taking place? If he means that in creation God delegates some of his power to form and actuate the world, then he is affirming something which has been held by all orthodox theists except the Occasionalists. If this is his meaning, then what are we to make of his claim that the "common hypothesis" of solid matter "supposes something to be independent of the Divine power"? The pantheistic interpretation would say that for him Boscovichian matter is, and solid matter is not, part of the Deity - why else would solid matter remain when the idea of Deity is excluded? But a theistic interpretation is also possible here. Priestley may mean that solid matter is so dissimilar to God that we must doubt whether the two can be in any way causally related. His mention of "the doctrine of two original independent principles" is perhaps intended as a reminder to us of his contention that there can be no interaction between two totally dissimilar substances. The denial of such interaction played a part in the breakdown of Cartesianism in the century before Priestley, and this denial is the only doctrine which comes to mind as "a difficulty that has staggered many".

It may be that parts of Priestley's meaning in this passage is obscure. There are both pantheistic and theistic interpretations to fit the second paragraph. However, when the first paragraph is also taken into account, the pantheistic reading leaves the whole passage confused and inconsistent, whereas the theistic reading is tolerably harmonious.

In any case, we are not confined to these passages for our interpretation of the theological significance of Priestley's theory of matter. The subject also arises in his discussions of perception. In Section 1.2(i) we saw Priestley arguing that Reid's occasionalism about the apparent actions of matter on mind would lead, when combined with the principle of simplicity, to the conclusion that "the external world is really a superfluity in the creation" (III,47). He uses a similar tactic against Baxter in Matter and Spirit. Priestley thinks Baxter no more convincing than Reid in explaining perception. Where Reid had doubts about mind-body interaction, Baxter was an interactionist. Priestley cites him as saying that "if we do not allow [that] the matter of our bodies affects our minds directly, the union between them may seem to be, in a great measure, to no purpose" (III,266).<19> To this Priestley replies that Baxter's theory of matter is such that matter really is "to no purpose": "Such a philosopher cannot but be puzzled to answer Bishop Berkeley, who supposed that the Divine Being himself presented the ideas of all things to our minds, and that nothing material exists".

For Baxter, as Priestley says, "all the properties of matter, as attraction, repulsion and cohesion, are the immediate agency of the Deity". We are trying to discover whether for Priestley the powers of matter are the "immediate agency" of God or some relatively distinct and independent "delegated" powers. It is notable here that when Priestley attacks Baxter's theory of perception, he attacks it simply because in it God supplants the role of matter.

"Matter I know cannot act of itself, as it acts only by resistance", Baxter says. To explain perception he goes on to say:

> But if the resistance between the matter of our bodies, and other matter, be enough to excite the idea of resistance in our minds, it would be unnecessary to suppose God to excite that idea, and the resistance itself to have no effect (III,266).<20>

But, replies Priestley, if matter "cannot act of itself", divine agency must be needed to produce ideas. He discounts Baxter's talk of matter "acting by resistance". If resistance is a power, then matter is not powerless; but if matter is powerless, as Baxter says it is, then resistance cannot "act".

> Consequently, as we perceive material things by means of these their [active] powers, it but too plainly follows that, in fact, [for Baxter] matter is wholly superfluous; for if it exists, all its operations and effects are resolvable into the pure unaided operation of the Deity.

In arguing thus, Priestley is clearly claiming that, whatever matter is, whether it be active or passive, if divine agency is needed for it to perform its ordinary operations, then talk of

matter is as unnecessary as Berkeley held it to be. We can reasonably infer that his own "active" matter was not conceived of as depending so directly on the Deity. So opposed to Baxter was Priestley that he remarks: "Pity that so mischievous a thing, as [Baxter] everywhere represents matter to be, should have been introduced at all, when, without the aid of superior power, it could not do even that mischief" (III,267).

The subject of material powers and pantheism arises also in the Free Discussion. In part I, "Of the Nature of Matter", Priestley states:

> If certain effects invariably take place in any case in which bodies are concerned, as on their mutual approach when placed at a given distance, the analogy of language requires us to say, that those bodies are possessed of the power of approaching or attracting one another. But by saying that bodies have certain properties, philosophers, I apprehend, only mean to express the unknown cause of the known effects. As to real agency, a Necessarian can allow of no more than one proper seat or source of it (IV,31).

This last statement might be read as denying that matter possesses any agency of its own, and as asserting that all action is divine action. Price read Priestley as holding that there is "no experiment in which we have found that any one thing causes or produces another, the only proper cause in nature, as he asserts, being that power of the Deity which is not an object of our senses" (IV,90). Priestley's reply to this interpretation is, I think, decisive for understanding the theology behind his theory of matter. He claims to hold exactly the same opinion as that of his orthodox theistic contemporaries:

> we all distinguish between primary and secondary causes, though speaking strictly and philosophically, we call secondary causes mere effects, and confine the term cause to the primary cause. Thus we say that the cause of moving iron is in the magnet, though the magnet is not the primary, but only the proximate, or secondary cause of that effect; deriving its power, and all that can be said to belong to it from a higher cause, and ultimately from God, the original cause of all things (IV,107).

To have Priestley deny that material objects possess powers and agency, it would be necessary to discount this widely accepted distinction between primary and secondary causation. This point is made even more clearly in the 1782 second edition of Matter and Spirit. There he holds that matter's apparently mysterious capacity of acting where it is not may be effect of divine power. He then adds:

> And surely I must have less objection to this resource than those who believe that God is not the only proper agent in the universe. As a Necessarian, I in fact ascribe every thing to God, and whether mediately or immediately makes very little difference. But I believe that it is possible, though we cannot clearly answer every objection to it, that God may endue substances with powers, which, when communicated, produce effects in a manner different from his own immediate agency (III,235).

Distance action is an effect of divine power, but not an immediate effect. The effect is mediated through the power "communicated" to matter. The Boscovichian theory, even when combined with determinism, does not eliminate matter to replace it with direct divine

agency. Priestley, I would conclude, can only be made into a "pantheist" or "monist" by collapsing the distinction between pantheism and theism.

To say this is not to claim that Priestley's views on this question are easily explicable. The powers of matter are not "self-existent in it", he says (III,224f). He seems to envisage a two-stage process of creation: matter exists first as a mere substance, a tabula rasa; and its powers and particular character are then added to it and adjusted to suit the whole frame of nature. This is what he regards as the general theological opinion. But the Boscovichian theory, at least as he interprets it, seems to reduce matter to its powers: "when all the properties of a substance are taken away, the substance itself is gone", (IV,148). Yet elsewhere, "Power cannot mean anything without a subject" (III,216). The problem is encapsulated in a single sentence: "though we cannot speak of power but as existing in some thing or substance, it is equally true that, without those powers, that something is reduced to what, in our idea, is nothing at all" (ibid.). The theological difficulty here is to see how matter might exist originally as a substance without powers or character. Priestley offers no assistance on this point.

Notes to Chapter Five

1. Coleridge's Table Talk and Omniana, (Oxford, 1917), p. 60 (Entry for March 10, 1827). The term "pantheism" is never used by Priestley, although it was available in his time. It had been current since 1705 when John Toland had entitled a tract Indifference in Disputes: Recommended by a Pantheist to an Orthodox Friend.

2. The dictum is quoted by Priestley from Whitehead's "Materialism Philosophically Examined", (London, 1778), p. 163.

3. However, not even Hobbes was wholly consistent on this point, and in one place he thought fit to describe God as a "most pure, simple, invisible, spirit corporeal", The English Works of Thomas Hobbes, Molesworth edition, (London, 1840), Vol. IV, p. 313.

4. In a similar vein, the materialist William Coward had written in 1702: "man is such a curious piece of mechanism as shews only an Almighty power could be the first and sole artificer, viz. to make a reasoning engine out of dead matter...." Quoted from Coward's Second Thoughts concerning Human Soul, (London, 1702) by Priestley's editor, J. T. Rutt, III, 379n.

5. Quoted in Thomas MacFarland, Coleridge and the Pantheist Tradition, (Oxford, 1969), p. 170. MacFarland himself is equally scornful, describing Hartley, Priestley and Godwin as avatars of "one of the most provincial of all the traditions that the history of philosophy records, one that might be termed, not unfairly, a kind of bargain-basement Spinozism" (p. 169). In trying to set out the grounds of Coleridge's later hostility to the Priestleian tradition of which he had been an early enthusiast, MacFarland takes his bearings mainly from the clash between the Christian philosopher Leibniz and the pantheist Spinoza. MacFarland sees Coleridge as renewing the Leibnizian attack on pantheism in his own attacks on Priestley's Socinianism. Priestley, however, thought that Leibniz's authority could be claimed for his position, at least as proof of the religious admissibility of determinism. When an earlier critic, Jacob Bryant, tried to rank him along with "the unglorious triumvirate of Hobbes, Hume and Collins" (Bryant's words), Priestley replied that "you might have grouped me with a triumvirate of christian necessarians, for Leibniz, Hutcheson and Hartley were such" (IV,253).

6. J. G. McEvoy and J. E. McGuire, "God and Nature: Priestley's Way of Rational Dissent", Historical Studies in Physical Sciences, Vol. 5, 1973, p. 326-32.

7. McEvoy and McGuire refer to III, 507-15 (Section X of Philosophical Necessity, entitled "In what sense God may be considered as the Author of Sin, and the Objection to the Doctrine of Necessity that account") to support their opinion, but I can find nothing in this section which relates to the subject. In my view, the subject is nowhere discussed in Philosophical Necessity. Nor do they remark on the Scholastic overtones of their statement.

8. McEvoy and McGuire, op. cit., p. 332-4.

9. I have to be tentative here as I have not seen a first edition of the Institutes. However, in 1778 Priestley told one of his critics, John Whitehead, that the infinite world doctrine had already been asserted in the Institutes, and this could only refer to the 1772 edition. This remark to Whitehead is at III, 148, and is to be quoted shortly.

10. McEvoy and McGuire, op. cit., p. 335f.

11. However, whether it was Spinoza's general opinion that human purposes do not provide examples of final causes is a question too difficult to discuss here. For the view that Spinoza defends the efficacy of purposes in bringing about human actions, see S. Paul Kashap, "Thought and Action in Spinoza", in Studies in Spinoza, edited by Kashap, (Berkeley, 1972), pp. 332-50.

12. This is part translation, part paraphrase (though accurate enough) by Priestley of ideas expressed in Chapter IV, Volume II of D'Holbach's Syste`me de la Nature. See the English translation by H. D. Robinson, (New York, 1835), p. 240f.

13. McEvoy and McGuire, op. cit., p. 338.

14. See Propositions 16 and 18 of Book I of the Ethics. Usually Spinoza speaks of the finite modes as necessarily "following from" or "flowing from" the nature of God (as, for instance, in the Scholium to Proposition 17) but these vague expressions need to be interpreted by the more technical language of efficiency and immanence. Spinoza saw no reason why a cause could not be both efficient and immanent. God is "the cause of the things which are in himself", says the Demonstration to Proposition 18.

15. Epistle XXXII in The Correspondence of Spinoza, trans. A. Wolf, (London, 1928).

16. See his The Philosophy of Spinoza, 2 Vols, (Cambridge, Mass., 1934), I, 319-28. The quotation is from p. 324. This page of Wolfson's book is also cited in a recent article by P. M. Heimann in which he too casts doubt on Priestley's supposed resemblance to Spinoza. While I agree with Heimann's main position, I differ from him in some details. He says that Priestley incorrectly took Spinoza to equate God with the "aggregate totality of all things". Priestley would certainly be mistaken if he did ascribe this view to Spinoza. However, Priestley's only obvious claim is that, for Spinoza, God is not ontologically distinct from all things. He does interpret Spinoza as saying that "the souls of men are parts, or modifications, of this one substance" (X,430), but this is an acceptable way of putting the position. See Heimann's "Voluntarism and Immanence: Conceptions of Nature in Eighteenth Century Thought", in the Journal of the History of Ideas, Vol. 39, 1978, p. 281.

17. Collected Letters of Samuel Taylor Coleridge, ed. E. L. Griggs, (Oxford, 1956), Vol. I, p. 192f, quoted in MacFarland, op. cit., p. 175.

18. McEvoy and McGuire neglect to quote the parts of this passage which tell most against their interpretation, namely, the sentence beginning "The centres of attraction..." and the clause "because I suppose a source...."

19. Andrew Baxter, An Inquiry into the Nature of the Human Soul, 2 Vols, 2nd ed., (London, 1737), I, 483.

20. Ibid., II, 333.

CHAPTER SIX: OPTIMISM AND PROGRESS (1)

6.1 The Concept of Optimism

Priestley's moral theology is a kind of optimism. It was the claim of optimists that "all is for the best in this best of all possible worlds" and to that doctrine Priestley fully subscribed. One of the main points of interest in his theology is to see how far and how fully such a view can be taken, while still avoiding the style of Dr Pangloss or Pollyanna. The phrase "best of all possible worlds" is not one he happens to use, nor is the term "optimism", but they express his sentiments perfectly well. In "the whole plan of nature", he says in the Philosophical Unbeliever, we see "the greatest good produced with the least possible evil" (IV,355). "Notwithstanding all present unfavourable appearances, whatever is, is right", the Philosophical Necessity maintains (III,507). "Evil always leads to good, and imperfect to perfect" is how the Essay on Government puts it (XXII,124). "There is but one will in the universe; [and] this one will, exclusive of all chance, or the interference of any other will, disposes of all things, even to their minutest circumstances, and always for the best of purposes", says the Philosophical Necessity again (III,450).

This is philosophical optimism. It is now well understood that the philosophical optimists of the eighteenth century were not usually optimistic in the colloquial sense of being "cheerful, sanguine, or hopeful". As A. O. Lovejoy pointed out, the optimists were generally far from being "exuberantly cheerful persons, fatuously blind to the realities of human experience and of human nature, or insensible to the pain and frustration which are manifest through the entire range of sentient life". Indeed, as he put it, "So far from asserting the unreality of evils, the philosophical optimist in the eighteenth century was chiefly occupied in demonstrating their necessity. To assert that is this the best of all possible worlds implies nothing as to the absolute goodness of this world; it implies only that any other world which is metaphysically capable of existence would be worse".<1>

Lovejoy's description as a description of such early eighteenth century optimists as Leibniz, King and Pope is now generally accepted. What is perhaps less obvious is that when he says that philosophical optimism "implies nothing as to the absolute goodness of this world" he leaves it an open question as to how much "absolute goodness" the optimist might ascribe to the world. The philosophical optimist need not be, in the ordinary sense, a pessimist. "The optimist proclaims that we live in the best of all possible worlds; and the pessimist fears this is true". This is a twentieth-century joke.<2> Lovejoy's optimists were, in these senses, both optimists and pessimists. But, as Lovejoy allowed, it is not impossible to be both philosophically optimistic and optimistic in the colloquial sense.

Priestley was optimistic in both senses. How much he was colloquially optimistic is suggested in the following passage from the memoir he wrote in 1787.

> Though my readers will easily suppose that, in the course of a life so full of vicissitude as mine, many things must have occurred to mortify and discompose me, nothing has ever depressed my mind beyond a very short period. My spirits have never failed to recover their natural level, and I have frequently observed, and at first with some surprise, that the most perfect satisfaction I have ever felt has been a day or two after an event that afflicted me the most, and without any change having taken place in the state of things. Having found this to be the case after many of my troubles, the persuasion that it would be so, after a new cause of uneasiness, has never failed to lessen the effect of its first impression, and together with my firm belief of the doctrine of necessity, and (consequently that of every thing being ordered for the best) has contributed to that degree of composure which I have enjoyed through life, so that I have always considered myself one of the happiest of men (I,1,344).<3>

Every man will speak of the fair as his own market has gone in it, according to Tristram Shandy; and no doubt Priestley's general views were influenced to some degree by his success in the "fair" of eighteenth-century society. However, this optimism persisted even when his reputation began to attract ridicule and vilification. In the later years of his life Priestley doubted "whether any person in England (the prime minister for the time being excepted) ever had so much of what is commonly called abuse" as he experienced (XXV,137). "Neither Mr. Hume nor Mr. Gibbon was a thousandth part so obnoxious to the clergy as I am", he remarked in 1792 (XIX,507).<4> Such attacks, he thought, seemed to do him good, for his health had been improving ever since they began. "That sarcastic writings should have this salutary effect will not be thought so extraordinary when it is considered that pepper, mustard, salt and vinegar, have their use in a good dinner, as well as the beef and the pudding" (XXV,137). Further, he was a man of wide-ranging interests and curiosity. The passage from his memoir describes not just his private fortunes; it summarises his response to his whole world of experience. This response might well be described as "exuberantly cheerful"; what this and the subsequent chapters will consider is the degree to which his outlook can also be described as "blind to the realities of human experience and of human nature".

Philosophical optimism is of course a theological doctrine. It is an attempt to solve the problem of evil, to reconcile an imperfect creation with a perfect Creator. The adequacy of Priestley's answer to the problem can be tested partly by contrasting it with the position outlined in Hume's Dialogues concerning Natural Religion, just as his account of the Argument from Design was so tested. The Dialogues devotes less attention to divine benevolence than it does to divine wisdom, but it is still useful for our purposes. However, as we shall see, Priestley's answer to Hume, whether or not it is an adequate answer to Hume, does not encompass the full range of his answer to the problem of evil; and to do justice to his full position we shall have to range across a wide variety of his writings, exploring his notions of character-formation, historical progress and politics. His optimism, in both its philosophical and colloquial senses, was not simply the solution to a philosophical problem. It forms the heart of his religious outlook, more than does either his materialism or even his determinism. We encounter the optimistic creed in almost all of his numerous writings.

What Priestley conspicuously did not write is a systematic account of that creed. The following chapters will describe what such an account might have looked like. The aim is

synthetic; the result might seem artificial, for the mosaic is made up of pieces from many different times and places. But if the pieces do fit together, it is hard to see why Priestley should be denied credit for holding a reasonably coherent viewpoint from, perhaps, his time at Warrington Academy when (in 1761) he first lectured on history until the turbulent and troubled 1790s threw everything into confusion. The last years of his life, from the Birmingham Riots of 1791, require special discussion, to be the subject of the next chapter. Even then he struggled, with questionable success, to uphold the ideas he had formed in the previous years. Though he retracted nothing, much of his optimism is eclipsed by millenarianism. This present chapter will argue that in the previous thirty years there is no radical interruption or change of direction in his moral theology, only the steady articulation of a single viewpoint.

6.2 The Problem of Evil

Our point of departure is Hume. On divine benevolence the Dialogues follows much the same rhetorical strategy as on divine wisdom. Hume sets Demea against Cleanthes and Cleanthes against Demea, leaving the sceptical Philo free to triumph over the theologians' irreconcilable differences. What a reading of Priestley offers is a steadily unimpressed standpoint from which the dazzling argumentation of the Dialogues might be seen as so much "mere cavilling" (IV,374). Consistent with his conviction that Hume's objections to rational theism are unoriginal, Priestley himself propounds unoriginal replies. He aims only to play the hand of orthodox theodicy, though with some better cards and with more skill than Hume allows to Cleanthes. Yet while the particular defences he employs are conventional, the epistemological orientation of his position is less so. Throughout the debate Priestley must uphold his commitment to empiricism, and this is less easy to do in relation to evil and benevolence than it is in relation to order and wisdom. In countering Hume's attacks Priestley is partly relying on the standard defences of the philosophical optimist. But in rebutting the epistemological emphasis in Hume's argument and protecting his own empiricist credentials, he must call on the resources of his optimism in the colloquial sense of the term. He commits himself to the position that good predominates over evil in this life as well as the next. The orthodoxy of this position is more dubious, and its implications will require exploration.

Hume's keen sensitivity to theological conflict had already detected this drift of ideas, not of course in Priestley, but in his predecessors. The modern theologians, Philo says (with more than a touch of malice),

> know how to change their style with the times. Formerly it was a most popular theological topic to maintain, that human life was vanity and misery, and to exaggerate all the ills and pains, which are incident to men. But of late years, divines, we find, begin to retract this position, and maintain, though still with some hesitation, that there are more goods than evils, more pleasures than pains, even in this life. When religion stood entirely upon temper and education, it was thought proper to encourage melancholy; as indeed, mankind never have recourse to superior powers so readily as in that disposition. But as men have now learned to form principles, and to draw consequences, it is necessary to change the batteries, and to make use of such arguments as will endure at least some scrutiny and examination.<5>

How well Priestley as a modern theologian had learned to form principles and draw consequences we shall see.

The problem of evil has often been seen as a matter of establishing the consistency, or inconsistency, of theism's central propositions. Philo in the Dialogues puts one famous formulation of this way of rendering the problem.

> Epicurus's old questions are yet unanswered. Is [God] willing to prevent evil but not able? then he is impotent. Is he able but not willing? then he is malevolent. Is he both able and willing? whence then is evil?<6>

Priestley does not even trouble to mention this passage, and he presumably saw it as a mis-statement of the issue. Evil, on his view, can have a purpose and explanation compatible with belief in an "able and willing" Deity. The sceptic, to make his case, must produce not mere evil, but sheer, pointless evil; only then would evil present a logical difficulty. Until then the real issue lies in debating the ways in which evil might or might not subserve divine benevolence. And in fact it is to this version of the problem, and not to "Epicurus's old questions" that most of Hume's considerations are addressed.

Hume's argument is largely devoted to inferring the character of God's intentions, and thereby God's character, from the general character of the world. According to Philo

> the course of nature tends not to human or animal felicity: therefore nature is not established for that purpose.... In what respect, then, do [God's] benevolence and mercy resemble the benevolence and mercy of men?<7>

This statement of the problem Priestley accepts. He takes it as his task to show that God's benevolence and mercy do resemble in important ways the benevolence and mercy of men. He denies himself the tactic of defending theism by denying any analogy between divine and human attributes. He differs from Hume solely, but entirely, in his interpretation of the tendency of "the course of nature".

Hume puts four objections to what he sees as the standard defences of theism. There are four main kinds of evil in the world, he says, each of which the theist has attempted to justify, but, in his view, "None of them appear to human reason, in the least degree, necessary or unavoidable ...." It is, he admits, "not impossible but all these circumstances may be necessary and unavoidable", but we can not suppose them such "without the utmost license of imagination". The burden of proof is thus shifted: it is the theist who must "tug the labouring oar" to defend his "philosophical subtleties against the dictates of plain reason and experience".<8>

The first three of Hume's four unnecessary evils are: the existence of pain; the system-like character of the natural order; and the excessive indolence of human nature. The fourth is something of an anomaly: although nature is a system in which "the parts hang all together", it is a system imperfectly adjusted, suffering from "inaccurate workmanship", as he puts it.<9> "The great machine of nature" does work, but it lacks fine tuning. Priestley replies to the first three objections but offers no discussion of this last claim. Hume

illustrates this objection with examples which are usually dealt with by the theist in defending the system-like character of nature. Winds, rain and fire can be both useful and destructive: with greater care an omnipotent being might produce a higher ratio of good properties to adverse ones. For Priestley, whether this can be done depends on whether nature is necessarily a system governed by general laws. Hume's objections thus seem to reduce to three.

Hume's three objections are answered by Priestley, and in answering them he draws on three of his main defences of theism. Taking his writings as a whole, Priestley presents five distinct arguments: that good can only be fully appreciated if evil exists as a contrast to it; that any finite creation must be imperfect; that the evils attendant upon a system-like natural order are less than those which are produced when every natural occurrence is a particular act of God; that human virtues can only be acquired in a struggle against adversity; and that history shows divine providence steadily bringing good out of evil, which affords a presumption that this process of amelioration will continue, even beyond death. The first three defences are employed against Hume; discussion of the final two will take us beyond the Hume-Priestley debate.

Priestley's determinism precludes him from arguing that free-will is a good which outweigh the evils which result from the abuse of that freedom. In this only is his position unconventional: free-will was a vital consideration for many eighteenth-century theists, though not for all. For Priestley libertarianism is a handicap to the theist, for the admission of "uncaused events" into the creation can only frustrate the workings of divine providence. The free-will defence is meant to mitigate moral evil only. All Priestley's defences apply equally to moral and natural evil, so he makes no distinction between the two.

6.2(i) Contrast

The first of Hume's objections is that a contrast between pleasure and pain is by no means necessary for the appreciation of pleasure, and that it is "plainly possible to carry on the business of life without any pain".<10> Although it is not a major argument for him, Priestley is committed to the necessity of such a contrast. In the Institutes he maintains that life's difficulties "heighten the relish of the good that we meet with" (II,9). In the Philosophical Unbeliever he holds that it "is even quite a common thing in human life, to prefer this variety [of pleasure and pain] rather than an unvaried degree of moderate enjoyment" (IV,351). Hume suggests that in the place of pain there might be a mere "diminution of pleasure". In reply Priestley contends that he has shown the usefulness of pain "as a guard against more pain and greater evils", and he requires Hume to do more than merely assert that "the same end could have been attained by any other means". He thus attempts to shift the onus of proof back to Hume, whereas Hume thinks it is the theist who must exhibit his solution as the only one plausible.

6.2(ii) Finitude and plenitude

Hume in the Dialogues had asserted (not as one of his four avoidable evils, but as a general epistemological point) that "Were the phenomena [of human happiness] ever so pure and unmixed, yet being finite, they would be insufficient" to prove infinite power and goodness.<11> According to Priestley the happiness of a finite creation is necessarily finite, and he employs this as a defence of theism. He observes that in any creation, no matter how happy, it can always be asked "why, if their Maker be infinitely benevolent, do not his creatures enjoy a higher degree of [happiness]?" He answers that

> this question may always be asked, so long as the happiness of any creature is only finite ... which, in its own nature, it must necessarily be. It must be consistent, therefore, even with the infinite benevolence of God, that his creatures, which are necessarily finite, be finitely, that is imperfectly happy (IV,351).

This would not have satisfied Hume: in his opinion the theist can establish only "a mere possible compatibility" between the terms of the problem. This compatibility, however, was all that Priestley thought needed to deprive the objection of force. Hume wanted more: the theist had to supply a proof from finite evidence of God's more- than-finite goodness. Priestley agrees that such a proof is impossible, for "we, being finite, cannot comprehend any thing that is infinite; and not being able to comprehend an infinite effect, we cannot fully demonstrate infinity in the cause". The theist can only hope to show the probability or plausibility of his position, and this he thinks Hume's objection has done nothing to impair.

Priestley's reasoning raises the question of just how imperfect the happiness of creatures may be, consistent with theism. The question had exercised other minds. The claim that finitude entails finite happiness is equally consistent with great happiness and great wretchedness, for it is practically impossible to estimate where in the range between infinitude and non-entity human capacities lie. This elasticity in the finitude defence is sometimes thought to invalidate it. At least, considerations of this sort had been employed destructively by Dr Johnson against Soame Jenyns' "Chain of Being" theodicy. Men like Jenyns had aimed to alleviate the problem of evil by constructing speculatively a scale of being whose fullness and variety are a direct manifestation of the loving generosity of its Creator and Source. All evil is to be accounted for by the unavoidable limitations imposed by the rank which each kind of being necessarily occupies. In response to this doctrine Johnson had allowed that finite creatures must exist within certain limits of possibility: "whatever is imperfect must have a certain line which it cannot pass". "But", he contended, "the reason which determined this limit, and for which such being was suffered to advance thus far and no further, we shall never be able to discern".<12> Both the popularity of the Chain of Being scheme and the acuteness of Johnson's critical attack lead us to inquire where Priestley stood on the matter.

Priestley shares with all "Chain of Being" theorists the supposition that the creation is without limits in space, and with some of them the supposition that it is without a beginning in time (the doctrine discussed in Section 5.4(i)). According to the Institutes, "infinite space is replenished with worlds, in which the power, wisdom and goodness of God always have been, and always will be displayed" (II,5). He reaches this conclusion because he finds unacceptable the only alternative to it, that there was "an eternity in which the Divine Being was possessed of the power and disposition to create, and to make happy, without once exerting them ...." He adds, in the "Chain of Being" manner, that

> if [God] had a desire to produce happiness at all, it seems to be an evident consequence that he must prefer a greater degree of happiness to a less: and a greater sum of happiness can exist in a greater number [of creatures] than in a smaller (II,18).

Men like Jenyns had held that the universe is not only as full as possible, it is also replete with all possible varieties of being. Priestley tends to agree:

> it is probable that a variety in the ranks of creatures, whereby some have a much greater capacity of happiness than others ... makes a better system, and one more favourable to general happiness, than any other.... (ibid.)

He accepts, then, both forms of what Lovejoy christened the "principle of plenitude", maximum quantity and maximum variety. The Chain of Being itself is not a subject which he discusses any further than this simple endorsement of its main assumptions.

Priestley regards the "Chain of Being" doctrine as relevant to the problem of evil in two ways. First, a universe replete with finitely happy beings will "add up" to a universe which is infinitely happy: "since the works of God are infinite, he contemplates an infinity of happiness ...." (II,20) But this reasoning does not tell us how much happiness each kind of being - man, for instance - can expect to enjoy. Here there is a second kind of relevance. Jenyns had supposed that a universe replete with beings was one whose inhabitants could not, or should not expect any significant increase in felicity; it was largely this contention which had raised Dr Johnson's ire against the Chain of Being. In Priestley's view the Chain of Being imposes no such metaphysical barrier to an increase in human happiness. The universe at present is as happy as, at present, it can be; but from this it does not follow that future happiness can not exceed its present level. We need to distinguish between the maximum happiness possible at any time and the maximum possible at present. God always intends the former maximum, and he would at present provide it, were it not that factors other than just our finitude need to be considered:

> the reason why all his creatures are not, at all times, as happy as their natures can bear, must be because variety and a gradual advance are, in the nature of things, necessary to their complete and final happiness (II,19).

Unlike Hartley and Johnson, Priestley wants to retain the belief that infinite benevolence must make us as happy as possible; unlike Jenyns, he denies that our present happiness need be our maximum happiness. Of the factors he mentions, "variety" is just another name for the notion of "contrast" already discussed. The other, "a gradual advance", introduces the notion of progress, which he articulates as showing that our natures could enjoy greater present happiness only at the cost of diminishing our "complete and final happiness". Before exploring this argument, there is another theistic defence against Hume to be examined.

6.2(iii) System

Hume questions the need for the world to be conducted by general laws. He asks, "might not the Deity exterminate all ill, where-ever it be found; and produce all good, without any preparation or long progress of causes and effects?"<13> Priestley had anticipated this standard objection in the Institutes.

> If there were no general laws ... there would be no exercise for the wisdom and understanding of intelligent beings. We could have none of that pleasure and satisfaction that we now have in contemplating the course of nature, which might be one thing today, and another tomorrow; and as no man could lay a scheme with a prospect of accomplishing it, we should soon become listless and indifferent to every thing, and consequently unhappy (II,11).

The claim here was Butler's in the Analogy of Religion, and would have been familiar to Hume. Indeed, Hume was prepared to admit the justice of a reply to this effect, for he allows that "if everything were conducted by particular volitions the course of nature would be perpetually broken, and no man could employ his reason in the conduct of life". But, he counters, "might not other particular volitions remedy this inconvenience?" This suggestion is not expanded; he seems to mean that God might provide for the exercise of our reason in a world where every event was an act of God. In the Philosophical Unbeliever Priestley seems to think this proposal an incoherent one. He points out that if God interferes once to save someone from the consequences of a rash act he thereby deprives them of the opportunity of learning caution, and it seems to follow that if he always interferes, caution will never be learnt. This really just repeats the argument of the Institutes. The only modification introduced as a result of his having read Hume is that he sees a need to add that the wisdom general laws are supposed to induce is itself a source of happiness: "what kind of happiness could we have had without the exercise of our rational powers?", he asks. Priestley's utilitarianism makes happiness the supreme good, but it does not discount intellectual enjoyments. The "exercise of our rational powers" is deemed to provide not just a superior kind of happiness than can be obtained from sensual enjoyments; the lasting satisfaction it produces is superior in a quantitative sense also. "We must consider corporeal pleasures as being of the least consequence to man's happiness, because intellectual gratifications are evidently of unspeakably more value to him", he believes (IV,348).

But Hume has not finished with the subject. If God must operate with general laws, he might at least intervene occasionally for "the good of mankind, and render the whole world happy, without discovering himself in any operation". By "some small touches" he might have altered secretly the infant Caligula's brain and converted him into a Trajan. Such acts could render much good and yet not "disturb the course of Nature or confound human conduct". Most such interventions, Priestley thinks, would be of "trifling" benefit compared with the "solid advantages we derive from the exercise of our faculties on this plan of general laws". Our reason is given us precisely to counter the danger of fires and cliffs. "How little do we suffer on the whole by accidents from fire, compared with the benefits we derive from it; and how much greater gainers are we still on the balance, by the great law of gravitation!". In general, Priestley's reply is the same as that to Hume's previous suggestion. One secret intervention would beget the need for another, as men became less equipped to look after themselves. However, he is happy to accept that there may be some limited scope for outside intervention. "As to very rare cases", he says, "it is possible, though I own not probable, because it would imply a want of foresight in the original plan, that the Divine Being does interfere in this invisible manner" (IV,355f).

Overall, Priestley thinks the critics of the divine plan content themselves with a too superficial view of things:

> it should be a rule with us, when we are considering any particular thing in the system of nature, to take in every thing that is necessarily connected with it, and every thing that we should lose if were deprived of it; so that if, upon the whole, we should, in that case, gain more than we should lose, we must pronounce the thing to be complained of to be beneficial to us, and should thankfully bear the evil, for the sake of the greater good that accompanies it (II,9).

Priestley, then, meets the objection to general laws in two ways. Some evils are just unfortunate but unavoidable by-products of overall goods. Others make possible qualities of character such as wisdom which are themselves considerable goods.

6.2(iv) Character

Just as general laws create scope for the exercise of intelligence and wisdom, so too other apparent shortcomings in the creation make possible other virtues. This claim in fact constitutes Priestley's main line of argument against the problem of evil. Not just wisdom, but fortitude, patience, clemency, compassion, justice and veracity are all to be obtained in a struggle against adversity. "The difficulties we meet with", he says in the Institutes, "contribute to strengthen the mind, by furnishing proper exercise for our passions and understandings ...." (II,9). "As gold is tried by the fire, so are our principles, and our integrity in maintaining them, by such scenes as these", he remarks after the Birmingham rioters had set fire to his house in 1791 (XV,487). And, on another occasion in 1793: "How strangely interest and other motives warp men! But without these things, which try men, it would not be known what we were" (I,2,209).<14>

Remarkably, this so familiar defence of theism is barely even noticed in Hume's Dialogues. The closest he comes to touching upon it is in his rather perfunctory complaint concerning "the great frugality with which all powers and faculties are distributed to every particular being". Mankind's limitations are numerous, but his greatest defect, and the one which might most easily be remedied, concerns not his intellect, his sensibility or his benevolence but his diligence. Give him but "a greater propensity to industry and labour; a more constant bent to business and application" and, Hume (or, at least, Philo) thinks, "the most beneficial consequences without any alloy of ill, is the immediate and necessary result...." Priestley replies that this would not remedy our ills, for industry is morally neutral, and it might "be apt to produce quarrels, and consequently, more unhappiness" (IV, 376).

Nevertheless, Hume's objection touches closely on one of Priestley's central moral convictions, and indeed his remark that "Almost all the moral, as well as natural evils of human life arise from idleness...." is echoed in Priestley's Lectures on History which describes idleness as "the great inlet to the most destructive vices" (XXIV,340). There are crucial differences, however. "Idleness" is not for Priestley characteristic of mankind in

general but only of men on the way to "corruption"; most men possess ample diligence. Further, "idleness" is not for Priestley simply a state of indolence or inertia; an idle man may occupy himself with wars or other "idle" forms of self-glorification. What he does not do is submit himself to the wholesome and character-forming difficulties that God and nature set before us. Hume's complaint specifically eschewed any such moral interpretation of the concept.

The relation between virtue and suffering is a central theme of Priestley's moral, political and historical thought. When he has to summarise his theodicy as briefly as possible, it is to the character- formation defence that he turns. According to the Philosophical Necessity, "This world, we see, is an admirable nursery for great minds. Difficulties, opposition, persecution, and evils of every other form, are the necessary instruments by which they are made...." (III,450) He adds that

> According to the most fundamental laws of nature, and indeed the nature of things, great virtues in some could not be generated, or exist, but in conjunction with great vice in others; for it is this opposition that not only exhibits them to advantage, but even, properly speaking, creates them. Where could there be clemency, fortitude, elevation of soul, and deep resignation to the will of God ... but in struggling with difficulties that arise from injustice, ingratitude, and vice of all other kinds, as well as from outward adversity and distress ...? (III,514)

To explore further the complications of his idea of character-forming we need to view it in combination with his ideas on progress, the "gradual advance" mentioned above. So much of Priestley's thought revolves around this concept that it warrants a major section to itself.

6.3 The Historiography of Progress

Priestley's progressivism is an attempt to see history as a process of character-formation. Translate "character-formation" as "soul-making" or even perhaps as "sanctification" and readers may be reminded of John Hick's useful distinction between "Augustinian" and "Irenaean" theodicies.<15> Hick's distinction is readily applicable to Priestley, though not as a way of characterizing his whole position. Priestley seems to find no difficulty in being both Augustinian and Irenaean. His defence of theism against Hume, resting on the notions of "contrast", "finitude" and "system", is plainly a defence of the Augustinian position, because that is what he saw Hume as attacking. However, the dominant "character-formation" theodicy, which Hume ignored, is unmistakably Irenaean, involving moral progress through the discipline of suffering.

Priestley's idea of progress possesses the dimensions required to figure in an explanation of evil: progress is universal and continuous, embracing all of mankind and all of history, though not without many vicissitudes along the way. More importantly, its primarily telos is ethical and religious, and not just technical or intellectual improvement. The character-formation story is intended not simply as an account of how some men are achieving virtue, but of how mankind is doing so. His work as both secular historian and church historian, as associationist psychologist and as political theorist are to be seen as

contributions to this grand scheme. He interprets the events of his own time (and even to some extent the events of his own life) as part of the progressive process.

It is only in the natural world that Priestley finds the notion of progress inapplicable. Believing the natural order to be fundamentally unchanging he does not postulate a cosmic evolutionism. Improvements in nature occur only as a by-product of human advance. By the spread of cultivation and agriculture, he remarks in the Institutes, "the world becomes a more healthy and pleasurable abode for its most important inhabitants. If things proceed as they have done in these respects, the earth will become a paradise compared to what it was formerly, or with what it is at present" (II,8). Although today Priestley's reputation stands highest for his scientific achievements, his basic position is the opposite to present assumptions that nature progresses (or at least evolves) when left to itself and that human "progress" is environmentally retrogressive.

Clearly, the impetus towards improvement is not immanent in the natural order. Nor, in a sense, is it immanent in human nature, for without the stimulus of suffering, mankind would languish in a state of primitive ineptitude. Mankind has progressed not so much because human nature tends toward self-development, as because God has placed man in a situation which spurs him on to higher achievements.

It is to the historian, and especially the modern historian, Priestley believes, that the systematic study of progress belongs. Progress is presented as the historian's most evident and basic fact, the perception of which is open to any observer free from preconceptions. Priestley has no doubt that in the battle between the Moderns and the Ancients the Moderns have indeed triumphed. According to his Lectures on History, it is "evident from the very first view of things" that "the state of the world at present, and particularly the state of Europe, is vastly preferable to what it was in any former period" (XXIV,425). All the achievements of modern Europe - in exploration, trade, finance, technology, science, medicine, social organisation, scholarship and religion - are seen as converging towards human betterment and happiness.

This European emphasis is, however, a source of some difficulty. If progress is to have religious meaning it must somehow embrace all mankind, yet no progressivist of Priestley's time doubted that progress is almost wholly (with or without some assistance from Islam in connecting the classical with the modern world) a European achievement. It was common practice to satirize European institutions by viewing them through the eyes of a fictitious Persian, Chinaman or American Indian, but this critique did not lead the progressivists to regard the "visiting" observers as representatives of a superior culture. Often enough the criticisms implied were criticisms already being put by the progressivists themselves in their campaigns for religious toleration, civil liberties and less artificial manners.

It was not simply insularity that accounts for this Eurocentrism. Priestley knew well enough that European prominence is mostly a modern phenomenon. From the time of Charlemagne to the late fifteenth century, he could say, Europe "would scarce attract the notice of a spectator of the affairs of men, who had no European connexions.... Asia exhibited the most inviting spectacle" (XXIV,213). Yet modern Asia, in Priestley's view,

has no such claim on our admiration, and, at least in the case of India, the fault seems to lie with her ancient beliefs. Rather late in life, Priestley became acquainted with the "discovery" of Hinduism by English travellers and scholars, and he read the Hindu writings that had been made available in translation. Not surprisingly, he concluded that the Indian caste system militated against social improvement, while Hinduism's pantheistic metaphysics, by encouraging attempts to absorb the soul into the divine, distracted from the tasks and challenges of the mundane world.<16>

There was little enough in this to disturb Priestley's Western self-confidence, which extended easily to the assumption not just that Europe led the rest of the world, but that the rest of the world would willingly follow the European lead. That "the improvement of Europe may serve as an example to the rest of the world" is still his opinion in 1790. European superiority appears so entrenched that the other nations can present no threat to it, for, "till they become civilized, as in the natural course of things they necessarily must, they will be sufficiently overawed by the superior power of [the European] nations that are so" (XXII,242). The theological difficulty of a world in which three quarters of mankind have to live for ages in relative darkness he does not discuss.

To serve his religious purposes, Priestley's account of history must represent progress as not only somehow universal, but also as a more or less continuous process, or at least as suffering no major interruption. For the secular historian of progress the "Dark Ages", after the fall of Rome and before the medieval and Renaissance recovery of classical knowledge, presents a stumbling-block. For Priestley, however, this period can be seen as a time in which Christianity expanded and matured, especially amongst the northern nations of Europe. He is not much disturbed by the temporary eclipse of Greek and Roman thought, for which he has no high regard. What disturbs him much more is the persistent influence of Platonic philosophy on Christian doctrine, an influence which Christianity had permitted right up until recent times. The history of Christianity is in large part the history of its own corruption, but this is not incompatible with progress.

> In looking back on the dismal scene which the shocking corruptions of Christianity exhibit, we may well exclaim with the prophet, "How is the gold become dim! how is the most fine gold changed!" But the thorough examination of every thing relating to Christianity, which has been produced by the corrupt state of it, and which nothing else would probably have led to, has been the refiner's fire with respect to it; and when it shall have stood this test, it may be presumed that the truth and excellency of it will never more be called in question (V,4).

The Christian historian of progress encounters a different difficulty. His problem is not a "Dark Ages" hiatus, but the radical nature of Christian origins. It is not easy to see how the events of first-century Palestine can be integrated into a story of gradual religious development. Priestley holds those original events to be of final importance in the whole historical drama. Their message is a simple one:

> The great outline of it is, that the Universal Parent of mankind commissioned Jesus Christ to invite men to the practice of virtue, by the assurance of his mercy to the penitent, and of his purpose to raise to immortal life and happiness the virtuous and good, but to inflict adequate punishment on the wicked (V,480).<17>

The Resurrection of Christ is divine confirmation of this message. The purpose of the message is to convey a truth which could not be known by natural means. Revelation supplements reason, for reason can do no more than assure us that there is a benevolent Creator and that we do have duties to our fellow men. Reason gives us no knowledge of a future life in which virtue will be rewarded. Thus far there is little in Priestley's position to which the orthodox Christian will take exception, and it is just this sharp orthodox distinction between reason and revelation which seems awkward for a gradualist.

In one respect, Priestley's heterodoxy tends to accentuate this discontinuity. It would seem natural for a Christian historian to regard the intellectual struggles of the early Church as the progressive unfolding of the latent rational content of the original revelation. Priestley, of course, takes the opposite view, regarding all the patristic doctrinal developments - Original Sin, Incarnation, Atonement and Trinity - as "corruptions", mere "human additions and incumbrances" obscuring the simple, original truth.<18> This Protestant primitivism appears quite at odds with his progressivism. His objection to doctrinal development, however, is not to development as such, but to those particular developments, each of which seemed to him to involve logical contradictions or some other offence against the requirements of reason. Had they been compatible with reason and Scripture he might have had no grounds for complaint.

In other respects, Priestley's heterodoxy assists his progressivism. Reason even at its best can not aspire to discern divine purposes beyond death. But in the primitive state of ancient philosophy, reason fell far short of what it could in principle know about the Creator and his benevolence, and this failure made the need for special revelation all the greater. The need arose not from the darkness of original sin, but from the obscurity of man's rational beginnings, his comparative backwardness in "the infancy of the world" (III,384). It is just this backwardness which ensures that the truth of Christianity will not be received without distortion. Priestley is ambiguous about whether this distortion merely encumbers the truth with additional difficulties or actually prevents reception of the truth. The latter interpretation implies that the patristic and medieval Church is no higher on the scale of progress than the world of pre-Christian antiquity. It would leave the Christian message to lie dormant for 1500 years and confine true progress merely to the modern world. Taking his writings overall, it is the former interpretation which prevails, and it at least is compatible with progressivism. If the church of Rome is (in the words which naturally so offended their recipient, Boscovich - a Jesuit priest) "a system of abominations little better than heathenism",<19> nevertheless (as he puts it in the Institutes) "the corruption was never so great, not even in the darkest ages of popery, but that the belief of it was more favourable to virtue than the belief of the prevailing doctrine at the time of the promulgation of Christianity" (II,97f).

If reason's relative undevelopment in antiquity makes revelation all the more necessary, it follows that, as reason matures, so its appreciation of the truth of Christianity will improve. Once Platonic metaphysics is replaced by Newtonian methodology doctrinal development need not result only in "corruption"; a new progressive kind of development becomes possible. But as reason gradually comes to find its own way, it seems less obvious why it should not advance beyond Christianity, as many of his contemporaries proclaimed that it had. Priestley rejects their claims. His own system is "not a progressive religion, but a

progressive reformation of a corrupted religion" (V,503).<20> He offers no general explanation why reason should continue to submit to Christian tutelage. All he can do is argue on particular grounds that such claims have not been justified.

In Priestley's world secular advances have usually tended to further the cause of religious progress. Renaissance scholarship assisted the Reformation; the invention of the printing press has made the Bible generally available and modern prosperity has fostered the literacy and education required to understand it; international trade has helped to spread the Christian message around the globe; Locke's political philosophy supports the cause of religious toleration; Newtonian science, and modern science generally, has deepened the foundations of theism; and Hartley's associationistic psychology culminates in "theopathy", the love of God. In the course of these changes an important transition occurs. At the beginning of modern history Providence works secretly

> rather by an accidental concurrence of circumstances, than by any efforts of human wisdom and foresight. We see the hand of Divine Providence in those revolutions which have gradually given a happier turn to affairs, while men have been the passive and blind instruments of their own felicity .... But the situation at present is vastly different .... Reflection upon our present advantages, and the steps by which we have arrived to the degree of power and happiness we now enjoy, has shewn us the true sources of them.... (XXIV,8).<21>

J. B. Bury's contention that "so long as the doctrine of Providence was indisputably in the ascendant, a doctrine of Progress could not arise" is quite the opposite of Priestley's view of the matter.<22> For him Enlightenment and modernization are ineliminably religious, because they are founded on the same principles of reason that validate rational theism. His writings do not seem to contain any suggestion that the modern understanding of reason, or more particularly Newtonian methodology, is itself somehow inspired by Christian assumptions, though it obviously weighed heavily with him that the scientific thinkers he most admired were Christian. The role of reason within religion is twofold: to eliminate the accretions that have obscured the essential simplicity of the original revelation; and to supply an apologetic for those remaining simple truths. This leaves open the possibility that the critical function of reason might get the better of its constructive function. Johnson at least thought so: one source tells us that "Of Doctor Priestley's theological works he remarked that they tended to unsettle every thing, and to settle nothing".<23> Priestley would have replied that they settle essentials and unsettle only inessentials. What ultimately can not be unsettled is the message of revelation, for, though compatible with reason and capable of rational acceptance, it remains always and necessarily a matter about which we can know anything only by revelation.

Priestley's historiography has to labour hard when his Eurocentrism conflicts with the alleged universality of progress and his Protestantism conflicts with the continuity required by his gradualism, but he will make only limited concessions to these difficulties. History and natural science "are equally attempts to trace out the perfections and providence of God, by means of different footsteps which he has left us of them, differing only in this, that the one is much more distinct than the other" (XXIV,423). Science may be more distinct, <23> but the evidences of Design in history are not for that reason to be neglected. Indeed, counter-evidence to the theory of Design should be treated with some suspicion.

> Let an historian ... attend to every instance of improvement, and a better state of things being brought about, by the events which are presented to him in history, and let him ascribe those events to an intention in the Divine Being to bring about that better state of things by means of those events; and if he cannot see the same benevolent tendency in all other appearances let him remain in suspense with regard to them (XXIV,424).

In his recent study, Hume's Philosophy of Common Life, Donald W. Livingstone objects to this passage that it makes it impossible ever to disconfirm the providential theory of history. "All purported counter-examples are treated a priori as cases of possible confirmation by historians unborn...," he contends.<25> The objection is too strong: Priestley is arguing only that where we find a "uniformity and consistency of design" to predominate, whether it be in nature or in history, we never "conclude against that consistency which the greatest number of appearances suggest to us, from the first view of circumstances not easily reconcilable with it". If the majority of appearances were unfavourable, then certainly the providential theory would have to be abandoned.

To whatever degree progress is an objectively ascertainable fact, it is by no means a morally neutral one, nor is historiography to be construed as a "value-free" science. Few before Priestley went as far as he did towards finding a moral purpose in the historical order. In the modern age "we see the gradual diffusion of intellectual light, and a better aspect of things in a moral respect than has ever appeared in the world before" (IX,17).<26> This commitment to moral progress is then employed to reinforce the character-formation theodicy. For, to show that virtue can arise in a struggle with adversity, as the character-formation idea seeks to do, is not yet to show that virtue does so arise. If adversity can occasion virtue, it can also - we may think - occasion vice. Suffering ennobles, but it also degrades. This point is fully acknowledged in the Institutes:

> In all the Divine dispensations we are treated as accountable or improvable creatures; but it is evidently necessary to such a state that we be capable of growing worse as well as better, by every species of discipline; and the very same circumstances may produce both these different effects on the minds of different persons. The same propensity that excites sentiments of gratitude, and a liberal, beneficent disposition in some, inspires others with insolence, rapaciousness and cruelty; adversity also may be the parent either of industry or of fraud; so that neither of them has necessarily and invariably a good effect on the mind (II,226).

Yet if history does display the gradual victory of virtue then this objection loses its force. It is by the empirical methods of the historian that we discover the validity of the character-formation scheme. (Whether this admission that the same circumstances may produce different effects on different people is in conflict with his determinism Priestley does not discuss.)

History thus reveals a benevolent Creator bringing good out of evil. This Irenaean solution to the problem of evil plays a special part in Priestley's overall optimism. The Augustinian arguments for optimism are essentially negative in import; they are meant to mitigate the impact of evil by suggesting complexities which give it a necessary role in the whole scheme of things. By contrast, what progress shows is evil being actually

eliminated. The evidence of progress suggests that the necessity of evil is only a temporary necessity, though apparently a long-lasting one. History does more than just counter the sceptic's objections to divine benevolence; it gives positive grounds for believing in that benevolence.

Notes to Chapter Six

1. Arthur O. Lovejoy, The Great Chain of Being. A Study of the History of an Idea, (New York, 1960) p. 208.

2. It comes from James Branch Cabell's novel of 1926, The Silver Stallion. Voltaire's remark that the optimists cry "'Tout est bien' d'une voix lamentable!" makes a similar point; he would have envied Cabell's sharper formulation of the paradox. (The remark is quoted from his Poem on the Lisbon Disaster in Lovejoy, ibid. p. 210.)

3. Autobiography of Joseph Priestley, Introduction by Jack Lindsay, (Bath, 1970) p. 123.

4. From his Appeal to the Public on the Subject of the Riots in Birmingham, Part II, (London, 1792).

5. David Hume, Dialogues concerning Natural Religion, ed. N. Kemp Smith, (Oxford, 1935) p. 238n. Rather surprisingly, the origin of this modern apologetic is ascribed by Hume to King and Leibniz.

6. Ibid., p. 244.

7. Ibid., p. 243.

8. Ibid., pp. 252, 248.

9. Ibid., p. 257.

10. Ibid., p. 253.

11. Ibid., p. 248.

12. A Review of a Free Inquiry into the Nature and Origin of Evil (1757), in The Works of Samuel Johnson, ed. Arthur Murray, 12 Vols, (London, 1806), VIII, 29. Also available, with a critical analysis, in Richard B. Schwartz, Samuel Johnson and the Problem of Evil, (Madison, Wisconsin, 1975). See also Lovejoy, op. cit., pp. 253f.

13. Hume, op. cit., p. 253f. All subsequent quotations from Hume in this chapter are from these pages.

14. From a letter to his friend, Theophilus Lindsey.

15. John Hick, Evil and the God of Love, (London, 1968), especially pp. 262-6. Priestley's position is "Augustinian" in its affirmation of the Chain of Being and of the notion of evil as a consequence of finitude; he of course rejects Original Sin and the free-will defence, and is thus in those respects anti- Augustinian.

16. For the larger context to this issue see P.J. Marshall and Glyndyr Williams, The Great Map of Mankind: British Perceptions of the World in the Age of Enlightenment, (London, 1982), pp. 105, 117, 143.

17. The phrase "additions and encumbrances" comes from the Theological Repository (a journal which Priestley edited), Vol. I, p. xv; it is quoted by James J. Hoecker in "Joseph Priestley and the Reification of Religion", The Price-Priestley Newsletter, No. 2, 1978, p. 52. If the notion of "development" includes retrograde development, then Priestley's church history is, as John Passmore has observed, "one of the earliest attempts to think of Christianity as a developing doctrine, or to penetrate to the minds of the ordinary early Christians - as distinct from, although through the medium of, the minds of the Church Fathers". Priestley's Writings on Philosophy, Science and Politics, ed. John A. Passmore, (New York and London), Introduction, p. 16. E. M. Wilbur is even more emphatic: "in his studies tracing the development of the doctrine of the person of Christ he practically founded a new science - the history of Christian doctrine regarded not as a fixed deposit, but as a growing process". A History of Unitarianism, 2 Vols, (Cambridge, Massachusetts, 1947), II, 315.

18. See A Scientific Autobiography of Joseph Priestley (1733-1804), ed. Robert E. Schofield, (Cambridge, Massachusetts, 1966), p. 167.

19. From the "General Conclusion" to his An History of the Corruptions of Christianity, (Birmingham, 1782).

20. From his Lectures on History. See also his 1779 sermon "The Doctrine of the Divine Influence on the Human Mind" (XV,93).

21. J. B. Bury, The Idea of Progress. An Inquiry into its Origin and Growth, (London, 1924), p. 21f.

22. The source is Johnson's friend Dr Maxwell; Boswell quotes the remark from Maxwell's Collecteana. See Life of Johnson, ed. G. B. Hill, 6 Vols, (Oxford, 1934-50) II, 124.

23. This superior distinctness is the only support I can find for John Passmore's assertion that Priestley "had to confess that when he looked at human history, as distinct from the history of science, he found it difficult to extract any support for his belief in the inevitability of progress". See The Perfectibility of Man, (London, 1970), p. 210. To concede this superiority of scientific progress is not to confess as much as Passmore's statement requires.

24. Donald W. Livingstone, Hume's Philosophy of Common Life, (Chicago, 1984), p. 280.

25. From the Preface to his General History of the Christian Church, (Northumberland, 1802).

CHAPTER SEVEN: OPTIMISM AND PROGRESS (2)

7.1 The Mechanics of Progress

Priestley is attempting to put the theory of historical progress to religious uses by grafting it on to the notion of character-formation under adversity. In response to the objection that suffering degrades as much it ennobles, he develops an historiography of providential action. The objection is even further diminished if it can be shown not just that virtue is accumulating but also how it is doing so. History will then be seen as an intelligible causal process. Priestley's concern for the mechanics of progress fits with his general view of causal relations discussed in Chapter Three. His progressivism is not simply the product of a supposedly objective survey of the panorama of history.

The best angle from which to view Priestley's ideas on the mechanics of progress is from a comparison with his philosophy of science. The rise of belief in progress since the seventeenth century is intimately bound up with the development of modern natural science. This is well known, but how scientific progressivism is related to social progress in the thought of a scientist of Priestley's standing deserves some elucidation. There are various ways in which the two might be related. Most obviously, modern science can be seen as one example of progress, towards a better understanding of nature. Science can also cause progress in other areas of life, through technology and thus improved living standards. It can provide an inspiration or, more particularly, a model for other kinds of progress. It might be seen as somehow having a moralizing tendency, as providing an impetus to virtue. Or, finally, moral and social progress might proceed independently, though perhaps in parallel to scientific progress, even drawing on the same fundamental principles of reason.

The centrality of science in Priestley's theory of progress is indisputable. Modern science is credited with having very considerable political and religious consequences, as he makes stirringly clear in 1790:

> considering the amazing improvements which have been made within the last century, and the many ages abounding with men who had no other object beside study, in which, however, nothing of this kind was done, there appears to me to be a very particular providence in the concurrence of those circumstances which have produced so great a change.... This rapid process of knowledge, which, like the progress of a wave of the sea, of sound, or of light from the sun, extends itself not this way or that only, but in all directions, will, I doubt not, be the means under God of extirpating all error and prejudice, and of putting an end to all undue and usurped authority in the business of religion, as well of science; and all the efforts of the interested friends of corrupt establishments of all kinds will be ineffectual for their support in this enlightened age, though, by retarding their downfall, they may make the final ruin of them more complete and glorious. It was an ill policy of Leo X to patronize polite literature. He was cherishing an enemy in disguise: and the English

> hierarchy (if there be any thing unsound in its constitution) has equal reason to tremble even at an air-pump or an electrical machine (XXV,375).<1>

Committed as Priestley is to the doctrine that a single set of rational principles applies equally to all kinds of knowledge, this attempt to link science, politics and religion may not seem surprising. Knowledge is for him a network, and as he remarks in his Letter to Burke, "Touch but any extremity of the web, and the vibration will be felt to the centre, and to every other extremity" (XXII,231). But this does not capture what the passage asserts, for clearly Priestley's air-pump is supposed to have more effect on the English hierarchy than the English hierarchy can hope to have on the air-pump. Some sharper definition of this stronger relation is required.

The most obvious way in which science might affect social institutions is through the material benefits it can bring. Priestley's views on the relation between science and technology are notable in this context for the high moral tone he imparts to the subject. Here, according to the Preface to his History of Electricity,

> we see the human understanding to its greatest advantage, grasping at the noblest objects, and increasing its own powers, by acquiring to itself the powers of nature, and directing them to the accomplishment of its own views; whereby the security and happiness of mankind are daily increased (XXV,343).

That science and technology might be put to destructive uses is not here even considered. In his Lectures on History he could say of gunpowder that it has made battles "both less bloody, and more quickly decided than before" (XXIV,383). War, though it is still a great evil, "is unspeakably less dreadful than formerly", he claims in the Philosophical Unbeliever (IV,349). Even if this is so, it has not yet been shown why improvements in "the security and happiness of mankind" might lead to a reorganised social order. Do they signal the creation of a new class made ready by education and leisure to share the political reins held by the land-owning aristocracy? The "air-pump" passage hints at more than this: that science creates a new kind of social outlook, one critical of the old order ("if there be any thing unsound in its constitution") and thus that the new class will be disposed to take over from and replace the old. But what this new outlook might be is not yet clear.

The role of science as a model for other kinds of progress sheds some light on this question. Science shows by its own example both how knowledge is acquired and how it accumulates. Acquisition comes first; we shall consider accumulation later.

7.1(i) Acquisition

The acquisition of knowledge depends vitally on the free exchange of ideas, for this stimulates the imagination and thus promotes the production of hypotheses. Without imagination to suggest hypotheses science could not begin. Hypotheses in turn suggest experiments. In the practical arts and in social affairs the same holds good: according to the Essay on Government, "of all arts those stand the fairest chance of being brought to perfection, in which there is opportunity of making the most experiments and trials, and in

which there are the greatest number of persons employed in making them". The object of this process is perfection, but the reason for this process lies in our imperfections.

> The reason is, the operations of the human mind are slow; a number of false hypotheses always precede the right one; ... so that to establish the methods and processes of any art, before it have arrived to a state of perfection, (of which no man can be a judge,) is to fix it in its infancy, to perpetuate every thing that is inconvenient and awkward in it, and to cut off its future growth and improvement (XXII,44).

Truth depends on comparison, and comparison presupposes variety. Diversity is just as essential in education, the making of men, as it is in the other arts and sciences. "Uniformity is the characteristic of the brute creation", whereas "the great excellence of human nature consists in the variety of which it is capable" (XXII,46f). Diversity is inevitable: to try to prevent it is to labour in vain (XXII,103f). (Even the Church of Rome, he tells us, contains as much disagreement as do the Dissenting denominations.) Diversity is not always comfortable, but it has to be accepted. Such a situation teaches charity and candour, and "the Divine Being has not provided for the prevention of vice by cutting off all occasions of virtue". "A man of extensive views ... will bear with a few tares, lest, in attempting to root them out, he endanger rooting up the wheat with them" (XXII,133). Toleration is no mere negative virtue, indistinguishable from indifference. It allows for adventure and it relishes controversy. Without it, "No man could indulge himself in anything bold, enterprising and out of the vulgar road; and in all publications we should see a timidity incompatible with the spirit of discovery". He is hostile towards those who would defend toleration on the grounds that matters such as religion are matters of indifference (I,2,188; XXII,435). He sees no incompatibility, for instance, between referring in the Essay on Government to the "Popish hierarchy" as "that great mystery of iniquity and abomination" (XXII,93) in the course of writing what is perhaps the first full-scale argument by an English Protestant for the civil rights of Catholics.<2>

Having a variety of hypotheses to suggest comparisons is only a preliminary to scientific advance, but it is the aspect of science Priestley stresses most when he applies the scientific model to social affairs. He is convinced that in the past progress has been retarded most of all by the unnecessary interference of government in civil society. Government has acted as an inappropriate authority comparable to the authority of the classical authors imposed on medieval thought. The state is necessary to keep the public peace, but it has no charter to regulate men's beliefs or to hinder the dissemination of ideas, even when these might tend to unsettle society.

Those such as John Brown<3> who opposed toleration thought they saw a world in which diversity entails disorder and the wheat is in danger of being overrun by the tares. Priestley rejects the attempt to have the tares eradicated by political means, partly because he believes the wheat to be naturally more vigorous and partly because he believes that politicians, being themselves a mixture of wheat and tares, are not competent to distinguish between them. Toleration may not lead to a pure crop but it produces a better yield than any other available policy.

Priestley's experimentalism in social affairs is one reason why he incurred the wrath of Burke, who alleged that radicals such as Priestley "have nothing of the tender parental solicitude which fears to cut up the infant for the sake of an experiment".<4> Priestley, however, did not advocate experiment without regard for the well-being or even the prejudices of the subjects of the experiment. What he wished for was to see experiment freely indulged when people were freely willing to engage in it (as he thought the French people were in 1789). He did not want experiments imposed by a minority of "enlightened" social scientists, any more than he wanted a minority of conservatives to stand in the way of popular reform. He put his view clearly enough in his Letter to Pitt of 1787. In all "matters of great consequence" the governors are to defer to the general opinion of the people. But in less vital matters "many lesser changes may be made by way of experiment, or the better to excite attention and discussion; and things may easily revert to their former situation, if, after sufficient experience, the alterations should not be approved" (XIX,115f). If this maxim is ignored and "great and sudden changes" instituted, the people "would probably resist the innovation, and public calamity might ensue".

Yet, for all that diversity is both rational and natural, it is not for Priestley either the primary goal or the ultimate destination of man's search. He is no more a relativist in social affairs than he is in science. As the Letter to Pitt puts it, temporary rational diversity must eventually give way to a "rational and permanent uniformity" (XIX,125). Not even religion should come before the cause of truth. His commitment to Christianity is, as it were, to the best supported hypothesis available in his time, and therefore the most likely solution to the great questions of life. It is always his hope that, as he puts it in 1797, "Christianity may yet become universal, and be the means of making mankind virtuous and happy for many thousand years to come" (XXI,187).<5> To establish any such hypothesis it must be shown to conform to the "universally received" criteria of science, Newton's "Rules of Reasoning in Philosophy", and as we have been seeing, this is what Priestley's apologetics attempts to do. Should free enquiry "lead to the destruction of Christianity itself, it ought not, on that account, to be discontinued; for we can only wish for the prevalence of Christianity on the supposition of its being true should not be dismissed merely because in popular presentations they have been defended poorly. As he observes in the Philosophical Unbeliever,

> The suspicion that the faith of the vulgar is superstitious and false is no doubt often well founded; because they, of course, maintain the oldest opinions, while the speculative part of mankind are making new discoveries.... [But] an aversion to the creed of the vulgar may therefore mislead a man, and from a fondness of singularity, he may be singularly in the wrong (IV,464f).

Originality and innovation are not good in and of themselves, but only in that they add to the stock of variety.

Priestley's belief in the superior natural vigour of the "wheat" over the "tares" may itself rest partly on assumptions derived from, or at least consonant with science. The notion of scientific progress would make no sense unless the majority of scientists were primarily concerned with the search after truth and amenable to rational argument. That they are so none of his contemporaries disputed. But many of them did doubt that men, on the whole, are so open to intelligent persuasion.<7> Denial of this capacity for balanced judgement, at least in matters of politics, is central to Burke's political philosophy, for instance.

Priestley believes that men, on the whole, are as capable of rational judgement as are scientists, scientists being nothing more than ordinary men engaged in one of the many spheres of useful and virtuous social activity.<8> The desire for truth and pleasure in doing good are fundamental to human nature. "Ignorance is the proper cause of all wrong conduct ...", a letter written in 1791 maintains (I,2,175).

The doctrine that "virtue is knowledge", as it is traditionally expressed, is for Priestley no idle piece of philosophical speculation: it re-appears in the thick of political controversy. William Blackstone's Commentaries on the Laws of England had argued that certain statutes of Edward VI and Elizabeth I which punished writings "in derogation, depraving or despising of the book of Common Prayer" with life imprisonment for a third offence should be retained, at least in terrorem. Such writings, Blackstone says, "can be calculated for no other purpose than merely to disturb the consciences, and poison the minds of the people". Priestley found this objectionable on a number of grounds, not the least of which is that it blackens the character of the opponents of Anglicanism beyond all plausibility. "I even question whether the most depraved of all beings be capable of doing evil for its own sake ...." (XXII,306).<9> When Burke much later speaks of the French National Assembly as having, by an "unforced choice", a "fond election of evil", authorized "treasons, robberies, rapes, assassinations, slaughters, and burnings, throughout their harassed land", Priestley replies that this is "supposing what all moralists reject as absolutely impossible in nature, viz. that any men choose evil for its own sake" (XXII,165).<10>

But, if virtue is knowledge, then evil, like error in science, needs little more than to be exposed to be defeated. The slave trade (to take an example that troubled the consciences of Priestley and his fellow-liberals) was able to flourish because it operated out of the public eye: "had the shocking scenes to which the attention of the public is now invited been generally known before, the evil could not have grown to its present height" (XV,363). Of course, exposure will not immediately cure all ills; it will overcome them only eventually. It was a conviction which sustained him in the heat of even violent controversy, as his Political Dialogue illustrates:

> No maxim may be more depended upon than that, whatever is true and right will finally prevail, and the more violent the opposition, the more firmly will it be established, in the end; because opposition excites attention, and this is all that is necessary to the perception of any truth, in minds free from prejudice; and in time one prejudice will so balance another, that true candour will prevail in the world (XXV,106).<11>

Rival "prejudices" (the usage appears ironic) face each other like hypotheses in science, awaiting adjudication by "minds free from prejudice". That the majority of men possess such minds is the essential assumption of the passage. Out of "prejudice" will arise intellectual opposition, and "open opponents are always the best friends of any truly good cause" (XXIV,471).<12>

Within months of writing the above passage, the Birmingham Riots provided some less refined opposition to "excite attention" to the cause of truth and to test the principles of Priestley and his supporters. The riots, he afterwards told the students of New College in Hackney, showed

> how naturally a failure in argument leads to violence, and how certainly that violence defeats its own end. A hierarchy, equally the bane of Christianity and rational liberty, now confesses its weakness, and be assured you will see either its complete reformation or its fall (I,2,158).

"Violence is temporary but truth is eternal", is how he put it to the Revolution Society (I,2,146). His fellow-progressivist Condorcet, writing to convey the sympathy of the Academie des Sciences, used similar language. "It is in the necessary order of things that error should be momentary and truth eternal.... The glorious day of universal liberty will shine upon our descendants, but we shall at least enjoy the aurora...." (I,2,128).<13> "Error" backed by violence (whether temporary or not) has no obvious parallel in the procedures of science; at this point the analogy between scientific and social progress breaks down. The rioters have renounced argument, and put themselves out of the community of rational men. Priestley must regard them as atypical. He must assume that most men, situated in the broad temperate region between the extremes of mob and hierarchy, will resist their methods of settling the matter.

7.1(ii) Accumulation

So far we have dealt only with the assumptions informing Priestley's account of the acquisition of scientific and social knowledge. For the progressivist it is equally important to explain how such knowledge might accumulate. Accumulation involves transmission, for if each, or any, generation fails to pass on what it has learnt, no level of achievement, no matter how great, can amount to real progress. Conversely, the smallest achievements, if passed on incrementally, may eventually constitute some large improvement in the human lot.<14> Although the difficulties it presents are not at first obvious, the process of transmission is by no means unproblematic.

Priestley shared to the full his century's faith in the power of education. Teaching occupied much of his life - first at the elementary level at his school at Nantwich, Cheshire; then at a higher level at Warrington Academy and (later) New College, Hackney; then also as a tutor to Lord Shelburne's sons; and always as part of his duties as preacher and instructor to his various congregations. His writings were frequently designed to serve an educational purpose. Yet all this experience did nothing to diminish his enthusiasm for what education might achieve as the agency of progress.

Both scientific and social knowledge is, the Observations on Education proclaims, so readily transmissible that each generation can hardly fail to build on its predecessor's achievements.

> Every addition that is made to the stock of art or science is the effect of slow trial and experiment, but what a man attains to by the study and labour of his whole life he may communicate to another in a few days or hours (XXV,11).

Similarly, but a little less extremely, the Essay on Government avows that "it requires but a few years to comprehend the whole preceding progress of any one art or science; and the

rest of a man's life ... may be given to the extension of it" (XXII,9). The more extreme formulations of this thesis will seem incredible: it suggests that every schoolboy will know as much about physics as Newton. The opposite position seems more plausible: if only a Newton can write the Principia, then only another Newton can fully master its teaching, and we have no reason to expect more Newtons after Newton than before him. However, Newton's achievement is not merely to add to the stock of knowledge; in a sense he reduces that stock. "The greater progress we make in the analysis of nature, the nearer we come to first and simple principles, and in fewer general propositions may the whole be comprised". Newton's followers need not share Newton's genius.

> When discoveries have been made, and the principles of science ascertained, persons of inferior abilities, and without the advantage of any extraordinary concurrence of circumstances, are sufficient to digest those principles into a convenient method, so as to make the knowledge of them much easier than it was to the inventors (XXIV,463f).<15>

Even the occurrence of genius is not essential to Priestley's position: discoveries are most often made by men of moderate abilities. Genius has not for him the central role in progress that it has for Turgot. "Could we have entered into the mind of Sir Isaac Newton, and have traced all the steps by which he produced his great works, we might see nothing very extraordinary in the process", he remarks in his Memoirs (I,1,346).<16>

Nor has the simplification that science accomplishes the strongly mathematical character that it has in Turgot, Condorcet, or, before them, in Hartley. Furthermore, he rejects as impracticable one of their favourite schemes, the creation of a "universal language": "neither the theory of language in general, nor the nature and analogies of things to be expressed in it are yet sufficiently understood to enable us to contrive a new and philosophical" language, he believes (XXV,353).<17> Priestley is not a precursor of nineteenth- century "social statics". His own illustrations of how social principles might be "digested into a convenient method" are to be found in his associationist psychology and his utilitarian moral philosophy, both of which claimed to unite a variety of separate propositions under a single general law, thereby satisfying the requirements of Newton's Rules. Without simplification of some sort, progress would exfoliate into endless complexity, beyond the comprehension of any single mind and manageable at best only by a "dehumanizing" specialisation. As his Observations on Education puts it, "without these advantages [of simplification], no man, in this advanced age of the world, could possibly attain to what would be called even a mediocrity in improvements...." (XXV,11).

If the assumptions that science proceeds by simplification and that social understanding follows the pattern of science are allowed to stand, then there seems to be no great problem about the accumulation of knowledge across the generations. Nor were his contemporaries much disposed to challenge these assumptions. Yet Priestley himself wished to impose some qualifications on what could be achieved by methods such as these. Moral progress is not quite as straightforward as this model makes it seem.

That the ultimate goal of history is moral improvement Priestley sometimes states with an unexpected tentativeness. This can be observed even when he is most fervent about the prospects of the future, as in the often-quoted declaration from the Essay on Government

that "whatever was the beginning of this world, the end will be glorious and paradisiacal, beyond what our imaginations can now conceive" (XXII,9). The preceding sentence had been listing the benefits of a division of intellectual labour:

> nature, including both its materials and its laws, will be more at our command; men will make their situation in this world abundantly more easy and comfortable; they will probably prolong their existence in it, and will grow daily more happy, each in himself, and more able (and, I believe, more disposed) to communicate happiness to others.<18>

He thinks that this "paradisiacal" conclusion arises "from the natural course of human affairs" and is "fairly suggested by the true theory of human nature". Yet even he seems to feel some uncertainty about the transition from "more able" to "more disposed". His critics might have suspected a gulf here, into which the progressivists' hopes could disappear without trace. If progress makes men happier but not more moral, that happiness will be in jeopardy if they each seek further happiness at each other's expense. How Priestley's "true theory of human nature" might bridge that gulf has to be reconstructed from his other writings.

Priestley's hesitation has an explanation. He is not certain that the achievements of morality can be accumulated in quite the same way as can the achievements of the means of happiness. The account which can be given of progress in science and technology, exploration and expansion, industry and agriculture, is not so readily applicable to moral matters. While the painfully-acquired habits of virtue may make the practice of virtue easier within one person's life, there is no obvious sense in which such habits can be collective achievements. They are not reliably transmissible from person to person or from generation to generation.

This is not, from Priestley's perspective, merely an unfortunate obstacle to moral improvement. His whole account of character- formation entails that moral achievements can not be passed on, for the simple reason that the suffering which produced them can not be shared. The attempt to pass on even ordinary goods, to be enjoyed without effort, is likely to misfire:

> when a provident, but unwise parent submits to toil and hardship in order to leave an estate to his son, he only provides him something to waste and dissipate, but not to enjoy. The prodigal youth is even generally much less happy in spending the estate than the father in getting it; though the object of his toil has been to make his son more happy in being exempt from it (XXV,61).

This comes from the Observations on Education of 1778 which arose partly from the difficulties he experienced in designing a "liberal and virtuous" course of education for sons of the aristocracy when he supervised the studies of Lord Shelburne's sons. Such considerations were still in his mind thirteen years later in his Political Dialogue.

> The man who makes a sensible use of riches which he has not acquired must be something almost above humanity; and therefore it is not to be expected in the ordinary course of things; and when hereditary titles, and other distinctions, are added to hereditary wealth, the danger must be greatly increased (XXV,93).

By this time he has decided that this argument counts also against hereditary political institutions. No political distinctions should

> descend to posterity, because superior wisdom does not so descend. Let the individuals be chosen, and let their power be continued as long as shall be thought expedient; but let their descendants have no advantage but from their own personal merit (XXV,96f).

(And just as virtue is not inheritable, so neither is vice. Priestley rejects the doctrine of Original Sin for this reason.)

In all this we see the individualism of Priestley's morality in conflict with the collectivism of his theory of (moral) progress, and it is the progressivism which has to give way. If morality can not progress of and by itself, what is needed is some other account of how progress in general can lead to progress in morals. Somehow progress which is morally neutral must lead to morally desirable results. Since the eighteenth century this has come to seem the central difficulty of progressivism, though in Priestley's day it was only beginning to be appreciated.<18> In his own thought the problem never comes into sharp focus, perhaps partly because for him the innovations of the modern world (even, as we saw, gunpowder) are so obviously beneficial that it would have been churlish to consider how they might be misused. There is, however, another reason why for him the issue is not a crucial one. His theology supplies a bridge to surmount the problem.

Priestley's thought contains another variation on the relation between scientific and social - or, in this case, moral - matters. Here natural science acts not as a model for social advance, but, in a roundabout way, as an intellectual cause or ground of it. As he maintains in the Preface to his History of Electricity, science has a moralizing influence because it reinforces the credibility of theism.

> A [natural] philosopher ought to be something greater and better than another man.... What great and exalted beings would scientists be, would they but let the objects about which they are conversant have their proper moral effects upon their minds! A life spent in the contemplation of Divine power, wisdom and goodness, would be a life of devotion. The more we see of the wonderful structure of the world, and of the laws of nature, the more clearly do we comprehend their admirable uses to make all the percipient creation happy, a sentiment which cannot but fill the heart with unbounded love, gratitude and joy. Even every thing painful and disagreeable in the world appears to a philosopher ... to be excellently provided, as a remedy of some greater inconvenience, or a necessary means of a much greater happiness .... Hence he is able to venerate and rejoice in God, not only in the bright sunshine, but also in the darkest shades of nature, whereas vulgar minds are apt to be disconcerted with the appearance of evil (XXV,351).

Suffering ennobles, but its influence is restricted to the improvement of individuals. But science also edifies, and progress in science produces progress in morality. The question of how mankind might accumulate virtue turns out to be tied to the transmission of knowledge, a process at that time not generally thought to be problematical.

Although this line of argument has not often found favour with later progressivists, it was not original in Priestley - it was a commonplace of the Design tradition.<20> What the scientist discovers, according to this view, is not merely order but an order designed to subserve human happiness. Priestley comes very close to an anthropocentric theology of creation in which "we may almost say that every thing was made for our use". "Though there are both plants and animals which, in some applications, are noxious to us, yet in time we come to find out their uses, and learn to avail ourselves of their extraordinary powers", the Institutes asserts (II,9). To see science, religion and morality as so intimately related came naturally to him and was in no way just a solution to a philosophical impasse.

Even so, the importance of this theological manoeuvre should not be over-stated. The edifying influence of science does not supersede the educative effect of hard-won first-hand experience, which the Observations on Education speaks of as "the most effectual discipline of the mind". "The actual experience of a thing is more sensibly felt, and consequently makes a deeper impression than the mere idea of it. Thus one real wound received in fighting will make a man much more attentive and alert to avoid the like danger for the future, than having the same part touched many times by the foil" (XXV,11). In short, moral character depends more on the experience of adversity than on the inspiration available from the contemplation of Design, though both contribute to moral ends. The two are complementary: scientific progress reinforces theism, which in turn motivates a movement towards the mastering of adversity and evil, out of which may arise a deeper understanding of the purposes of Providence.

Priestley's world, in which science, religion and morality enjoy such harmony, may strike us as remote. Few of his progressivist successors were prepared to allow religion so central a role. Yet his contemporaries sometimes objected that he gave religion too subordinate a place. Burke was one such objector, and their disagreement on this point underlies their later political differences. Burke's views are notoriously elusive, but it seems now accepted that he was a progressivist of a kind. When he attacks the abstract reasoning of the radicals he does so in the name of the accumulated wisdom of past ages; he assumes that history is, on the whole, a process of gathering and preserving such wisdom. His theory of progress is mechanically quite opposite to Priestley's. Instead of science supporting religion and morality through the idea of Design, it is for Burke religion and morality that make science possible. Only once medieval Christianity and chivalry have tamed and civilized men is it possible for the great cooperative ventures of modern science, technology, commerce and industry to flourish.<21>

From these opposite starting-points (to foreshadow a theme of the following chapter) Burke and Priestley draw opposing political conclusions. In Priestley's view progress rests on a broad social base - the "industrious classes", of which the scientist, the industrialist and the merchant represent only the tip. For Burke the heart of all progress remains with the guardians of good manners, the nobility and the clergy. For him progress can never be more than extremely fragile, for everything depends on the ability of the clergy and nobility to preserve and propagate the special and difficult ethos of civilized restraint, and the clergy at least must be always vulnerable to materially-powerful predators. For Priestley, by contrast, the civilizing agencies are also the creators of a new kind of material power and prosperity. Progress is intrinsically robust; it is not always in danger of sinking

into barbarism. Burke often attacks Priestley for importing religion into politics and for making a philosophy and a religion out of his hostility to established institutions<22>; yet his own politics are in their own way quite as "religious" as his opponent's. Whether their disagreement is most basically about "original sin", the strength of human nature's propensity towards wickedness, is not easy to establish. Burke is obviously less "optimistic" (in the colloquial sense) than Priestley, but the matter is not quite straightforward. Both must assume that wickedness is not evenly distributed amongst men, for otherwise it would make no moral difference who was in power.

Priestley's dispute with Burke is for the most part a disagreement within a framework of progressive belief. Priestley believes that the past gives us grounds for expecting the future to be a story of continual improvement. He prefaced his Philosophical Unbeliever with a quotation from James Thomson's The Seasons:<23>

> .... I cannot go
> Where universal Love not smiles around;
> From seeming Evil still educing Good,
> And Better thence again, and Better still,
> In infinite Progression ....

Thomson's "Better thence again, and Better still", which suits Priestley so well, would have seemed to Burke just the sort of enthusiastic utterance best calculated to destroy the careful compromises and mutual forbearances in which real progress consists. Nor can we imagine any such proclamation from Burke's colleagues, Hume, Johnson and Gibbon. Yet, for all their caution, Hume, Johnson, Gibbon and Burke were not hostile to progressivism,<24> and it is not easy to find amongst Priestley's contemporaries arguments to show that human nature is so essentially uniform and unchanging as to make progress impossible. Many might assert that the human nature of a Hottentot is not essentially different from that of a modern philosopher, but in saying this they did not mean to imply that modern civilization is no better, morally speaking, than that of a savage, or that men are not susceptible of incremental moral improvements.<25> Some radicals had indeed come to think that progress is intrinsically self-defeating and that the future portends a process of decline - a view we will consider further in discussing Priestley's politics. But this was not quite the same as seeing man as "Created half to rise, and half to fall" (as Pope put it). Nor are these radicals the men usually credited with a permanently tragi-comic or "Augustan" philosophy of history. To find a priori arguments against progressivism (and, for that matter, the theory of historical decline) we must go back to the early eighteenth-century optimists.

The Shaftesburian poet, Henry Brooke, was one who thought optimism and progress incompatible doctrines, for the reason that "What is best can never change to better".<26> Priestley sees no such difficulty in combining the two:

> The more attention we give to evils of all kinds, the more good do we see to accompany, or to follow them: so that, for any thing that we know, a better system, that is, a system abounding with more happiness could not have been made than this, even as it is at present; and much more if we suppose, what is very probable, a tendency to much greater happiness in the completion of the whole scheme (II,9f).

The future will be even happier than the present, which is already as happy as it can be. There are temporal and atemporal notions of an optimal system, and this world manages to meet the specifications of both.

It was perhaps Pope in the Essay on Man who stated best an anti- progressive interpretation of optimism.

> Alas what wonder! Man's superior part
> Uncheck'd may rise, and climb from art to art:
> But when his own great work is but begun,
> What Reason weaves, by Passion is undone.

Much of Pope's Second Epistle is given to describing how passion and reason can cooperate and conspire to virtuous ends; yet he asserts with equal force that the unruliness of passion can never be wholly tamed.

> Passions, like Elements, tho' born to fight,
> Yet, mix'd and soften'd, in his [God's] work unite....
> These 'tis enough to temper and employ;
> But what composes Man, can Man destroy?

Passion operates in human nature homeostatically, to ensure that reason can never take full control.

> Virtuous and vicious every Man must be,
> Few in th' extreme, but all in the degree ....

Priestley rejects this assumption that man is made of mutually antagonistic materials. The possibilities of improvement are unlimited: according to the Observations on Education, "progress is not equable, but accelerated, every new improvement opening the way to many others...." (XXV,11). The Essay on Government goes so far as to declare that as our minds mature "we are perpetually deriving happiness from new sources, and even before we leave this world are capable of tasting the felicity of angels" (XXII,47). The difference between Pope and Priestley rests perhaps on different emphases on the questions of theodicy. Both are deeply concerned about questions of character, but for Pope character-formation is constrained by the Chain of Being in a way that it is not for Priestley. Man is "Plac'd on this isthmus of a middle state", and his inability to approach perfection is only what is to be expected in such a situation. For Priestley considerations of finitude and plenitude are not permitted to set limits on character and progress.

7.1(iii) Gradualism

Priestley's progressivism commits him to an historiography of change and to a theory of the mechanics of change, but it also entails something about the appropriate pace of change, in both the social and scientific spheres. The mere passage of time itself does not increase the amount of human knowledge, virtue and happiness, but it is an essential ingredient in their

creation. Lasting achievements can only be won in a lengthy struggle: "all great improvements in the state of society ever have been, and ever must be the growth of time, the result of the most peaceable, but assiduous endeavours in pursuing the slowest of all processes - that of enlightening the minds of men ...." (XV,439).<27> This "slowest of all processes" can not be hastened without losing the object to be attained, and is thus the fastest possible route to its destination.

Indeed, there is a natural presumption against the validity of any particular innovation:

> we should reflect that it is the result of a wise part of our constitution that the bulk of mankind should not hastily change their opinions and practices, and that innovations should be opposed, because this makes us more cautious in propagating what appears to be truth, and gives it the firmest establishment once it is received (XXV,324).<28>

Elsewhere he remarks that "The slow and gradual progress of Christianity, and also that of the reformation, is a circumstance that bids fairer for their perpetuity than if they had met with a readier reception in the world" (IV,119). Priestley's progressivism contains its own kind of conservatism: change is justifiable only if it preserves the accumulated achievements of past generations, and this preservation is no easy matter.

This gradualism is a position he employs his associationism to reinforce. According to his psychology, character and culture are a compound of accumulated associations, and their acquisition is necessarily slow and piecemeal. He believes the most dangerous error in religion to be the opinion that

> that which renders a man acceptable in the sight of God, and fits him for heaven, is not a habit or disposition of mind...; which evidently requires time and care to form; but some single act, or effort, whether proceeding from a man's self, or from God.... [A] single action, though it may lead to, does not constitute a habit; and even a habit, or course of actions, must be continued a considerable time before it can be quite easy and familiar to him, so that his heart and affections shall be engaged in it; and then only is the character properly formed (XV,13f).<29>

This reasoning pertains not only to religion, but to social affairs in general. As we shall see in discussing his politics, it is the basis of Priestley's reformism, and usually acts as a brake on hopes for revolutionary solutions to social problems. His political views, I shall argue, are an extension of his ideas about character and progress and thus an aspect of his optimism; but before this can be considered, we need to review the epistemology which informs his optimism, both for its own sake and because his political views are the aspect of his optimism which comes to be most severely tested by experience - the experience of the events in France and England in the 1790s.

7.2 The Epistemology of Optimism

To examine the epistemology of Priestley's optimism, and thus to return to the challenge Hume issued to moral theology, we need to keep in mind that not all of his theodicy is

progressivist. He contends that even if man were not on a course of improvement, there would be ample signs that God intended our well-being. The atemporal aspect of divine benevolence appears in various permanent features of the human situation, the "natural sanctions of virtue". The Institutes, following standard eighteenth-century opinion, regards human affairs as so ordered that

> those persons who addict themselves to vice and wickedness become miserable and wretched, in the natural course of things, without any particular intervention of Providence; whereas virtue and integrity are generally rewarded with peace of mind, the approbation of our fellow creatures, and a reasonable share of security and success (II,14).

Intemperance tends to injure health; malevolence involves "uneasy sensations"; lying will "destroy a man's credit in society". The Observations on Education warns that "A life of pleasure, as it is improperly called, never fails to have most dreadful intervals of languor and disappointment, and generally leads to wretchedness and vice" (XXV,35). These are not invariable connections, but they hold true more often than not, so that "generally" virtue and self-interest coincide.

This coincidence is taken to call for a theological explanation. In the Philosophical Unbeliever Priestley contends that a naturalistic account of the case, if one could be found, would not refute the supernatural explanation. It does not matter, he thinks, "by what particular means these advantages have accrued to mankind, for whatever the secondary causes may have been, they could not have operated without the kind provision of the first and proper cause of all" (IV,350). His usual assumption is that there are no naturalistic alternatives to a theistic explanation.

7.2(i) Empiricism

The combined force of Priestley's belief in progress and in natural rewards for virtue amounts to the claim that good predominates over evil in human affairs. This need not have been his opinion: a philosophical optimist, as we saw, may think this to be the best of all possible worlds without believing it to be good in any ordinary sense; a progressivist may think that mankind is only at the beginning of its ascent to moral dignity; and an ordinary theist is free to think that good will gain the ascendancy over evil only in a future existence. Priestley rejects all these alternatives for epistemological reasons. Consistent with his general empiricism, he requires that God's attributes and intentions be discovered from the evidence of history and science, what Hume called "vulgar experience", or not at all. "All the evidence of religious truths", he insists in the Institutes, is of two kinds, "either general conclusions, by induction from a number of appearances, or founded on historical evidence" (II,252).

It is not for Priestley an evident metaphysical truth that the best of all possible beings must create the best of all possible worlds. Leibniz had held that infinite wisdom and goodness could not fail to choose the best possible world; and thus for him this world must be best whether it appears so or not. "In God this conclusion holds good: he did this, therefore he did it well".<30> For Priestley this reasoning is not acceptable. Only the

actual production of happiness or "a manifest tendency to it" can be used to demonstrate benevolence (IV,395). Samuel Clarke had argued that God's infinite intelligence must perceive the "necessary fitnesses of things" upon which morality depends and that he must act in accordance with those "fitnesses". Priestley in reply to this denies that there is any perceptible "connexion between intelligence, as such, and any particular intention or object whatever" (IV,393).<31> Not even for God does action follow from knowledge; consequently we cannot interpret his actions by reference to his knowledge. Both Clarke and Leibniz can afford a less stringent attitude to the phenomena of benevolence because, unlike Priestley, they have a priori assurances of God's existence.

Priestley also rejects James Oswald's claim that common sense can assure us of God's goodness. In the Examination he quotes Oswald as saying "it is impossible to survey the multitude of living creatures [God] has brought into being, which he upholds in being, and protects from danger, and for whom he makes continual and bountiful supplies, without acknowledging his immense benevolence and parental care". Suffering, Oswald asserts, is "consequent upon almost every deviation from moral rectitude, even in this life...." (III,126f).<32> The sentiments here could easily be Priestley's own, except for the word "impossible". For Oswald, to deny divine benevolence would be unreasonable because it is in some sense impossible: our constitutions ensure that we cannot believe otherwise. For Priestley this denial is certainly unreasonable, but not at all impossible. Oswald, he thinks, is reasoning without realizing that he is doing so. "I can only compare our author to the poor man who had spoken prose all his life without knowing it".

The question of divine benevolence is a matter which requires argument, and about which disagreement is to be expected. Writing in the Institutes (a few years before the publication of Hume's Dialogues), he says:

> If any person, like Lord Bolingbroke, call in question the goodness of God, all that I can say to convince him of his mistake is, to shew him that there are more marks of kind intention than of the contrary in the structure and government of the world: and if he reply that some facts, singly taken, are as evident marks of a malevolent intention, as others are of a good intention, and the particular instances to which he alludes be such as I cannot deny or explain, so that my proof is not complete, I frankly acknowledge that I have no other or better (II,252f).<33>

In Priestley's view, Oswald's attempt to extend the domain of common sense into matters of religion is both epistemologically vulnerable and unnecessary: vulnerable, because men of sound common sense may still be atheists; and unnecessary, because theism can find in the world assurances quite as solid as those of common sense.

In the Dialogues Philo had asserted that

> The whole universe presents nothing but the idea of a blind nature, impregnated by a great vivifying principle, and pouring forth from her lap, without discernment or parental care, her maimed and abortive children.<34>

Priestley quotes this passage with abhorrence but he does allow that if Philo is right, then theism is untenable. Philo had ridiculed the "gloom and melancholy remarkable in all devout people"; Priestley thinks "gloom and melancholy" more appropriate to someone of

Philo's outlook. The proper response to theism is, he thinks, a "calm and sedate, but cheerful spirit of rational devotion", grounded on a broad experience of a world exhibiting "marks of kind intention" (IV,376).

A world such as Philo describes would make theism both emotionally and epistemologically unstable, even if it could promise the reversal of present misfortunes in a future existence. According to the Institutes, a benevolent Deity would "have produced no system at all, rather than one in which misery might prevail" (II,17). This is perhaps ambiguous: it is not clear whether Priestley is here weighing up the balance of happiness and misery in this life only or in this life and the future life taken together. Other passages make it clear that he thinks happiness outweighs misery already in this life: "acts of kindness far exceed those of cruelty", and "for one man who really suffers from remorse of conscience, numbers think so well of themselves and of their conduct that it gives them pleasure to reflect upon it" (IV,348).<35> For Hume (or at least Philo) "one hour of [pain] is often able to outweigh a day, a week, a month of our common insipid enjoyments".<36> For Priestley "pains and evils ... tend to exterminate themselves; whereas pleasures extend and propagate themselves, and that without limit".

> In nature, it is a fact that a state of health (that is, tolerable though not perfect health) is general, and a state of sickness comparatively rare.... A hundred diseases terminate favourably for one that is fatal (IV,347).

Johnson's famous dictum might be transposed almost: for Priestley, "Human life is everywhere a state in which much is to be enjoyed, and little to be endured".<37> But this goes too far: "more to be enjoyed than endured" would be closer, and, we should remember, a life of pure enjoyment would be far worse - because morally detrimental - than our present mixture of enjoyment and endurance.

Lovejoy has asserted that "The reasoning of the optimist was directed less to showing how much of what men commonly reckon good there is in the world of reality than to showing how little of it there is of it in the world of possibility ...."<38> Priestley maintains both kinds of argument. Defensively, following the Augustinian approach, he can argue the importance of thinking about good and evil systematically, and thus try to show that certain goods we might suppose possible are not real possibilities. But more often, in the Irenaean manner, he argues that reality contains more good than the sceptic supposes, and that what evil there is is on the way to being eradicated. Reality, even this world, is not predominantly evil, nor do we normally experience it as such. When Hume has Philo deny that men find life "eligible and desirable", Priestley replies that "almost all animals and all men do desire life".<39>

Yet, while not wanting to allow the sceptic to magnify the reality of evil, he does not want evil to be seen as insignificant. In the eyes of God, he sometimes says, evil is unreal. He means by this that there is no evil that does not subserve good. The reality of evil is as empirical as the reality of good. That evil is ultimately entirely subservient is for him a statement of faith or probable conjecture, and not an empirically-verifiable truth. From our limited perspective some evils remain inexplicable, and those whose good purposes we can perceive often remain as obstacles to be overcome, for their purpose is fulfilled only in the virtue acquired in their elimination. To come to see evil as wholly, or even largely

subservient to good takes great strength and comprehension of mind. The Institutes concedes that "the great mixture that we see of apparent evil is apt to stagger even well-disposed minds, especially when they themselves are affected by it ...." (II,285). When confronting the horrors of the slave trade of his own day, he retreats to the claim that "we cannot say what evils are useful in the general plan, or to what height they may safely and usefully rise (this being far above our comprehension)...." (XV,364). In another dark moment he remarks, with almost Humean severity, that "kings and conquerors, who spread undistinguishing havoc wherever they come, might plead that they imitate the Almighty, in his storms and tempests, in his plagues, pestilences and famines" (XXI,115). On such occasions the Christian has to call upon his faith. "The true Christian can, therefore, rejoice even in tribulation, knowing that 'tribulation worketh patience, and patience experience, and experience hope' [Romans 6; 3-5]" (XV,161).<40> But such instances are not the norm. Normally our comprehension is taken as reasonably competent to judge the safe and useful height for evil. We can, unaided, perform our own transmutation of adversity into patience, experience and hope.

Priestley's insistence on the predominance of good over evil may help to diminish the problem of evil, but it creates what from another angle looks like a paradox. On his view, it might seem, those most in need of religious consolation are those least entitled to expect it. To him who has experiential grounds for believing in divine goodness, more may be given; but to him who has not, what little he has will be taken away by the strict requirements of empirical reasoning. This interpretation misconstrues the situation, at least partly. If all mankind were ordinarily miserable then hope would be misplaced. But as mankind are not on the whole badly off, those individuals or societies who for a time find themselves with little to be thankful for still have reason to believe that God's mercy and justice are not far away. And even when good does have the upper hand there will still be many evils that the religious man can hope and pray to see overcome. This world is still "only the beginning of a scheme of more exact and impartial administration" (IV,381). Sometimes virtue has to be heroic. Indeed, (as he tells the students of New College, Hackney) progress "has seldom been attained without great sacrifices, from generous and disinterested individuals, who, though the greatest benefactors of mankind, receive no reward in the present world, but in the gratitude of posterity, and in heaven" (XV,439).<41> The Christian believes that, "though all virtue, public and private, is attended with a sufficient reward in this life, it arises chiefly from the consciousness of having done our duty"; but he also believes that the only day of proper and ample recompense is 'at the resurrection of the just'" (XXV,4).<42>

7.2(ii) Analogy

Priestley thinks he has established God's "general benevolence", the priority of good over evil; and in the Philosophical Unbeliever he contends that it is a not unreasonable conjecture to suppose that God is infinitely benevolent. This second step Hume had opposed just as strenuously as he had opposed the inference from limited divine wisdom to omniscience. We can advance beyond finite divine benevolence only if we "call in the assistance of exaggeration and flattery to supply the defects of argument and reasoning", he says in the Enquiry concerning Human Understanding.<43> In the Dialogues Cleanthes finds himself compelled to resort to the hypothesis of a finite deity capable of only finite goodness. Priestley in the Philosophical Unbeliever accepts that we cannot hope to prove

infinite benevolence, for we are not competent to judge with any great exactitude "the degree of misery proper or necessary to be mixed with any proportion of happiness"; but he insists that infinite benevolence is more than just a mere possibility. He appeals again to the theory of progress, to the claim that "in general, we perceive in every thing a gradation from worse to better". This progress supports the presumption "that, as our experience advances, we shall see more and more reason to be satisfied with the dispensations of Providence" (IV,351). This presumption is only a probability, based on analogy from past experience, but such reasoning is permissible. Hume's contention that "with regard to the oeconomy of a universe, there is no conjecture, however wild, which may not be just; nor any one, however plausible, which may not be erroneous" is not, on Priestley's view, a reason to abandon plausibility as a guide to belief. In such matters "analogy, founded on established associations of ideas, is our only guide" (IV,345; 380).

Many in the eighteenth century were willing to believe mankind had progressed while refusing to allow that it either must or more simply will continue to do so. They believed in the reality of progress but rejected progressivism. Johnson's view was characteristic: "The most zealous enemy of innovation must admit the gradual progress of experience, however he may oppose hypothetical temerity".<44> For Priestley this "temerity" is epistemologically acceptable. Progress entails progressivism, not logically but inductively. The reasoning is sanctioned by the authority of Newton's Second Rule. Newton's First Rule would seem to present a difficulty here, for to postulate an infinite cause to explain a finite would seem to be to go further than is necessary. Priestley would reply that the historical evidence points in the direction of an infinite cause, and thus warrants the postulation of such a cause. He would presumably deny that other possible causes are "sufficient" to explain appearances. Hume, as we saw in Section 6.2(ii), maintains strenuously that any finite evidence, no matter how strong, would be insufficient to establish infinite power and goodness. His contention makes no explicit reference to Newton's Rules, though he may have thought of it as a version of the First Rule.

7.2(iii) The necessity of adversity

That adversity sometimes leads to courage and compassion is indisputable. Some may be prepared to agree that it produces these qualities as abundantly as Priestley says it does. The optimist, however, has to depend on an even stronger proposition. He must try to show that adversity elicits virtue more effectively than any other method. In particular, he must show that it is outside the power of God to make men naturally virtuous. This question was perhaps implicit in Hume's remark, attacking the system-theodicy, that the Deity might "produce all good without any long preparation of causes and effects".<45> It is in any case a question Priestley himself often raises. The difficulty for him is accentuated by his inability to appeal to the free- will defence. The libertarian might claim that for God to implant an infallible tendency to virtue in our original constitutions would be to reduce men to automata. Debarred from this plea, Priestley has to seek alternative solutions. His whole argument stands or falls on the premise that virtue requires suffering. Without something to support that premise his argument must rest on the premise's intuitive plausibility, and not everyone will find it plausible, as Hume did not.

Priestley's main essays in philosophical theology, the Institutes of 1772 and the Philosophical Unbeliever of 1782, are in agreement. Both discountenance the suggestion that "we might have been differently constituted, so as to have been happy in a world not governed by general laws, and not liable to partial evils". Yet in defence of his position he can only conjecture that adversity and virtue may be necessarily connected. "For any thing that we know, it may be as naturally impossible to execute any scheme free from the inconveniences that we complain of in this, as that two and two should make more than four" (II,11f).

In two other places he seems to assert, rather surprisingly, that God could make men naturally virtuous, but in both cases the suggestion turns out to be illusory. Priestley's 1779 sermon, "The Doctrine of Divine Influence on the Human Mind", is concerned to argue that God never acts directly on men's minds to improve their moral character. Divine agency operates in the moral sphere only at a distance, through the influence of natural means following general laws. The context is thus that of the system theodicy. In the course of this discussion he remarks that the Deity, "who made us at first", can "new-make and new-mould us, as he pleases", so that he may "change the hearts of the worst of men in an instant" (XV,91). Priestley's point is, however, that God "has not thought proper to work in this manner" and that he must have had compelling reasons for not doing what, otherwise, he could have done.

Similarly, the Essay on Government says rather surprisingly that God might have

> formed the human mind with an intuitive knowledge of truth, without leading men through so many labyrinths of error. He might have made man perfectly virtuous without giving so much exercise to his passions in his struggles with the habits of vice (XXII,124).

But Priestley is not asserting what he seems to assert. He is reasoning, rather, that because God did not choose to make men perfect, because he preferred that "mankind should be, as far as possible, self-taught", he must have had good reason for so preferring. The path of adversity must have been best because it is the path God has chosen for us. He seems unaware that this reasoning is, once again, the reverse of that required by his empiricism; but he does go on to offer an independent reason why God might have so chosen. The divine purpose is that we might finally be "more confirmed in the truth, and have more enjoyment of it, by reviewing the many errors by which we were misled in our pursuit of it" (XXII,125).<46> Truth (and, presumably, virtue), he is assuming, can only be fully appreciated by contrast with not error (or vice) in the abstract, but errors (and offences) actually committed. The assumption here is a version of the contrast theodicy discussed in Section 6.2(i). Exactly how it establishes the necessity of adversity Priestley does not expand upon.

There is another strand in Priestley's moral thought which might seem to serve the purpose, the strong distinction which he draws between virtue and innocence. An address he gave to the students of New College, Hackney, speaks of

> that virtue which is the result of reflection, of discipline, and much voluntary exertion; which though operating with equal promptness and facility, is as much

> superior to mere innocence, and what is commonly called good nature, as motions secondarily automotive to those that are primarily so; a comparison which you who have studied Hartley's Theory of the Mind will see the force of (XXV,389).<47>

Virtue and innocence may result in the same actions, but the virtuous act is morally superior to the innocent act. Why this should be so is not yet clear; but if it is so it might supply a reason for God to prefer hard-won to ready-made characters.

The relation between virtue and innocence is a topic raised for Priestley by Richard Price's Review of the Principle Questions of Morals. Priestley thought Price had attempted to wholly discount the moral worth of innocence. Price had asserted that "the virtue of an agent is always less in proportion to the degree in which natural temper and propensities fall in with actions, instinctive principles operate, and rational reflection on what is right to be done is wanting". "Instinctive benevolence", he maintains, "is no principle of virtue".<48> His reasoning is that virtue is freely chosen, and thus valuable, while instinct is outside our control and thus merely automatic. Priestley and Price agree that virtue is a matter of hard-won habit, innocence a matter of instinct. Yet Price went too far in allowing innocence no title to our moral regard, Priestley believes. The two are not essentially dissimilar. According to his Philosophical Necessity, "Every thing that is so confirmed as to become habitual, operates exactly like what is called instinct (for my own part I believe them to be, in all cases, the very same thing)...." As physical structures they are the same, both governed by the laws of Hartley's psychology, he seems to mean. They differ morally only because instinct is less reliable than habit in producing its characteristic effects: "but let that principle [instinct] be supposed to be really fixed and stable, and wherein does it differ from that disposition of mind which is the result of the greatest labour and attention?" (III,489f).

Priestley defends innocence against Price's dismissal of it, but there is no doubt that in a wider context he thinks the superior reliability of habitual virtue over instinctive innocence makes a world of difference. This distinction underpins his progressivism. "By means of art [says the Observations on Education] we are not only enabled to go far beyond that low mediocrity in every thing, to which alone nature would train mankind, but the whole species is put into a progressive state...." (XXV,11). Yet it is still not clear whether the distinction can serve at the theological level to justify the necessity of adversity. The libertarian like Price can draw an absolute distinction between virtue and innocence, Priestley only a relative one. But if virtue and innocence are not essentially different why can not God achieve his moral purposes by one as well as by the other? If he can create us with instincts quite as reliably virtuous as the most hard-won of habits, why bother to put us through the school of adversity? This problem remains obstinately unresolved in Priestley's writings, despite his various attempts to deal with it.

Priestley, in his debate with Price, compounds the problem by discovering theological reasons for denying that virtue must result from effort and opposition. Price's denial of any moral worth to innocence, he says,

> take[s] away all virtue, goodness and merit from the greatest and best of all Beings, and likewise make[s] it absurd to pray for virtue, since nothing that is communicated can be entitled to that appellation.... In fact, it is mere Heathen

> Stoicism, which allows men to pray for external things, but admonishes them that, as for virtue, it is our own, and must arise from within ourselves, if we are to have it at all (III,491).

Virtue cannot always depend on effort, for divine virtue is effortless: this may be so, but it is hard to reconcile with the claim that virtue and suffering may be related as two and two are related to four. Consistency requires him to show that virtue needs adversity only at the finite level of human existence. Likewise, it is strange to find him speaking of virtue being "communicated" from God to man, when only two years later his "Doctrine of the Divine Influence on the Human Mind" was to deny expressly any such direct communication.

7.2(iv) Original Inertia

Some eighteenth-century thinkers, both religious and sceptical, thought the past a tale without meaning; "little else but the history of uncomfortable dreadful passages", the great part of which "is scarcely to be read by a good-natured man without amazement, horror, tears" - the words are William Wollaston's,<49> but might easily be Voltaire's. Progressive optimism is committed to combating this kind of despair, but it does so by shifting all meaninglessness back to the beginnings of history, and this creates a curious epistemological problem. If history, read forwards, is a story of improvement, then it must also, read backwards, exhibit increasing backwardness. If the credit for the advances of modernity is to be given to a guiding Providence, then Providence must also be accounted equally responsible for the miseries of antiquity. Perhaps those miseries exceed the bounds allowably consistent with belief in a superintending Benevolence. An extreme of misery would produce despair and thus make it problematical how man ever managed to escape those circumstances. Progress, on this interpretation, is like a machine that requires more force to put it in motion than to keep it in motion. Priestley's antipathy to primitivism is such as to suggest difficulties for his progressivist theodicy. Whether he was aware of any such difficulties is doubtful.

Priestley's picture of the distant past is almost unrelievedly dismal. He devotes a long chapter of the Institutes to establishing this view (II,73-108).<50> The ancients are depicted as ignorant, superstitious and barbaric. In religion, they are ignorant of all the essentials - the unity of God, his goodness, his final judgement and the promise of a future life. In moral matters things are no better: "Idleness, treachery and cruelty are predominant in all uncivilized countries; notwithstanding the boasts which the poets make of the golden age of mankind, before the creation of empires", according to the Lectures on History (XXIV,269). If history is a passage from innocence to virtue, mankind's "innocent" beginnings are not in this context rated very highly. Even the Greeks, generally accounted the most civilized of ancient societies, condone infanticide, suicide, sodomy and adultery; the Egyptians and Persians permitted incest. Such political liberty as they enjoyed was purchased at the expense of the personal liberty of numerous slaves, ancient slavery far exceeding the scope of the modern slave trade (XXIV,427ff). Ancient governments, for all their harshness, provided little security against banditry.

Nor do the "primitive" societies discovered by European explorers offer an alternative to the European world. The Essay on Government holds that in all "barbarous nations, and especially in countries thinly inhabited" (he has in mind the tribal communities of North America and Greenland) "society and government are exceedingly imperfect". Such societies are still effectively in a state of nature, no further advanced than Europe's ancient forerunners, not having yet discovered the benefits of rational cooperation in a division of labour. "From generation to generation every man does the same that every other does, or has done, and no person begins where another ends; at least, general improvements are exceedingly slow and uncertain" (XXII,9).

How, in these circumstances, the true value of cooperation might come to be discovered Priestley has difficulty explaining. In its original condition, according to the Lectures on History, "Mankind seem to have required a greater spur to ingenuity than merely the prospect of providing themselves with the conveniences of life...." Like Turgot he is led to speculate on the role of war and hostilities in stirring men out of their primeval indolence, spurring them on to exercise their inventiveness, the by-product of which has been "many of the most useful arts of civil life". He sees conquest as one main cause of the spread of civilisation, before commerce became sufficiently advanced to assume that role. The reasoning here is uncharacteristically counter-intuitive: "religion, liberty and the sciences", upon which human happiness mostly depends, "have been chiefly promoted by events which, at first sight, appeared the most disastrous" (XXIV,431).

Progress in religion, no less than that in other spheres, requires a special impetus to set it in motion, but here especially the impetus is entirely outside the normal course of events. The Jews, who contribute most to the process, are not themselves exempt from Priestley's general condemnation. Against Gibbon and Voltaire, Priestley used the Jews' backwardness as an argument to show that their monotheism must have derived from a real external revelation. "Let Mr. Gibbon recollect his own idea of the Jews, which seems to be much the same as that of Voltaire, and think whether it be at all probable that they should have originally invented a religion so essentially different from any other in the world, as that which is described in the books of Moses" (V,483; X,515). The argument here supports revelation only by detracting from the evidence for a benevolent Creator. Priestley holds that the existence and benevolence of God was discoverable by the ancients, and (surprisingly) that monotheism had flourished "in the earliest age of the heathen world", having been "communicated by Divine revelation to the first parents of mankind" (II,2; II,74f; IV,323f), only to be corrupted by the Greeks' first efforts at philosophizing. He does not show how divine benevolence could have been discovered if the human situation was as wretched as he depicts it.

Priestley's closest approach to this problem occurs in discussing the present, not the past. He once, for the purposes of argument, concedes to Matthew Turner that in the present world misery still exceeds happiness. Turner, however, happens to also believe in progress, and Priestley turns this against him.

> You allow that 'the condition of mankind is in a state of amelioration'; and if this be the case, though happiness should not preponderate over misery at present, it is sure to do so in due time; so that, looking forward to the whole of things, the argument

> for the goodness of God, with respect to mankind at least, is quite satisfactory (IV,435).

Priestley's primitive man might perhaps have reasoned in the same fashion. But the problem of evil is stubbornly synchronic: it concerns all men at all times equally. Priestley's argument will appear more satisfactory to men who can enjoy the benefits of history's accumulated achievements than it can to the early pioneers who battled against almost overwhelming adversity. For them only the prospect of recompense in a future life can have offered real reassurance. They could not easily "look forward to the whole of things", having so little to look back on to ascertain the direction of events. Early religion, it would seem, has of necessity to be a matter of revelation and faith rather than of history, science and reason.

Notes to Chapter Seven

1. From his Preface to Experiments and Observations on Different Kinds of Air, and Other Branches of Natural Philosophy connected with the Subject, (Birmingham, 1790). When, a year later, the Birmingham mob, in retaliation perhaps for statements such as this, wished to set fire to his books, they tried to extract a spark from Priestley's own electrical machines. The attempt failed and they had to resort to less scientific techniques of arson.

2. See Martin Fitzpatrick, "Joseph Priestley, and the Cause of Universal Toleration", The Price-Priestley Newsletter, 1977, No. 1, pp. 3-30. Priestley also wrote A Free Address to those who have petitioned for the Repeal of the late Act of Parliament in favour of Roman Catholics (London, 1780).

3. John Brown, Anglican clergyman and moralist, published in 1757 An Estimate of the Manners and Principles of the Times and in 1765 Thoughts on Civil Liberty, on Licentiousness and Faction, which argue that economic prosperity and "luxury" have caused Britain's traditional liberty to decline into licence. He urged his countrymen to take Sparta, not Athens, as their model, and to institute a system of rigorous patriotic state education. It was this proposal that Priestley attempted to combat in an appendix to the Essay on Government. See Margaret Canovan, "Two Concepts of Liberty - Eighteenth-Century Style", The Price-Priestley Newsletter, vol 2, 1978, pp. 27-41.

4. Edmund Burke, Reflections on the Revolution in France and on the Proceedings in certain Societies in London relative to that Event, ed. with an introduction by Conor Cruise O'Brien, (Harmondsworth, 1968), p. 277. See also p. 194 where he uses the metaphor of parricide not infanticide.

5. From his Outline of the Evidences of Revealed Religion, (Philadelphia, 1797).

6. From his sermon "The Importance and Extent of Free Inquiry in Matters of Religion" of 1785.

7. The most pessimistic assessment of human nature in Priestley's acquaintance came from a man often thought of as naively optimistic, his friend and fellow-scientist, Benjamin Franklin. Writing to Priestley in 1782, after five years of warfare between Britain and the Americans, he says: "I should rejoice much if I could once more recover the leisure to search with you into the works of nature. I mean the inanimate, not the animate or moral part of them. The more I know of the latter, the more I am disgusted with them. Men I find to be a sort of beings very badly constructed, as they are generally more easily provoked than reconciled, more disposed to do mischief to each other than to make reparation, much more easily deceived than undeceived, and having more pride, and even pleasure, in killing them in begetting one another; for, without a blush, they assemble great armies, at noon-day, and when they have killed as many as they can, they exaggerate the number, to augment the fancied honour". A young angel, brought to earth for the first time and lighting on the battle between the fleets of Rodney and De Grosse, with all its smoke and fire, maimed and mangled bodies, and sinking or burning ships, would protest that it had been brought not to earth but to hell. Its guide would reply: "No Sir.... This is really the earth, and these are men. Devils would never treat

one another in this cruel manner. They have more sense, and more of what men (vainly) call humanity" (I,1,360f). In an earlier letter, when Priestley was writing Matter and Spirit, he says: "The hint you gave me, jocularly, that you did not quite despair of the philosopher's stone, draws from me a request, that when you have found it, you will take care to lose it again; for I believe, in my conscience, that mankind are wicked enough to continue slaughtering one another as long as they can find the money to pay the butchers" (I,1,297). This pessimism is matched only by that of Hume in Part X of the Dialogues.

8. Priestley knew well enough that scientists are "only human", but in his practice as an historian of science he wished to make as little as possible of human failings. "Did it ever depend upon me it should never be known to posterity that there had ever been any such thing as envy, jealousy and cavilling among the admirers of my favourite study", the Preface to his History of Electricity admits with disarming straightforwardness (XXV,346). The same Preface can quote David Hartley as saying that "Nothing can easily exceed the vain-glory, self-conceit, arrogance, emulation, and envy, that are found in the eminent professors of the sciences, mathematics, natural philosophy, and even divinity itself" (XXV,353). Priestley was hurt and shocked when in the 1790s the Royal Society seemed to him to have become unduly political, snubbing him and rejecting his friend Thomas Cooper's application for membership. He consoled himself with the thought that "the most scientific members" were above this level of pettiness (I,2,119n; XIX,503-5), though Henry Cavendish was among those who shunned him.

9. From his A Few Remarks on some paragraphs in the Fourth Volume of Blackstone's Commentaries on the Laws of England. Priestley himself is not above speaking in the same place of the "lies and sophistry" and "malice and nonsense of High Churchmen" (XXII,304). For Blackstone's original statements see Commentaries on the Laws of England, 4 Vols, (Oxford, 1769), IV, 51. By the fourth edition (Dublin, 1771) he has allowed that "no restraint should be laid upon rational and dispassionate inquiries into the rectitude of the established mode of worship"; the force of the laws is, he now thinks, only against writings which exhibit "contumely and contempt" (IV, 51).

10. Reflections, op. cit., p. 127.

11. Compare Burke: "Wisdom is not the most severe corrector of folly. They are the rival follies, which mutually wage so unrelenting a war; and which make so cruel a use of their advantages, as they can happen to engage the immoderate vulgar on the one side or the other in their quarrels" (ibid., p. 269).
12. From his A Description of a Chart of Biography of 1765.

13. Condorcet's own enjoyment of the "aurora" was unfortunately momentary, when the necessary order of things turned the Revolution from fraternity to fratricide. His death by suicide or apoplexy in a sans-culotte prison cell occurred in March, 1794, eleven days before Priestley's departure for America.

14. This simple point was missed by the German writer Georg Christoff Lichtenberg in his at-first-sight shrewd observation, against the progressivists, that "The high-jumper jumps higher than the plough-boy, and one high-jumper better than another, but the height which no human being can jump over is very small" (quoted by Frank Manuel in his Shapes of Philosophical History, (Stanford, 1965), p. 77).

15. From his A Description of a Chart of Biography.

16. See Autobiography of Joseph Priestley, ed. Jack Lindsey, (Bath, 1970), p. 125. On Turgot and genius see Frank Manuel The Prophets of Paris, (New York, 1965), pp. 26-8.

17. From his Preface to the second edition of the History of Electricity. In his Course of Lectures on the Theory of Language and Universal Grammar, (Warrington, 1762) he argues that the diversity of languages has brought considerable intellectual and religious benefits, in counteracting the effects of merely verbal associations and in preventing the establishment of one single system of idolatry in the earliest religions. Even in this matter he finds hints relating to the problem of evil. The diversity of languages is analogous to the rest of the works of nature, for, though in some sense an evil, it serves a superior purpose. And "we have reason to believe that all evils, whether necessary to, or permitted in this world, are both temporary, and while they continue, salutary; that is, relatively so, and the state of every thing connected with them considered". At present a universal language is beyond our capacities, but it may be effected in "some distant age of the world". "For since all other evils and inconveniences have final causes, which terminate by means of those very evils, the diversity of languages, when it hath completely answered all the present uses of it, may also contribute to its own extermination" (XXIII,242-50).

18. Priestley's tentativeness about moral progress was echoed by Gibbon thirteen years later. Chapter 39 of the Decline and Fall of the Roman Empire declares, "We may therefore acquiesce in the pleasing conclusion that every age of the world has increased and still increases the real wealth, the happiness, the knowledge, and perhaps the virtue, of the human race" (my emphasis). See The History of the Decline and Fall of the Roman Empire, 12 Vols, (London, 1815), Vol. 6, p. 420.

19. The problem of how virtue might be transmitted across generations was a stumbling block for many progressivists; Turgot, for instance, hesitated at this point (see Manuel, Prophets of Paris, op. cit., p. 37f).

20. This is shown by J. G. McEvoy and J. E. McGuire, "God and Nature: Priestley's Way of Rational Dissent", Historical Studies in the Physical Sciences, Vol. 6, p.343; they include Newton, Colin MacLaurin, William Derham and David Hartley in this tradition. They quote Priestley's History of Electricity: "the greatest and noblest use of philosophical speculation is the discipline of the heart and the opportunity it affords of inculcating benevolent and pious sentiments upon the mind" (XXV,351).

21. See J. G. A. Pocock, "The Political Economy of Burke's Analysis of the French Revolution", in Virtue, Commerce, and History. Essays on Political Thought and History, Chiefly in the Eighteenth Century, (Cambridge, 1985), especially pp. 195-9.

22. A contemporary cartoonist's description of Priestley as "Dr Phlogiston, The Priestley politician or the Political Priest!" neatly sums up Burke's view of him. In the Reflections (op. cit., p. 93) he speaks of "political theologians, and theological politicians". The cartoon sees Priestley as an enraged firebrand standing on a tract entitled "Bible explained away", waving a "Political Sermon", and with "Essays on Matter and Spirit" and "Revolution Toasts" protruding from his pockets. It at least pays

him the compliment of seeing him whole. See A. D. Orange, Joseph Priestley. An Illustrated Life of Joseph Priestley 1733-1804, (Aylesbury, 1974), p. 37.

23. These are from the concluding lines of "The Seasons". Priestley has left out a line. It should read "Where universal love not shines around / Sustaining all you orbs, and all their sons".

24. Gibbon can declare that "the experience of four thousand years should enlarge our hopes and diminish our apprehensions...." (op. cit., p. 418). Johnson, says Boswell, was "never prone to inveigh against times, as is so common when men are on the fret. On the contrary, he was willing to speak favourably of his own age; and, indeed, maintained its superiority in every respect, except in its reverence for government" ("lack of reverence", Johnson means, as the context shows). See Life of Johnson, ed. G. B. Hill, (London, 1937), Vol. III, p. 3. It would be absurd to interpret such complex figures through single statements or passages; my claim is only that they are not to be assumed hostile to progressivism. For discussions of the complexities of Gibbon's views see G. W. Bowersock, John Clive and Stephen R. Grabaud (eds.), Edward Gibbon and the Decline and Fall of the Roman Empire, (Cambridge, Massachusetts and London, 1977), especially the essays by Pocock (reprinted in his Virtue, Commerce and History, op. cit.), Starobinski, Furet and Manuel. On Johnson see John A. Vance, Samuel Johnson and the Sense of History, (Athens, Georgia, 1984). On Hume see Duncan Forbes, Hume's Philosophical Politics, (Cambridge and New York, 1966) [****]. For a view of these writers and also Burke as anti-progressive see Paul Fussell, The Rhetorical World of Augustan Humanism. Ethics and Imagery from Swift to Burke, (Oxford, 1965). There is of course a large difference between a picture of ages of steady but infinitesimally slow amelioration, which supports no inferences about the present, and a theory of accelerated improvement with rapid present-day advances.

25. This distinction was made most sharply in the replies to Matthew Tindal's Christianity as Old as the Creation (London, 1730). William Law, for instance, contended both that all men have a common human nature "fitted for any impressions, as capable of vice as virtue" and that they are "liable to a second nature from education", a nature which differs "all over the world, and in every age of the world". See his The Case of Reason, (London, 1731), quoted and discussed by Ronald S. Crane, "Anglican Apologetics and the Idea of Progress, 1699-1745", in his The Idea of the Humanities, and Other Essays Critical and Historical, 2 Vols, (Chicago, 1967), I, 214-87.

26. Quoted from a note appended to Brooke's poem The Universal Beauty of 1735 by Lovejoy, The Great Chain of Being, op. cit., p. 243.

27. From his 1791 discourse on The Proper Objects of Education in the Present Stage of the World.

28. From his Preface to An History of the Sufferings of Mr. Lewis de Marolles, and Mr. Isaac le Fevre, upon the Revocation of the Edict of Nantz, (Birmingham, 1788).

29. From his Discourses on Various Subjects, (Birmingham, 1787).

30. See G. W. Leibniz, Theodicy. Essays of the Goodness of God, the Freedom of Man and the Origin of Evil, edited with an introduction by Austin Farrer, trans. E. M. Huggard, (London, 1951), "Preliminary Dissertation on the Conformity of Faith with Reason", section 35, p. 94; also p. 128.

31. See Samuel Clarke, A Demonstration of the Being and Attributes of God [**** PU, IV,??]

32. James Oswald, An Appeal to Common Sense in Behalf of Religion, 2 Vols, (Edinburgh and London, 1766), II, 81.

33. See also Institutes, II,17: "No scheme ... which supposes the greater number of the creatures of God to be miserable upon the whole can be consistent with the supposition of the Divine benevolence". A just God sees that "the terms on which I came into the world are advantageous to me" (II,390).

34. Hume's Dialogues concerning Natural Religion, ed. N. Kemp Smith, (Oxford, 1935), op. cit., p. 260.

35. Compare Johnson: "Very few can boast of hearts which they dare lay open to themselves, and of which, by whatever accident exposed, they do not shun a distinct and continued view; and certainly what we hide from ourselves we do not shew to our friends". Quoted from the Life of Pope by Paul Kent Alkon, Samuel Johnson and Moral Discipline, (Northwestern University Press, 1967), p. 134.

36. Op. cit., p. 246.

37. This dictum ("much to be endured, and little to be enjoyed") is laid down by Imlac in Rasselas but the sentiment is eminently Johnsonian.

38. See Lovejoy, op. cit., p. 208.

39. Philo says that "We are terrified, not bribed to the continuance of our existence" (op. cit., p. 242). Priestley points out that for Hume death is annihilation, not judgement, and thus not an object of fear (IV,376).

40. See his 1788 "Sermon on the Subject of the Slave Trade"; his Letters Addressed to the Philosophers and Politicians of France, Part II, (Northumberland, 1794); and his sermon "The Duty of not being Ashamed of the Gospel" in Discourses on Various Subjects.

41. From his discourse on The Proper Objects of Education in the Present State of the World.

42. From his 1778 Observations on Education.

43. See Enquiries concerning the Human Understanding and concerning the Principles of Morals, ed. L. A. Selby-Bigge, 2nd ed. (Oxford, 1902), p. 137; quoted by Priestley, IV,379.

44. Quoted without attribution by Paul Fussell, The Rhetorical World of Augustan Humanism, op. cit., p. 4.

45. Dialogues, op. cit., p. 253.

46. The context here is political. Priestley is arguing that all constitutions, no matter how apparently excellent, should contain the means of their own amendment.

47. From the 1794 Dedication to his Heads of Lectures on a Course of Experimental Philosophy

48. See A Review of the Principal Questions in Morals, 3rd ed., (London, 1787; reprinted New York, 1974), pp. 323-30.

49. See William Wollaston, The Religion of Nature Delineated, (London, 1724), Section IX, Proposition VIII, p. 202.

50. Priestley draws heavily on John Leland's "excellent" The Advantages and Necessity of the Christian Revelation, shewn from the State of Religion in the Ancient Heathen World, (London, 1763).

CHAPTER EIGHT: OPTIMISM AND POLITICS (1)

8.1 Religion and Politics

Priestley's moral theology both arises from and provides guidance in empirical matters. History supplies him with his evidence for the theory of progress. It also presents a number of moral and theoretical difficulties when events seem to deviate from the progressivist pattern. His empirical commitment requires him to grapple in theological terms with such diverse issues as the malign influence of Platonic and Cartesian thought, the dominance of Catholicism in Christian history, the African slave trade, and the growth of infidelity amongst Enlightenment thinkers. For Priestley these questions were never simply theoretical matters, though they maintained a certain distance from his personal life. However, as his own career progressed, the difficulties in his scheme multiplied and intensified. Priestley's first fifty years themselves seem like a progressivist parable, as he rose from obscure beginnings to become, through talent and hard work, perhaps England's leading luminary in the Enlightenment pantheon, "the Voltaire of Unitarianism", as Hazlitt styled him.<1> Despite the international recognition his work received, he found himself a prophet without much honour in his own country. His combination of radical politics and unorthodox theology was not to the liking of many of his compatriots. The better known he became, the more he became simply notorious. The process dates from around 1776 perhaps, but 1789 can be taken as a turning point in this as in so much else. In the remaining fifteen years of his life his fortunes declined. What is significant about this here is that he continued to see these matters as theological. The abstract and academic difficulties of his progressive optimism had to be put aside. The problem of evil now became for him at once both theoretically perplexing and acutely personal.

Priestley's usual defences against enthusiasm were breached by the arrival of the French Revolution, which he greeted in 1789 as heralding "a glorious prospect for mankind" (I,2,38). It was to be the culmination of all the liberalizing and rationalizing tendencies of the century, the first European nation with the courage and vision to follow the American prototype. Priestley and Burke had been friends and allies in support of the American cause. Burke's Reflections on the Revolution in France of 1790 burst like a massive clap of thunder before a decade of storm and violence, and Priestley, along with his friend Richard Price, was one of the main objects of Burke's denunciations, though he is never mentioned by name. Their earlier and apparently minor differences, about aristocracy and the interpretation of the idea of progress, are now magnified by both parties into matters of fundamental importance. After 1790 Burke thinks Priestley not merely mistaken or foolish, but manifestly wicked, even monstrously so. His complicity with the revolutionaries makes him an enemy to his country; his reputation is to be discredited at every turn.

A year later the Birmingham mob, under the banner of Church and King, used real violence to achieve what Burke had attempted to accomplish with intellectual force. Priestley thought the Riots the product of the hysteria aroused by Burke; Burke thought

that the fire of the Dissenters' intemperate zeal had been turned upon themselves by the intemperate zeal of the populace.<2> This violence seemed to Priestley to demonstrate the moral bankruptcy of the English hierarchy. He found the courts both slow and deficient in granting recompense for his losses. Convinced that Pitt's administration was unwilling to guarantee the safety of so notorious a heretic, he followed his sons to America in 1794. At the same time, however, his utopian Revolution itself degenerated into a violence of far greater ferocity. In 1792 the newly-formed National Convention elected him (along with seventeen other servants of the cause of liberty, including Paine, Bentham, Jefferson, Washington and Wilberforce) an honorary citizen of revolutionary France. Shortly after he was elected to a seat in the Convention, which he declined. In 1794 his French friends, including Condorcet and Lavoisier, lost not merely their libraries and laboratories but their lives to the Terror. Even in America, after a hero's welcome, his unwillingness to repudiate the Revolution in France made him increasingly the subject of suspicion. Then William Cobbett, an unknown Englishman tutoring French émigrés in Pennsylvania, who had lived in France 1792, cut his teeth as a political pamphleteer by launching an attack on Priestley's character, reputation and pro-French principles which, according to its victim, was even more scurrilous than anything he had experienced in his native land. Cobbett's campaign, now conducted under the famous pseudonym "Peter Porcupine", lasted for nearly seven years, and eventually extracted a reply, Priestley's Northumberland Letters. An extradition threat against Priestley was averted only by President Adams. Only when his friend Jefferson succeeded Adams in 1801 did he feel really at home in the Republic of liberty.

These setbacks were compounded by more personal disappointments. He found life in the back-blocks of Pennsylvania, cut off from the books and intellectual companionship of England, lonelier and more isolated than he had expected. In 1795 his youngest son, who most promised to carry on his intellectual interests, died suddenly from exposure. Nine months later the death of his wife followed. Soon after, his brother-in law, the ironmaster John Wilkinson, suffering from investment in French assignats, claimed back from Priestley over 56,000 pounds given over a long period as patronage for his scientific research; fortunately, he soon relented on the claim. Then his daughter Sarah, who had remained in England, became seriously ill with tuberculosis. In 1800 Priestley's second son, William, seems to have attempted to poison his father and the household. Priestley denied the allegation, though William left the family suddenly and permanently.<3>

Priestley's moral theology makes much of the notion of character- formation under adversity. He did not forget this in his distress. "At present", he wrote to Theophilus Lindsey in 1800, "I am sometimes ready to say with Jacob, that many things are against me; and though they do not shake my faith, they try it" (I,2,440f). Another letter three years later, when his worst troubles had abated, is more characteristic.

> Few have had so happy a lot as I have had, and I now see reason to be thankful for events which, at the time, were the most afflicting .... My only source of satisfaction, and it is a never-failing one, is my firm persuasion that every thing, and our oversights and mistakes among the rest, are parts of the great plan in which every thing will, in time, appear to have been ordered in the best manner. When I hear my son's children crying, I consider that we who are advanced in life are but children ourselves, and as little judges of what is good for ourselves or others (I,2,519).

Priestley remained an optimist to the end in 1804. Yet his cheerfulness, it is clear, arises not from his earlier confidence that the ways of Providence are open to rational discovery. Though America had Jefferson, France was now under Napoleon. Napoleon's Italian campaign had not brought down "the ten crowned heads of Europe"; his Egyptian expedition had not heralded the restoration of the Jews. The Millenium had not arrived. Further, the heir of the Revolution had just concluded a Concordat with the Pope, restoring the alliance between Church and State. Priestley was forced to the conclusion that the French system of government had not achieved what it set out to achieve. History, it seems, no longer exhibits an intelligible purposive design.

Some of Priestley's disappointments were simply personal; but at the centre of all the crisis and controversy was the Revolution in France. As he remarks in a letter of 1798, "when the times are so dark and serious with respect to nations, how can individuals expect to escape troubles?" (I,2,407). His hopes, which were for most of his life confidently progressivist, underwent a series of changes after 1789: first utopian, then millenarian, and finally other-worldly. To gauge the impact of the Revolution we need first a full picture of Priestley as a political being. Priestley sometimes denied taking an active part in political affairs: "the very catalogue of my publications will prove that my life has been devoted to literature, and chiefly natural philosophy and theology, which have not left me any leisure for factious politics" (XIX,507). He was nevertheless deeply interested in the fundamental questions of political philosophy, and his political writings show that this interest was as much theological as it was political. The problem of evil, it turns out, is for him a also political problem and the problems of politics are aspects of the problem of evil. The relation runs in both directions: not only did theology suggest (or at least reinforce) the central ideas of his politics, events in the political world responded by presenting a serious challenge to his theologically-based assumptions. This chapter will survey his general political principles. The chapter following examines his attempts to reconcile those principles with the events that were occurring all too rapidly around him.

Priestley's political views are of course religious in a more obvious sense. As a primitivist Protestant (primitivist at least in his view of revelation, not in his philosophical theology) he believes that worldly power is both unnecessary and positively harmful to the cause of true religion, and that the New Testament directly opposes such involvements. As a Dissenter he is committed to the full toleration of Dissenters and to their right qua citizens to participate fully in all civil offices. As a Rational Dissenter he is committed to the full toleration of all religious or non-religious minorities, if they abide peacefully by the laws of the state. As a believer in the rationality of true religion he regards political support for religion as heterogenous and distracting. On religious grounds, then, he wishes to see a complete separation between church and state, entailing the disestablishment of the Church of England. Most of Priestley's efforts in practical politics are directed to this end, nor can we imagine him holding any political philosophy that conflicted with that cause. However, it does not follow that his political philosophy is simply Dissenter politics writ large. Rather, he regarded the cause of the Dissenters as fitting easily into a larger development, the growth of liberalism. When the cause of liberalism in England seemed to Priestley to be losing ground, the campaign for full toleration also seemed to him to be making no progress. The suggestion (implicit in some of Burke's polemic) that he is no true liberal, but only a sectarian exploiting the advantages that liberalism offers to dissident minorities, is difficult to defend. Priestley repudiated this suggestion, and there is much independent evidence against it; he disapproved of the Puritans for their illiberalism

towards their enemies (XXII,7), and was outspoken in his own defence of the rights of Catholics.

8.2 Luxury and Idleness

We can begin this survey of Priestley's political thought from a purely theological starting-point. Priestley envisaged a future in which men will gradually come to see themselves as (according to his Sermon on the Slave Trade) "workers together with God", a partnership which will "make even this world a real paradise, and fit us for a state of greater glory and happiness in another" (XV,387). This kind of perfectibilism will naturally seem too good to be true, and Matthew Turner at least thought he could see a logical flaw in the fantasy. He thinks Priestley's character-formation doctrine is in direct conflict with his progressivism. "Who will ever resolve the question if evil and pain are good and necessary now, why they will not always be so?", he objects (quoted IV,435). Priestley in reply concedes some force to this objection. "I answer, this may be the case in some degree, and yet be consistent enough with the proper meaning of the figurative descriptions of a future life in the Scriptures". The pursuit of perfection is literally endless, and does not cease even in heaven; and even in heaven something like adversity will continue to be needed as a stimulus to further improvement. Such "dynamic" descriptions of life in heaven, though still considered unorthodox, were no longer novel by Priestley's day. Nevertheless, evil and pain will diminish. As he was to put the matter in 1793: "Having learned wisdom by long experience, we shall be able to proceed in the paths of knowledge, virtue, and happiness, without those severities which were necessary to draw us into them" (XV, 506).<4>

Turner's objection had an analogy on the social level in the form of the "problem of luxury". If a future paradise might be too enjoyable to be morally beneficial, social progress towards an earthly paradise might suffer from a similar defect. Various eighteenth- century thinkers, of whom Rousseau is only the best-known, had come to the conclusion that progress is a self-defeating process: the more the arts and sciences contribute to human well-being, the more they sap men's capacity for genuine virtue. Progress, by making life easier, makes character-formation more difficult. For Priestley character-formation requires adversity, and we might expect this side of his theodicy to lend itself to a Spartan conception of private and civic life. However, in political matters this Spartanism is one of the things which he seeks to combat. The dominant theme of his politics is a defence of liberalism based on his progressive interpretation of history. The interesting theological issue is whether this defence requires him to sacrifice the emphasis on adversity and difficulty so prominent in his purely theological writings.

Character-formation and progress are not in conflict, Priestley is convinced. Modern technology, for instance, is beneficial both practically and morally. The Lectures on History holds that "The more conveniences men are able to procure to themselves, the more they have it in their power to enjoy life, and make themselves and others happy" (XXIV,338; my emphasis). It is not only the more utilitarian achievements that he is prepared to praise: a taste for ornament amongst the affluent classes will promote industry and thus circulate wealth, without doing any moral harm. Not just Rousseau but many in the radical tradition - Richard Price, for instance - thought such "conveniences" had made

men less self-reliant; they frequently measured men's virtue by considering how they would fare if deprived of the trappings of civilization. Priestley assumes that the products of civilization are to be included as part of what is to be measured in assessing men's moral condition. If history is a struggle against adversity, it is also a story of accumulated achievement. His theodicy entails a defence of that achievement, and thus a defence of civilization's controversial aspect, known to its opponents as "luxury".

The notion of luxury was an important term in the radical politics of the latter part of the century. (It is of course one of the hardy perennials of social criticism, as old as social criticism itself.) The growth of luxury, the radicals alleged, had caused a decrease in liberty and a bias against free speech and free thinking. Priestley shared with the radicals the belief that such a decrease in liberty had occurred, but he rejected their diagnosis of its causes. He sought to draw a sharp distinction between "luxury", which was on the whole a good, and "idleness", which he saw as the chief cause of his age's ills. Luxury is evil only insofar as it is associated with idleness; in every other way it is to be approved of. This distinction is the key to his politics. It is possible, though unusual, to find him using "luxury" as a term of condemnation; but the dominant usage is clearly favourable to the rise in prosperity that for him the term primarily denotes.

"Idleness" is for Priestley "the great inlet to the most destructive vices" (XXIV,340). "Human happiness depends chiefly upon having some object to pursue, and upon the vigour with which our faculties are exerted in the pursuit", he says in the Preface to his History of Electricity (XXV,347). By "idleness" he means not of course rest after labour, but life without labour. We are constitutionally unfitted for a life of ease, and without "the constant, but moderate, exertion of our faculties" we can not be happy, his Observations on Education argues. Work and relaxation together furnish enjoyment much greater than either can alone supply, for "the labourer alone knows the sweets of rest, just as the hungry and thirsty alone can taste the genuine pleasures of eating and drinking". Here the contrast theodicy supplements his more usual character-building concern. Difficulty not only creates character, it heightens our capacity for happiness. "By the wise appointment of Providence, our enjoyments are [thus] generally in proportion to our hardships in life", he concludes (XXV,60f). In sum, material progress ("luxury") is morally beneficial so long as its connection with effort is not broken; when, however, we seek enjoyment without effort ("idleness") the result is morally detrimental.

Priestley also cautions against an ethic that proposes adversity without any compensating enjoyment. Adversity is to be faced wherever it is met, but it is not to be sought for its own sake. It is the duty of the Christian, he says, "not to court, but to shun, persecution, as well as evils and trials of any other kind, lest we should not be able to acquit ourselves in them, and might just draw upon ourselves the punishment of our presumption and vain confidence" (XXV,320). At the economic level Priestley's hostility to idleness can easily be read as a version of the supposedly "Puritan" work ethic; but such a reading will be defeated by its own tendentious terminology - "work ethics", if the notion can be defined at all, are common to most of Western Europe and many other parts of the world also. What is clear is that he does not make labour an end in itself, and that his defence of luxury is designed to ensure that the ethic of material progress contains no barrier to the enjoyment of the fruits of one's labours. This argument applies as much to political austerity as to religious or economic asceticism, as we shall see when contrasting Priestley's politics with

the Spartanism of some of his fellow radicals. In all of his judgments Priestley is a man of the Enlightenment in regarding the pursuit of knowledge as of pre-eminent importance; wealth as such is not to be feared because it can be turned to the pursuits of science, social understanding and especially religious knowledge.

8.3 Liberals, Radicals and Conservatives

Priestley's remarks on labour and leisure are from his 1778 Observations on Education. Their theological affiliations are obvious: idleness is simply the avoidance of the kind of difficulty prescribed by the character-formation regimen, while luxury is the end-product of a long historical struggle with adversity. But it is not yet clear how these notions are political. Priestley's moral theology is relatively unchanging across the course of his long career, but his political views underwent marked alterations, and the impact of his moral theology on his politics only becomes clear a decade after the Observations were written.

In the 1770s Priestley, although an opponent of British government policy in America, was still a supporter of the "mixed" or "balanced" constitution, which located sovereignty with the King-in-Parliament and was commonly supposed to make up the best-of-all-political worlds, with the optimum combination of popular liberty, aristocratic wisdom and monarchical authority. By the 1790s he had come to regard this system as far from perfect or optimal, as indeed theoretically and practically very defective. As John Passmore has put it, "He had been accustomed to call himself 'a Unitarian in religion but a Trinitarian in politics'; now he was a Unitarian in both".<5> (The suddenness of this change can be gauged from his denial in 1790 that his writings contain "any traces of a preference for republican government" (XIX, 151). However, the foundations for the change were laid in 1768-1774, in a series of pamphlets relating to the American Revolution and the Wilkes affair.) Thereafter, he was mostly willing to support the British system as the one best suited to British conditions, until such time as political enlightenment had further permeated popular thinking (XXV,106). At the same time he greeted the new American and French experiments as much superior to the British system.

This change in Priestley's thought can be traced partly to his interpretation of the political events of the period, but partly also to his theodicy, which supplied the crucial terms of that interpretation, "luxury" and "idleness". His belief in the corrupting effects of idleness underlies his disagreement with Burke, whose Reflections he attempted to rebut in his Letters to Edmund Burke of 1790. Less obviously, his defence of luxury marks him off from many of his fellow radicals, who attacked aristocratic predominance in government (and Burke as its apologist) for its propensity towards a corrupting surrender to luxury.

These differences were focussed most sharply by the French Revolution, but the subsequent wide-ranging debate also revealed to the English participants how much they were divided about their own society. To summarize it very diagrammatically, the debate was triangular, but not in the sense of a disagreement about three possible rates to a single process of change; rather, three positions were taken about two possible kinds of change. One axis of the argument concerned political participation, with opposing views about the virtues and vices of aristocracies and democracies. The other axis was economic, about the

virtues and vices of economic progress. The two processes were of course seen as related. Some supporters of aristocracy feared the political effects of economic progress, though this was a minority opinion, and will play no part in my present exposition. The radicals tended to regard economic progress as detrimental to political liberty. This radical doctrine was one of the two main positions in the debate. The other was Burke's defence of aristocratic leadership, which included a commitment to the generally beneficial effects of progress. Priestley's position cut across these two, to form the third corner of the triangle. He belonged with the radicals in rejecting aristocracy, which Burke saw as essential to political order. But he also rejected the economic assumptions of the radicals, and thus sided with Burke in defending the main products of progress. He was both politically radical and economically progressive, and at bottom this combination rested on theological premises. He attacked aristocracy for embodying idleness and defended progress as the product of the struggle against adversity.

Most of the remainder of this chapter is concerned with Priestley's analysis of France and Britain. His assessment of America will be somewhat neglected here, despite the fact, or perhaps because, America after 1776 becomes the model of all his subsequent ideals. Being a model it fails to raise the complexities and difficulties that make matters interesting. Whenever he finds himself in trouble in attempting to apply the model to France and Britain Priestley enjoys the luxury of being able to fall back on the American paradigm. Not everything in America went according to the plan of his progressivism, as he discovered rather painfully after 1794 when he moved to Pennsylvania as a refuge from Pitt's England.<6>

8.4 Against Aristocracy

As we tend to take for granted the virtues of both prosperity and democracy it is easy to question Priestley's place in the pantheon of radicalism. His contemporaries, from the highest to the lowest, had no doubts about the matter. Any doctrine that denied the legitimacy of inherited privilege and would dispense with the monarchy was certainly radical, whatever its economic assumptions. By 1789 Priestley had concluded that the governments of both Britain and France were on the brink of bankruptcy and that the cause of this imminent catastrophe was to be found in the moral bankruptcy of their aristocracies. Burke shared Priestley's sense of financial crisis, the belief that "Nations are wading deeper and deeper into an ocean of boundless debt", which "threatens a general earthquake in the political world"; but against that, he contended that the French nation was generally prosperous, and that the crisis gave no warrant to those who would exploit the situation for the purpose of political change. This prosperity, combined with the civilizing influence of religion, laws and manners had made France "a despotism rather in appearance than in reality". The radical leaders are guilty of proposing "rash and ignorant counsel in time of profound peace".<7>

Priestley thought radical reform the only remedy. His Letters to Burke does not examine the emergency in detail; he is content to claim that a large majority of the French people believe an emergency exists and that they are the best judges of whether or not a new form of government would serve their interests better (XXII,155). His more radical Political Dialogue on the General Principles of Government of 1791 goes further into the matter.

The French national debt is central to his discussion; but his objection is not to public credit itself, but to the misuse of public credit in the hands of the aristocracy. Government expenditure is out of control because fiscal decisions are in the hands of an hereditary class which bears no commensurate responsibility for the raising of revenue. Enjoying unearned honours, offices and authority, this class has occupied its idleness with grand schemes of empire and conquest, paying little regard to their cost to the public. Priestley opposes not honours as such, but hereditary honours, honours awarded not for actual virtues and achievements but for birth alone: "no wise man would wish to make his posterity noble, however ambitious he might be to acquire honours for himself" (XXV,93). His objections are usually against aristocracy and less often explicitly against monarchy, though it too clearly comes under the condemnation of "idleness".

Priestley's wish is that the hereditary system "be brought to the plain test of use and expedience", but his objection goes beyond simple utilitarian criteria, into the realm of moral theology. The system is not just inefficient, it is corrupting, and not least to those who appear to profit from it. It excludes the nobility from the employments and pursuits in which other men acquire virtue. It is the fate of men of rank to suffer "debasement of their characters, with the deprivation of all real enjoyment". The aristocratic system is bound to fail, for it destroys the connection between difficulty, effort and virtue. It separates leisure from labour and thus causes luxury to degenerate into idleness. Public finances can only be restored when those who produce public moneys, the "industrious classes", have the greatest say in how they are spent. Then only will government work for the public good. The hereditary system must eventually bow before "that prevailing spirit of industry and commerce to which it was ever hostile, and before that diffusion of knowledge on the subject of government ... which has burst out in the last half century" (XXV,92).

That Priestley's objection to aristocracy was not factitious is indicated by his applying the same reasoning to the "idleness" he encountered at the other end of the social scale. He argues (in a pamphlet entitled Some Considerations on the State of the Poor in General of 1787) that the system of tax-funded parish relief has demoralized many of the labouring poor in the towns and cities of England. Readily-available relief has increased the temptation to idleness and profligacy, and has in some places extinguished the spirit of industry and frugality.

> Our measures (proceeding from humanity, but from a weak and ill- directed policy) having in effect debased the nature of man, have defeated the purposes of Providence with respect to him, and have reduced him to a condition below that of the brutes.... (XXV, 315).

It is, he thinks, the "plain path of nature and of Providence" that a man should look ahead and provide for himself and his family against contingencies. If this is done then "the humanity of individuals will easily step in to the relief of those wants which could not be foreseen" (XXV,316). Social policy must be directed to promoting self- reliance, and normally this is best promoted by the state interfering as little as possible in matters of welfare. However, so great have been the evils of compulsory relief, that for once he is prepared to allow state interference to establish a system of compulsory saving by the poor, with the aim of restoring true self-reliance. He advocates this measure fully aware of how much such state or municipal coercion goes against his own principle of non-interference.

Priestley is sometimes criticized for assuming that the interests of the middle and working classes are substantially the same. He did believe this: they are both in his eyes the "industrious classes", and are thus both distinct from the "idle" paupers and the hereditarily "idle" aristocracy. His position is not quite clear on one important point. In his view the middle and working classes differ in respect of their skills, and it is primarily the middle classes who have created the special achievements that constitute progress. Priestley does not deal with the question whether this difference is of moral significance.

Pauperism and aristocracy, though both evils, are not equal evils, for the ills attendant upon high society are much less than the "treachery and cruelty" which the poverty of backward countries engenders (XXIV,339). Nevertheless, the vices of poverty are more open to correction. Priestley strongly advocates that

> by some public provision, all the poor should be taught to read and write.... As for those persons whose wretched policy would keep all the poor in a state of ignorance, thinking thereby to keep them in a state of greater submission and dependence, it were to be wished that they alone could be made to feel the burthen, and to take the danger which arises from the present state of our poor, while the more liberal of our fellow-citizens might be relieved from them (XXV,319).

And though, like almost all of his contemporaries, Priestley would not extend political rights to women, he was strongly committed to education for girls (XV,419).<8> In all this there is a general conviction that the poorer and unprivileged classes are capable of improvement and self-improvement - their "idleness" is not, unlike that of the aristocracy, a necessary concomitant of their situation.

Priestley's views on aristocracy are best brought out by a contrast with those of Burke. Burke's defence of the French aristocracy is couched partly in terms of the utility and innocence of "idleness". A leisured class is essential to ensure the political wisdom that can come from education and financial independence, and hereditary privileges are the best security for such a class. Hereditary wealth and distinctions are, at their best, the privilege of men of virtue and ability, or of the patrons of such men; "at the very worst, [they are] the ballast in the vessel of the commonwealth", a counter-balance to the disturbing effects of men with ability but no property. This stabilizing influence is all the more necessary because it is likely to be always under threat from the rest of the populace. However responsible the French aristocracy may be for the National Debt (Burke thinks that France's fiscal difficulties resulted from mismanagement, not anything fundamental), any revolutionary regime which seeks to take its place is certain to act with a "contempt of justice". Greed and envy will cause it to expropriate all that it can, even to the extent of debasing the currency in its own interests. In short, nothing good can be expected from the self-appointed representatives of the people, whatever motives they might profess, and the people themselves, lacking sufficient moral self-restraint, must be taught to hold their institutions in "social awe".<9>

Burke's argument is two-pronged: the aristocracy is on the whole protected from moral degeneration by the privilege of "idleness", whereas when "the people" try to overhaul society they are always in moral danger from the temptations of greed and envy. Priestley

takes the opposite stance: idleness is the chief source of moral danger, and in civilized societies it is (as the Essay on Government claims) popular opinion which has come to embody "a sense of justice and honour" in acting as a check upon encroachments by the state on civil liberties (XXII,34). Yet while holding antithetical views on idleness, Burke and Priestley are in agreement about luxury, which they both see as socially beneficial. As Burke puts it, "The love of lucre, though sometimes carried to a ridiculous, sometimes to a vicious excess, is the grand cause of prosperity to all states". In this respect they are both allies of Adam Smith.<10>

Furthermore, Burke endorses Priestley's insistence on a theological dimension to the notion of difficulty. "Difficulty is a severe instructor, set over us by the supreme ordinance of a parental guardian and legislator, who knows us better than we know ourselves, as he loves us better too".<11> The words are Burke's, but could be Priestley's; the two differ here not about fundamentals but about their relevance to the present social situation. Burke's portrait or caricature of the radical, carried away by his "idle" speculation and theoretical dreams, has features in common with Priestley's portrait or caricature of the "idle" aristocrat. Burke's radical "delights in the most sublime speculations; for, never intending to go beyond speculation, it costs nothing to have it magnificent".<12> Priestley's aristocrat also favours the grandiose gesture, for it costs him nothing to have it magnificent, though it may bankrupt the state.

8.5 Varieties of Radicalism

The theological element in Priestley's later politics can be further highlighted by contrasting his road to reform with that taken by many of his fellow radicals. There are two essential contrasts here: one concerning natural political rights, the other concerning luxury. Out of these differences arises different pictures of the historical process.

All the late eighteenth-century radicals, Priestley included, wished for a redistribution of political rights, but they argued for this on various grounds. Unlike Tom Paine or Major Cartwright, and contrary to what is frequently implied by Burke, Priestley makes little of the notion of natural political rights. In limiting natural rights to civil rights Priestley and Burke are at this point in close agreement. Epistemologically, this is what we might expect Priestley to hold - in politics, much as in moral theology, everything depends on "historical facts", and observation and experiment are "the only safe guides", according to the Lectures on History (XXIV,35). His 1767 Essay on Government follows Pope's maxim concerning forms of government: "Whatever is best administered, is best". The Essay defends mixed government against pure monarchy, pure aristocracy and pure democracy on the grounds that it is the form best calculated to produce just administration (XXII,30). Both the Essay and the Lectures on History exclude from politics "persons possessed of no property" or the economically "extremely dependent" (XXII,15; XXIV, 245).

It is this pragmatic attitude to political systems that prevents Priestley from embracing complete democracy even when he has become hostile to aristocracy. He does indeed tell Burke that if men make a wise social contract "they will never wholly exclude themselves from all share in the administration of their government, or some control over it"

(XXII,167). But this is quite compatible with mixed constitutionalism, and does not entail full democracy. His Political Dialogue asserts that "If the majority of any people understand their own interest, there can be no good reason why they should not have the power of promoting it" (XXV,96), and he seems to suggest that the common people in England do "understand their own interest". This is the most democratic of his pronouncements, yet even here political rights depend not simply on adulthood but on the capacity for understanding. The point requires emphasis because, from Burke onwards, the radicals have been regarded as if they were all natural rights democrats in the manner of Paine. According to Burke the radicals "are always at issue with government, not on a question of abuse, but a question of competency, and a question of title".<13> This seems inaccurate in Priestley's case: his formal argument reasons from questions of abuse (the National Debt) to questions of competence (the nature of aristocracy) and only then to questions of title (political rights).

There may also be some theological interest in this point. It is tempting to suggest that Priestley rejects full suffrage on the same grounds that he rejects an aristocratic polity, namely that political rights are in no sense a birthright and must be earned or merited. It is perhaps "idleness" once again that disqualifies both the claims of hereditary rights and the argument for full democracy. (Not all rights must be earned, however; the ordinary civil rights to life, liberty and property, which government exists to preserve, are natural.)

Priestley differed from many of his fellow-radicals also in his attitude to luxury. Many radicals saw luxury as the root cause of political corruption, laying politicians open to being suborned by the King's ministers, who controlled the distribution of patronage and favours. Because modern society seemed to be becoming increasingly luxurious, they regarded history as a retrogression, and looked back to the simpler world of pre-Norman England for their standards of virtue. Radicals like Richard Price sought to cure the evils of modern politics by a stricter system of parliamentary representation; others like James Burgh and Major Cartwright demanded universal suffrage for the same purpose. In employing "luxury" as the central criterion of their moral diagnosis, these radicals were the heirs of the "Country" tradition.

The older Country tradition saw true virtue as lying with the simple, honest backbenchers from the shires. One branch of the Country tradition, finding this description of men somewhat less than effective in defending the virtue of the commonwealth, looked to the Sovereign for a solution, hoping that his authority, outside and above the corrupt world of political intrigue, could restore moral order. This was the "patriotism" that Johnson stigmatized as "the last refuge of a scoundrel"; late eighteenth century radicalism originates from the realization that George III could in no way fulfil this dream of a "patriot king". "Patriotism" was thus not the last but the second last refuge of the men that Johnson regarded as "scoundrels" - the last refuge was radicalism. But perhaps Johnson's dictum was right after all: radicalism was no sort of refuge. Having no avenue of appeal within the established system if (as they believed) the House of Commons failed to represent majority opinion, the radicals now made their appeal to a new kind of Sovereign - "the people". But just as before they sought a king in their own image, so now they tended to find a "people" to match their own predilections. Those radicals for whom luxury was the root of corruption imagined a rural populace free from the deleterious effects of urban

commercialism, just as their Country predecessors had imagined a set of incorruptible backbenchers.

Priestley's refusal to see modern urban prosperity as morally dangerous makes his radicalism strikingly different in origin from that of some of his closest associates such as Burgh, Price and Jefferson. He is quite immune to the "primitivism" of radical Whig mythology. Many of his fellow-radicals looked back to pre-Norman England for their standard of virtue. Priestley could admire that era only relative to its position in the scheme of progress. As he argues in the Essay on Government, when opposing Brown's proposal for state education:

> Suppose Alfred, when he founded the university of Oxford, had made it impossible that the method of education used in his time should ever have been altered. Excellent as that method might have been, for the time in which it was instituted, it would now have been the worst method that is now practiced in the world (XXII,45).

The same principle holds for political as for educational systems: they ought always allow the means of their amendment. Priestley had no wish to see a return to a pre-commercial existence, with the urban poor resettled on the land, as some radicals recommended. Nor was he concerned to advocate the eventual abolition of property, as Price did.<14> Economic redistribution, sometimes pursued as a means of abolishing luxury, was also no part of his programme. Fundamentally he thought that if wealth had been honestly earned it could be safely enjoyed. Along with this went a defence of the means of modern wealth, commerce, credit and manufacturing. The defence rests on the claim that wealth is the result of effort and industry, and thus has a theological sanction. To apply consistently his "idleness" criterion, he should perhaps have opposed inherited wealth as much as he criticized inherited honours. Sometimes he does indicate that such unearned fortunes are morally dangerous - "the man who makes a sensible use of riches he has not acquired must be something almost above humanity" (XXV,93) - but it is not a matter he gives much attention.

If the economic foundations of modern society are morally sound, then it can present no great danger at the political level. The radicals tended to regard luxury as destructive of liberty. Priestley will allow in the Lectures on History that, by creating great inequalities of wealth, commerce can sometimes endanger the commonwealth, giving rise to a Medici-style dynasty (XXIV,239f). He can even remark that commerce, "which never fails to introduce luxury and inequalities into men's circumstances, does not perfectly suit with the true spirit of a commonwealth" (XXIV,310). This remark, a commonplace of the time, is out of character for Priestley: on the whole he maintains that the effects of luxury will be favourable to liberty. "When men, by the practice of the arts of luxury acquire property, they covet equal laws to secure that property" (ibid.). Nor does luxury endanger liberty by opening the commonwealth to the threat of external aggressors. It does not make men effeminate and cowardly: "surely more spirit and courage may be expected from a man who has had good nourishment, and who has something to defend, than from one who is almost starved and who has little or nothing to fight for" (XXIV,339). Besides, he adds, modern knowledge is itself a source of power for the defence of the state. The real danger to modern society came from the absurd militarism which results from the enforced

idleness of Europe's aristocracies, leading as it does to fiscal disaster and, subsequently, to revolutions.

Priestley's radicalism, then, rests on a different moral basis from that of the opponents of luxury. It derives from his theodicy which links difficulty, effort and character, while rejecting the Spartanism of some of the other radicals. This theodicy denies that material progress must produce its own moral nemesis and thus perpetuate a sequence of historical cycles. It contends for the opposite conclusion, that material progress brings both moral and political benefits. Priestley can be generally democratic without recourse to the argument from natural political rights because he believes that, in the main, history is running in a direction favourable to the cause of liberty. His fellow radicals, by contrast, sometimes saw history as retrogressive; they tended in consequence to lay great stress on the danger of "corruption in high places" and to fear the formation of conspiracies in court circles against the liberties of the people. Priestley is by no means free from this outlook with its "prophetic" and declamatory rhetoric - particularly in connection with events in England (as we shall see in detail in Section 9.1). Nevertheless, this version of radicalism plays little part in his general political theory, and, when it does appear in his more polemical writings, it is always tempered by his progressivism.

8.6 Liberalism

It is Priestley's emphasis on the political benefits of progress that distinguishes him most sharply from both Burke and many of his fellow radicals. In his writings we can see how heavily early liberalism depended on the assumption of moral progress.

All their differences notwithstanding, the British "balanced constitution", and the American and French Revolutions are, Priestley believes, the fruit of a long process of political maturation. In modern societies such as Britain, France and America, civil and political liberty is no longer constantly endangered by evil and corruption; in these societies liberty can indeed be safely expanded.<15> The assumption of moral progress meant for Priestley, as Margaret Canovan has observed, that "There was no longer any need for the state to watch jealously over the morals and manners of the citizens, and to fight constantly against human nature. Opinions and private habits were no longer politically important, and could become a part of civil liberty precisely because they had become politically indifferent, things that could neither make nor mar the state".<16> To use one of Priestley's arguments for religious toleration (from his Letter to Pitt), men "do not quarrel with one another because they employ different physicians. Why then should they quarrel because they choose to attend different preachers?" (XIX,125). State regulation is no more necessary in religion than in medicine or in any other sphere of civil life. (He specifically argues against the public funding of hospitals because this will lead to the extinction of "benevolence and real utility" (XV,424).)

Because he thought men had become more self-disciplined and governable, the art of government came to seem to Priestley less intrinsically difficult than it had been represented as being by earlier thinkers. Not so, for Burke: for him the difficulty of rational government and the scarcity of political wisdom are leading considerations. In his

view only a wealthy, leisured and educated class could adequately master the required skills. He accuses the leaders of the French National Assembly of wanting to "evade and slip aside from difficulty", preferring "tricking short-cuts, and little fallacious facilities" to the hard business of reconciliation and compromise, so that in the end, by "a slow but well-sustained progress", one advantage "is as little as possible sacrificed to another".<17> When it comes to matters of politics it is Burke who emphasises and praises difficulty, not Priestley.

For Priestley's Political Dialogue "the business of states is not so difficult, but that persons who give proper attention to it may easily prepare themselves for the conduct of it" (XXV,91). It is beyond the competence only of the uneducated and those morally disabled by habitual idleness. The skills required are relatively abundant simply because they are not particularly complex or special. Because of this there is nothing to be feared from an extension of the franchise. Priestley is voicing a commonplace when he observes that "Virtue and public spirit are the necessary supports of all republican governments" (XXIV,239). What is novel in his outlook is the conviction that such virtue and public spirit is readily available to create a new kind of society.

Nor can there be any argument against popular intervention to reform and improve a political system which is failing to serve the general good, for the people are the best judges of how that good is best assessed. A people, Priestley's Letter to Burke allows, "may act precipitately, and they may suffer in consequence of it: but this is only a reason for caution, and does not preclude a right of judging and acting for themselves, in the best manner that they can" (XXII,153). They can be presumed capable of learning from their mistakes. Debate on this point, of course, goes back well beyond the controversy with Burke. The objections to Priestley's position, first outlined by him in the Essay on Government, had been forcefully canvassed by Josiah Tucker. Tucker's attack, however, depends on being able to characterize Priestley's standard Lockean doctrine as a species of individualism, and this objection is not obviously cogent. According to Tucker, Priestley regards the origins of government as merely "a complicated business of chicane and artifice, where every man was for driving the best bargain he could; and where all in general, both the future governors and governed, were to be on the catch as much as possible".<18> Each individual, whenever it serves his interests, is entitled to break faith with the social contract. Surprisingly, Priestley made no reply to Tucker, but we can construct one easily enough. He would accept Tucker's accusation that on his theory we enter the social contract as individuals, each seeking our own interests; but he would deny the suggestion that our interests are so much in conflict as to make government so frequently a bad bargain. Tucker complained that he made government "to be so entirely the work of art, that nature had no share in forming it; or rather in predisposing and inclining man to form it". Nature has a large share in Priestley's social contract, but it does its work through the common natures of individuals. What Priestley as a radical wishes to defend is not the rights of individuals to throw off the constraints of government, but the rights of a "people" against its rulers when the actions of those rulers conflict with the people's common interests.

Burke, arguing in the 1790s, will allow the people to dissolve a bad government only when they have been driven by it to sheer desperation. Any such dissolution would be a "resort to anarchy", dissolving not just a government but the society itself. Popular

revolution of any less desperate kind would be not just inept, but catastrophic. Burke is usually quite circumspect in his description of the general populace - his reference to a "swinish multitude" is uncharacteristic. The people are simply "those who have least knowledge of [the state], and the least interest in it". Indeed, he sometimes seems to want to defend the common sense of the common man, as in his remark that "The species is wise, and, when time is given, as a species it almost always acts right". Here, however, the qualification "when time is given" is crucial, for, when time is not given, the popular mind will leap to disastrous conclusions. Much depends on whether their intellectual leaders allow the people to develop at their own pace or seek to hurry them along.<19>

In general - we need to except the utopian phase aroused by the beginnings of the French Revolution (to be discussed in Section 9.2) - Priestley shares the gradualism Burke is here espousing. Even the Political Dialogue, his most radical tract, declares that "Things once established should be respected by speculative politicians, because they will be respected by the people at large; but every thing should be put into the way of as much reformation as it is capable of" (XXV,107). But he never concedes that the people are as easily inflamed by the rhetoric of agitators as Burke would have it. If such rhetoric succeeds there must be some substantial reason for the discontent it arouses. "A whole people is not apt to revolt, till oppression has become extreme, and been long continued, so that they despair of any other remedy than a desperate one" (XXII,155).

These differences about the moral and political competence of "the people" is another version of the conflict between robust and fragile accounts of progress, which in turn rests on whether moral progress tends to follow material progress, as Priestley contends, or material follows moral, as Burke would have it (discussed in Section 7.1(ii)). Burke's emphasis on fragility is remarkable: "Rage and phrenzy will pull down more in half an hour than prudence, deliberation and foresight can build up in a hundred years". "The beginnings of confusion with us in England are at present feeble enough; but ... we have seen [in France] an infancy still more feeble, growing by moments into a strength to heap mountains upon mountains, and to wage war with Heaven itself".<20> Priestley will not allow that progress can so easily disintegrate partly because for progress to occur at all it must become part of the ingrained character of a people, a second nature built up by innumerable habits or "associations". Curiously, Burke's conservatism employs a similar psychology. He defends "prejudice" partly on the grounds that it embodies hard-won habits and national characters, the destruction or attempted destruction of which will be disastrous.<21>

Liberty, both civil and political, according to the Essay on Government, gives a man "a constant feeling of his own power and importance, and is the foundation of his indulging a free, bold and manly turn of thinking ...." (XXII,37). Priestley's commitment to political liberty has more to do with freedom of thought than with the feeling of power and importance. Political activity, important as it is, is not an essential part of a fully virtuous life. To hand over some responsibility to a parliamentary representative is, he contends against Rousseau, no great loss of liberty or virtue, for politics is only one among many possible spheres for progressive endeavour (XXII,10). He considers civil affairs - commerce, industry, agriculture, science, philosophy and religion - the main arena for the pursuit of virtue, and these matters are for him all areas in which the state can make little useful contribution. In this respect it is Burke, not Priestley, who upholds the "republican"

tradition, usually associated with radicalism, according to which political wisdom and action is at the heart of manliness and self-mastery. Burke's view of politics as demanding consummate skill and sagacity accords with his elevated notion of the state as "a partnership in all science; a partnership in all art; a partnership in every virtue, and in all perfection".<22> By restricting the scope of government Priestley diminished the status of the political virtues.

Priestley wants to replace an "idle" political class unwilling to submit to moral discipline - the aristocracy - with a class which has learned self-discipline in the civil sphere; yet he employs the idea of moral progress to emphasise that the art of government is by no means as difficult as it has been traditionally thought to be. It was partly by a development of Priestley's restrictions on the scope of the state that Godwin arrived at the idea of government as at best a necessary evil, and normally in some sense a usurpation of the rights of private judgement and conscience. In most of Priestley's writings government is, when properly circumscribed, an undoubted good, and no infringement upon the rights of conscience. In the Essay on Government as elsewhere, he can speak quite naturally of "the blessings of society and civil government" (XXII,28). Only in a brief utopian phase does government begin to seem if not an actual evil, at least something that might soon become dispensable.

Notes to Chapter Eight

1. See The Complete Works of William Hazlitt, ed. P. P. Howe, 21 Vols, (London and Toronto, 1932), V, 421.

2. See The Correspondence of Edmund Burke, Thomas W. Copeland general editor, 10 Vols, (Cambridge and Chicago, 1967), Vol. VI, Alfred Cobban and Robert A. Smith eds, p. 421.

3. On this phase of Priestley's life see F. W. Gibbs, Joseph Priestley. Adventurer in Science and Champion of Truth, (London, 1965), chapters 14 and 15.

4. From his 1793 Fast Sermon.

5. See his Introduction to Priestley's Writings, (New York and London, 1965), p. 32.

6. See Colin Bonwick, "Joseph Priestley: Emigrant and Jeffersonian", Enlightenment and Dissent, No. 2, 1983, pp. 3-22.

7. See Edmund Burke, Reflections on the Revolution in France, edited with an introduction by Conor Cruise O'Brien, (Harmondsworth, 1968), pp. 263-5, 231-8, 127.

8. From his sermon, "Reflections on Death" of 1790.

9. Reflections, op. cit., pp. 139-41, 236f.

10. Priestley's debt to Smith is difficult to assess. His most Smithian writing, the Lectures on History, was published twelve years after the appearance of the Wealth of Nations in 1776, but it was originally drafted in 1761 as student lectures at Warrington Academy. How "Smithian" the original lectures were is not clear. The subject is examined in Chuhei Sugiyama, "The Economic Thought of Joseph Priestley", Enlightenment and Dissent, No. 3, 1984, pp. 77-90. For Burke on the love of lucre see Michael Freeman, Edmund Burke and the Critique of Political Radicalism, (Oxford, 1980), p. 52.

11. Reflections, op. cit., p. 278.

12. Op. cit., p. 155.

13. Op. cit., p. 149.

14. See Price, Four Dissertations, 2nd ed., (London, 1768), p. 138. For a valuable analysis of the varieties of radicalism and views on property, see Geoffrey Gallop's D. Phil. thesis, "Politics, Property, and Progress: British Radical Thought, 1760-1815", University of Oxford, 1983. I am indebted to Geoff Gallop for clarifying Priestley's place in the spectrum of radicalism.

15. The development of the conditions for liberty is a more generally European phenomenon, he suggests in some places (XXII,34f; 142). His view is not consistent. Elsewhere he claims that despotism is threatening the Continent (XXV,134).

16. Margaret Canovan, "Two Concepts of Liberty - Eighteenth-Century Style", The Price-Priestley Newsletter, 1978, No. 2, p. 38.

17. Reflections, op. cit., p. 279.

18. Josiah Tucker, A Treatise concerning Civil Government, (London, 1781), p. 23f. For a discussion of Tucker see J. G. A. Pocock, Virtue, Commerce, and History, "Josiah Tucker on Burke, Locke, and Price. A study in the varieties of eighteenth-century conservatism", pp. 157-192.

19. Reflections, op. cit., pp. 195, 305; "the species is wise" comes from Burke's never-delivered speech "On a Motion Made in the House of Commons ... for a Committee to Enquire into the State of the Representation of the Commons in Parliament" quoted in J. G. A. Pocock, "Burke and the Ancient Constitution: A Problem in the History of Ideas", in his Politics, Language and Time. Essays on Political Thought and History, (London, 1971), p. 226f.

20. Reflections, op. cit., pp. 92, 279.

21. Reflections, op. cit., p. 183. See also Frederick A. Dreyer, Burke's Politics, A Study in Whig Orthodoxy, (Waterloo, Ontario, 1979), chapter 5.

22. Reflections, op. cit., p. 194.

CHAPTER NINE: OPTIMISM AND POLITICS (2)

9.1 Retrogression: England

If progressive liberalism is the dominant theme of Priestley's political thought, closer analysis of his response to the political events of his time reveals a more complex picture. This difference is also a literary difference: there is a distinction to be drawn between Priestley the political philosopher and Priestley the pamphleteer and propagandist. This chapter looks at his work under the latter rubrics. Here the transition from moral theology to political theory is not as straightforward as previously, though theological matters are still close at hand.

The first and most obvious qualification to be made to his general theory is that Priestley has very mixed feelings about events in his own country. If, in his general scheme, England, America and France lead the world in the march of progress, they do not do so evenly or equally. History is generally progressive, but progressivism is not a blank or bland endorsement of every passing eventuality. Within the vicissitudes of history there is room for currents which run counter to the mainstream. Priestley thought he was seeing his own country moving from the mainstream into a back-current. He began his intellectual career with the assumption that England was unsurpassed in social and cultural achievement and was, as a result of its own Revolution (the prototype of reform for the rest of Europe), closest to political perfection in the "balance" of its constitution. Towards the end of his life, in 1799, he accepted the need, reluctantly ("I wish it may be effected peaceably"), for a second English Revolution, modelled perhaps on that of America or France (XXV,131). Just as America and France seemed to have leapt ahead during his lifetime, England seemed to have retrogressed. How this could occur is a question which affects the whole of his outlook, his theology included.

Priestley's Essay on Government concludes with some surprising reflections which set the terms for his subsequent thoughts on this topic. His remark there that "England hath hitherto taken the lead in almost every thing great and good" (XXII,143) seems merely to summarize his Anglocentric progressivism - but it is hedged around by some unexpected forebodings. There is little earlier in the Essay to prepare us for his concluding statement that "the time may come when this country of Great Britain may lose her freedom" (XXII,141). Fears for the safety of English liberty were commonplace at the time, but they were usually voiced by conservatives like Brown and the novelist Smollett, the kind of opinions the Essay is trying to combat. Priestley has been arguing that England's social development is such as to make possible an expansion of intellectual, religious and political freedom; even absolutist France's social advancement promises well for an era of political liberalization, he believes.

The year is 1768, before Wilkes' expulsion from the Commons and the struggle with America had persuaded many of the illiberal intentions of the British administration. Radicalism had yet to achieve any significant self-definition: Junius' Letters had only just

begun to appear; Burgh's influential compendium, the Political Disquisitions, begun in 1771, was not published until three years later. Priestley's forebodings appear out of an apparently clear sky. (In 1774 he can speak of the 1763 Stamp Act as being "absolutely an innovation in our constitution, confounding the first and fundamental ideas belonging to the system of different realms subject to the same king" (XXII,493), but his writings in the 1760s make no mention of this controversy.) What he seems to fear is that schemes like John Brown's compulsory patriotic education will be taken up by the crown and the court in a manner leading to "a system of education, principles and manners favourable to despotism" (XXII,53). Brown's attempt to instil patriotism and respect for the constitutional, by being made compulsory, will be itself unconstitutional and inimical to the traditional liberties of "free-born Britons". He offers no evidence that Brown's scheme will be taken seriously. Despite this threat, he does not want to exaggerate the dangers to English liberty. "After weathering so many real storms, let us not quit the helm at the apprehension of imaginary dangers", he enjoins his countrymen (XXII,143). No English king will be deceived by the false adulation of writers and courtiers into forgetting that his own true dignity is inseparable from a regard for the privileges of his subjects.

Priestley's sentences waver between warning and reassurance, yet not only is the source of danger (whether "real" or "imaginary") unclear - it is also mysterious how the country which leads the world in agriculture, manufacturing, trade, science, rational religion, moral philosophy and political organization can be so much at risk. From this time on, Priestley's attitude to his own country hovers between a fear that "corruption" is observably gaining control and a conviction that liberal principles must be sufficiently entrenched in English society, or perhaps in Europe more generally, to withstand these "temporary" setbacks. In warning his countrymen of the danger they are in, his warnings come in time to read also as veiled threats directed to the ruling hierarchy, threats backed by his assumption that the forces of progress will prevail.

In the following year, 1769, his anonymous The Present State of Liberty in Great Britain and her Colonies (written with some assistance from Benjamin Franklin) attempts to bring together the causes of Wilkes and the Americans as evidence that the time may be approaching "(though I hope it is still at a great distance) when, as Montesquieu has prophesied, this country shall lose its liberty" (XXII,383). The pamphlet debates the rights and wrongs of government policy of the day, setting the issues in the context of Priestley's general political philosophy, but it has little to add on the question of how to diagnose the causes of this decline. Its view of the future is at once both pessimistic and progressivist.

> The tree of liberty, I trust, has taken too deep root in both countries [Britain and America], not to be able to stand the shock of a few storms, before it be quite overturned.... The folly, if not the iniquity, of attempts to enslave a great and magnanimous nation, or any part of it, is surely too glaring not to seen before they can be put into execution (XXII,381).

Despite the dangers he does not think the tree of liberty will be overturned ("before" here is being used not to refer to the future but in a causally counter-factual sense). But until the folly of trying to overturn it be generally recognized, matters must rest in the hands of "that good Providence which disposes of all things".

The fears first expressed in the Essay are shown a few years later to concern more than just England. Another anonymous pamphlet, A Letter of Advice to those Dissenters who conduct the Application to Parliament for Relief from certain Penal Laws, also concludes with some portentous observations.

> The state of Europe is at this time [1773] critical and alarming, beyond what it was ever known to be before. The slightest attention cannot but discover the seeds of great and calamitous events in almost every kingdom of it, so that we must be upon the eve of great revolutions (XXII,481).

Whatever they indicate about Priestley's abilities as a prophet, these are surprising reflections from a progressivist who not long before in the Essay had been proclaiming the security of civil liberties in even the more absolutist states of Europe (XXII,34f). The crisis is financial: the expenses of war have necessitated exorbitant taxation and yet still result in increasingly burdensome national debts. The causes presumably lie in the nature of aristocracies, though this is not discussed. Yet critical though the situation is, Priestley's faith in the forces of progress remains ascendant: "it may be hoped that the wisdom of man, improved by the observation and experience of so many ages, will be able to strike out something more favourable to liberty, virtue, and happiness, than any form of government that now subsists in Europe" (XXII,482). Priestley's disenchantment with England stems from her refusal to "strike out something more favourable" in the two decades following, when the rest of Europe and America were doing so with (he believed) considerable success.

In the following year An Address to Protestant Dissenters continues the theme of European crisis.

> Power has shifted and fluctuated in a most extraordinary manner among the different ranks of men, people, lords, clergy, and princes: but, after almost all the modes and combinations of which the distribution of power is capable, it has at length almost wholly, and every where, reverted to the princes; so that they are nearly as arbitrary in Europe as in the East, though established maxims ... have hitherto prevented their giving in to so wanton an abuse of their power. But a longer continuation in power may be attended with these excesses: as was the case with the Romans (XXII,489).

The causes of England's decline are identified more clearly. The blame is placed with "the tricks and artifices of the court, and the influence of the bishops, who have the same views and interest with the court" (XXII,485). Yet it is not the court alone: he qualifies Montesquieu's contention that "England will lose her liberty whenever the legislative part of the constitution should be more corrupt than the executive"<1> with the remark that

> Our liberties must necessarily be gone whenever the power of the House of Commons shall be united to that of the crown, whether the court be corrupt or not. For how can there be any equilibrium, when every weight is thrown into one scale? (XXII,488).

Whether this disequilibrium can be corrected Priestley is very doubtful: "The disease", he thinks, "may be too desperate for any power of medicine ...." No longer does

progressivism supply a safety- net to prevent a fall from grace. If the Romans, "as brave and as high-spirited a people as the English", should have tamely submitted to "so vile an abuse of power as one would have thought, a priori, had been absolutely impossible among men", then "why may not this be the case with us? We have already taken the first steps towards it in the corruption and venality of the lower ranks of the people" (XXII,489). This is surprising, in both the depth of its pessimism and in its assessment of popular morals. He sees the partition of Poland by Prussia, Russia and Austria as possibly the beginning of despotism across Europe, in which the Swiss states, the United Provinces and eventually England will succumb to the power of absolutism.

Priestley's conviction that the British "balanced constitution" had failed to live up to its name, which he formed in the 1760s and 1770s, explains his later preference for the republican experiments in America and France, but there is little evidence of how his political thought developed in the 1780s. The most pertinent comment is to be found in his Reflections on the Present State of Free Enquiry in this Country of 1785. England, he says, has

> set the example of free inquiry, and ... taken the lead in religious liberty to other nations; and though the policy of the times may be averse to any extension of this liberty, circumstances will no doubt arise that will hereafter be as favourable to it in this country as they are now in others.... Abroad, they are the governing powers that promote reformation. But with us, the people think and act for themselves, a circumstance infinitely more promising for an effectual and permanent reformation; there being nothing of worldly policy in the case, but a pure love of truth that is the great spring of action with us (XVIII,549).

Here England's social advancement and popular libertarianism will rescue her from the ineptitude of her governing classes.

From this time on Priestley's animus against the Established Church intensifies. It was in the Reflections that he made himself notorious as "Gunpowder Priestley" for speaking of the Rational Dissenters as, "as it were, laying gunpowder, grain by grain, under the old building of error and superstition, which a single spark may hereafter inflame so as to produce an instantaneous explosion" (XVIII,544). When his opponents, Burke included, chose to take this inflammatory language literally he was forced to protest that his gunpowder "is not composed of saltpetre, charcoal, and sulphur, but consists of arguments; and if we lay mines with such materials as these, let them countermine us in the same way, or in any other they please, and more congenial to their natures" (XIX,121). His Letters to Burke continue this vein of metaphoric abuse ("Writing to an orator, I naturally think of metaphors and comparisons"), describing the Church as a fungus, a sloth and a glutton feeding on the body of true Christianity (XXII,203).

The "old building" seems to require such argumentative demolition because it is refusing to disintegrate quietly with age. However much its theological and ecclesiastical claims have been discredited by the process of "enlightenment", it retains a power over the English people which is increasing rather than waning.

> I now see that there is something in the Church of England which has more power than I was aware of, to blind the eyes of men, in others respects honest and ingenuous; and to produce a degree of self-delusion almost equal to anything we see in Bedlam (XIX,110).<2>

Religious toleration, he thinks, is more imperfect in England than in most other countries, even Catholic ones, because in them Protestants may be admitted to such offices of trust and power that they are excluded from in England. In his Letter to Pitt he mentions North America, Ireland, Holland, Prussia and Russia as more tolerant in this regard (XIX,119; 130).<3>

Though the Church's defenders such as Bishop Warburton, and later Burke, justify Establishment on the grounds that Anglicanism is the majority religion of the English people, they refuse to apply the same principle to Ireland, where Catholics outnumber Anglicans ten to one - or better still, to disavow the idea of Establishments altogether (XIX,130f; XXII,181f). The Irish example seems to Priestley to show that Burke's professed adherence to the criterion of historical antiquity, to the Lockean principle of the general good, and to Montesquieu's respect for the particular character and peculiarities of different peoples all come to nothing when they conflict with the status quo. He makes no acknowledgment of Burke's work for Irish Catholic relief, though Burke cared as much for the rights of his own minority as Priestley did for his. (Indeed, at times in the 1790s Burke's private correspondence on the Irish question could sound a revolutionary note quite as strident as any of Priestley's proclamations.<4>) Burke's public position was that by countenancing treason against the constitution the radical Dissenters had annulled the Dissenters' claims to full civil and political rights. He accused Priestley in the House of Commons of having a "declared hostility to the Constitution" (XV,495). Priestley countered (in the preface to his 1793 Fast Sermon) that the Dissenters had every right to peacefully debate even radical constitutional change, and that they had no ambition to overthrow the present arrangement with violence. Although as a democrat he accepts the principle of majority rule, the Anglican majority should be permitted no civil rights that the English religious minorities lack, because religious preference is not a relevant consideration in political matters. "As it is right in the minority to submit to the decision of the majority, it will be wise in the majority to bear with any mere difference of opinion in the minority, and to throw no impediment in the way of the freest discussion of their differences" (XV,495-7).

Replying to Burke's defence of the English Church's right to be publicly endowed with "modest splendour, with unassuming state, with mild majesty, and sober pomp",<5> Priestley asserts in the Letter to Burke that:

> The wealth of the clergy, of which you are so proud, and the temporal power with which you have invested them, is the natural source of their corruption, and what must ever sink them and religion into contempt .... Infidelity has made considerable progress in this country, and especially in the upper classes of life, persons to whom you imagine the wealth of the clergy would naturally recommend their religion (XXII,197).

Again, the objection is not to wealth and power as such, but to unearned, hereditary entitlements - to "idleness", not "luxury". He contrasts the respect held by the Dissenting

congregations for the ministers they themselves support with that by Anglican congregations for their state-supported clergy. (Bishops his Letter to Pitt damns as being "recorded in all histories, as the most jealous, the most timorous, and of course vindictive of all men, apprehensive of danger from quarters from which no eye but their own could have suspected any" (XIX,118).)

In purely political matters England fares no better. If the events in France of 1789-91 exceed Priestley's hopes, those in England fall far short. He writes to his friend Lindsey, just before the Birmingham Riots, that

> In spite of all that we can write or do, an attachment to high maxims of government gains ground here, and the love of liberty is on the decline. Such is the influence of the court. Nothing but public difficulties will open our eyes.... The enemy is powerful, though we must not despair (I,2,114).

In the "public difficulties" of the Riots Priestley thinks he can see the English hierarchy (which he believes to have instigated the disturbance) confessing its weakness by resorting to violence. Such vicissitudes have to be related somehow to his overall scheme. The problem is all the more acute because in no way could England be said to have fallen behind the rest of Europe in social and cultural achievement, and this sort of achievement is what he takes to be the driving engine of progress. Nor (at the time when he is praising the initiative of the French population) can he absolve the English people: he recognizes that they "would choose to have the power of the crown rather enlarged than reduced, and would rather see all the Dissenters banished than any reformation made in the Church" (XIX,508).<6> But he exempts them from serious responsibility for the Riots. Pitt had sought to dismiss the affair as "an effervescence of the popular mind". Priestley agrees, but turned the point against Pitt: mobs are volatile bodies, and only act as directed by their masters. He later remarks on a crowd which once burnt himself and Paine in effigy and then shortly after shouted "Paine for ever" and "No king" (I,2,108).<7>

Priestley has to find alternative strategies to explain the English predicament, especially in the heightened atmosphere produced by the Riots. One of these is to appeal to the wider European stage, where events - before the rise of Robespierre - seem to be running in a direction favourable to the cause of "liberty". He can assure the students of New College, Hackney, after the Riots that "the same grand luminary which has arisen on America, France, and Poland, and which has taught them all universal toleration in matters of religion, will illuminate the whole world; and that, all mankind will be free, peaceable, and happy" (I,2,159).

Another strategy is to argue that the resort to violence by his opponents is a sign not of their strength but of weakness. Violence is ultimately self-defeating. "Such measures" as the Riots, he tells the Unitarian Society, "are the first suggestion of chagrin [at the failure of argument to promote the establishment cause], though they are sure to end in disappointment...." For, "every instance of persecution will render it more odious, and therefore accelerate its final cessation ...." (I,2,175). To his congregation, the Old and New Meetings, he declares that persecution evinces "the malignity of our adversaries, and the evident tendency of their principles to introduce that disorder and confusion into society with which ours are ignorantly charged" (I,2,195). "If any thing will bear to be viewed and

examined, it must derive advantage from whatever draws attention to it; and such, I am confident, is the cause in which I suffer" (I,2,156). According to his own pupils of the New Meeting, "argument armed with fire and faggot may produce a temporary shock but ... it finally strengthens our cause; ... it forces us to feel the great justness of it, and produces actions natural to such a conviction" (I,2,139). "A hierarchy, equally the bane of Christianity and rational liberty, now confesses its weakness, and be assured you will see either its complete reformation, or its fall", Priestley is convinced (I,2,158).<8>

The underlying assumptions here are still those of the progressivist: that the majority of the people will bring to the case "minds free from prejudice", and that their judgement will prevail in the final analysis. The progress of knowledge will render ineffectual "all the efforts of the interested friends of corrupt establishments of all kinds ... though, by retarding their downfall, they may make the final ruin of them more complete and glorious" (XXV,375). Nevertheless, the hierarchy which, in the long run, has reason to "tremble even at an air-pump or an electrical machine" is, in the short run, gaining the ascendancy. To adapt the terms of Dunning's famous motion of 1780, the power of the state, in its various guises as crown, king's minister, court and bench of bishops, has increased, is increasing, and, in Priestley's view, ought to be diminished. His Letter to Burke locates the cause of this increase in the growth of "our immense public debt" (XXII,226f). However, as he elsewhere insists, the cause of the debt is to be found in the nature of aristocracy and its essential connection to "idleness". The struggle, in England as in France, is between aristocracy and people, between idleness and industry; but in England the balance between the opposing forces has been altered. Priestley's acknowledgment of a distinction between long- and short-term perspectives is a reluctant recognition that future progress in England is going to be far from straightforward. His despairing remark, "Such is the influence of the court", tacitly accepts that, contrary to one of the main premises of his theory of progress, the state can control developments within civil society.

James Mackintosh, before his conversion to Burkean conservatism, remarked astutely of Burke's attitude to Dissenting radicals like Priestley that "on those whom he at one moment derides as too contemptible for resentment, he at another confers a criminal eminence, as too audacious for contempt".<9> As a progressivist Burke ought to have had little to fear from a tiny minority of agitators incapable even of securing the repeal of the Test and Corporations Act. "The grasshoppers of the field" can little disturb the placid English cattle, however much noise they make. Yet in another place - for progress is immensely fragile - the radicals are given "wicked principles and black hearts" and are likened unflatteringly to "the principle of evil himself, incorporeal, pure, unmixed, dephlegmated, defecated evil".<10> Priestley's attitude to the English hierarchy, and to some extent to Burke, runs parallel to this. The hierarchy will tremble at air-pumps and electrical machines, for these are the true engines of progress and their cause is irresistible; and Burke will have to take off his coat of ancient prejudices in the sunshine of reason and liberty. And yet, reluctantly, he has to confer on the hierarchy a "criminal eminence", as the cause of all the evils of the day, capable of delaying the forces of progress in the most socially advanced country on earth. Priestley in this latter mood has to attribute to progress in England a fragility and vulnerability comparable to that which Burke ascribed to progress wherever it occurred. As a liberal progressivist he contends that the difficulties of politics have been steadily mastered by the character-forming exertions of the historical process. As a radical he sees ahead only a long uphill struggle against the inexplicably powerful forces of English "idleness".

However, Priestley had some difficulty in sustaining even this level of optimism. It was becoming very apparent that the English people did not want the French millennium, and that not just revolutionary action but any hopes of reform would have to be postponed. In the face of this rejection of their programme, the English radicals with very few exceptions attempted to preserve their principles while disavowing any resort to revolutionary violence. In 1794 Priestley insisted to the radical students of New College, Hackney that, whatever be their own political opinions, they should do every thing in their power to preserve the form of government which the majority of the population accept (XXV,390; cf. XV,495-9). William Cobbett complained that "Even suppose [Priestley's] plan of improvement had been the best in the world, instead of the worst, the people of England had certainly a right to reject it".<11> Priestley recognized that right and accepted that popular sovereignty has conservative implications when the people themselves are conservative. When New College had to be disbanded in 1796 (mainly because of internal strife amongst the students <12>), Priestley thought the failure "certainly very mortifying to the friends of liberty, and I doubt not the occasion of much triumph to its enemies; but we must give way to the times, which unfortunately are against the good cause, in England" (I,2,360f). But, writing from America, he was at least able to take consolation from the claim that "Here we have nothing of that kind to complain of".

9.2 Utopianism: France

Neither Priestley nor Burke succeed in maintaining a straightforwardly gradualist account of progress through the excitement of the revolution in France. The early phase of the revolution brings out the utopian in Priestley and the traditionalist in Burke.<13> Priestley's Letters to Burke concludes in "Letter XIV" with an account "Of the Prospect of the General Enlargement of Liberty, civil and religious, opened by the Revolution in France" (XXII,236-44). "These great events", he says, "in many respects unparalleled in all history, make a totally new, a most wonderful and important aera in the history of mankind". He pretends to be borrowing Burke's rhetorical style when he describes the Revolution as "a change from darkness to light, from superstition to sound knowledge, and from a most debasing servitude to a state of the most exalted freedom". But the irony here directed at Burke's hyperbole rebounds upon himself. The style being parodied turns out to be (at least temporarily) Priestley's own, whether or not it is also Burke's. "How glorious, then, is the prospect, the reverse of all the past, which is now opening upon us, and upon the world!... [In] comparison with what has been, now only can we expect to see what men really are, and what they can do" (XXII,236f).

Statements such as these in "Letter XIV" seem to commit Priestley to the kind of utopianism so severely castigated in Burke's Reflections, a utopianism not so readily found in the earlier writings Burke was attacking. Priestley seems now to deny what he had asserted only two years earlier, that

> it is the result of a wise part of our constitution that the bulk of mankind should not hastily change their opinions or practices, and that innovations should be opposed, because this makes us more cautious in propagating what appears to be truth, and gives it the firmest establishment when it is once received (XXV,324).

His gradualism had depended on the associationist account of character-formation, according to which it would be hardly possible for a nation to acquire the habits of virtue by the single act of starting a revolution, no matter how well-meaning the intentions of its founders might be.<14> Further, to see political action as the doorway to utopia is to give the state an eminence, even a pre-eminence, that his liberal progressivism had been strenuously concerned to deny it.

This last problem is perhaps only an apparent paradox. The Revolution, though itself a political act, is meant to impose restrictions on the scope of government. It aims to establish a constitution which will permit the state to be "no more interfering with matters of religion, with men's notions concerning God and a future state, than with philosophy or medicine". The old order of established church and entrenched aristocracy is the last barrier to the free exchange of ideas. Its privileged "idleness" has served as "heterogeneous supports" propping up antiquated views of religion and society. Under the new order government will be desacralized. "There will be magistrates, appointed and paid for the conservation of order, but they will be considered only as the first servants of the people, and accountable to them". Civil conflicts will cease, for "The power and emoluments annexed to [civil offices] will not be an object sufficient to produce a war". Foreign wars will be no longer fuelled by "the mad and insatiable ambition of princes". "Men will no longer covet what belongs to others, which they have found to be of no real service to them, but will content themselves with making the most of their own". When the expenses of government have been thus drastically reduced, there will be some "superfluity of public money" available for works of public utility. With the removal of "idleness" from the social structure only time will be required before reason will become "the umpire in all disputes"; and, Priestley adds, "The empire of reason will ever be the reign of peace" (XXII,237-41).

"Letter XIV" does acknowledge some problems which will not be solved simply by abolishing "idleness". Some difficulties must await the day "when mankind shall be a little more accustomed to reflection" - Priestley mentions disputes about "modes of government, and differences of interests between provinces". Likewise, "national prejudice and enmity" will diminish only when men "no longer covet what belongs to others". But he cites America's having avoided both foreign and civil wars since the time of its revolution as evidence that these hopes are not unfounded.<15> The tenor of "Letter XIV" could be described as predominantly utopian with a modicum of gradualism still in place. It is as if, after a very long journey, the last bend has been turned and home is now distantly in view.

It is perhaps the case that all progressivism is potentially utopian (and religious progressivism is usually millenarian - an aspect of Priestley's thought to be considered in the next section). For Priestley progress is accelerative, so the final bend of history might well arrive unexpectedly soon. What is most surprising about his utopianism is that this "final bend" is to be turned by an act of a political nature, revolution. His liberalism quite definitely delimits the scope of what can be expected from he political realm and his progressivism gives priority to civil life as the main arena for lasting improvements. To view this in perspective it will help to notice a comment of Priestley's on the France of the ancien regime, written two decades before the Revolution.

Priestley entertained high hopes for progress in France long before 1789. As early as 1768 the Essay on Government envisages that France might "leap-frog" ahead of England, just as (he thinks) England had leapt ahead of France after the expulsion of the Huguenots:

> whenever the French make a reformation, as their minds are much more enlightened than those of the English were when our present establishment was fixed, their reformation will, in all probability, be much more perfect than ours (XXII,68).

This refers only to the issue of religious toleration, but the same reasoning might apply to political matters. The statement assumes that France's "backwardness" - its Catholicism and perhaps its absolutist form of government - is only superficial, and that real progress and prosperity has permeated French society. Writing with hindsight in 1799 he can comment that:

> In no country was there ever less liberty of printing and publishing than in France before the revolution .... But did this strictness prevent the revolution? The freest publications were at the same time circulated with the greatest industry, and they were read with avidity, and with tenfold effect, in consequence of it (XXV,164).<16>

When a reformation did arrive in 1789 Priestley was predisposed to greet it as the political and religious fulfilment of a long-standing social development. In that sense the Revolution is not a "single act" attempting per impossibile to reform a society against its will. Priestley was not a Jacobin before Jacobinism.

The utopianism of "Letter XIV" was to be short-lived, and perhaps simply indicates a tendency in his thought visible only at the height of enthusiasm for the French Revolution. He was certainly not alone in greeting the Revolution so optimistically: it was a time when, as Melvin Lasky has put it, "the English mind was on the eve of one of its rare but grandiose flirtations with utopia and revolution". In 1790 even Pitt could say that "The present convulsions in France must sooner or later culminate in general harmony and regular order ... and thus circumstanced, [she] will stand forth as one of the most brilliant pioneers of Europe".<17> It was Burke who almost single-handedly disabused most English minds of this grandiose flirtation, leaving only a minority of radicals to defend a Revolution whose decline seemed to follow Burke's predictions all too exactly. How Priestley reacted to the subsequent course of the Revolution we shall see shortly. What is notable here is that his most explicitly utopian pronouncements are formulated in defiance of all Burke's sarcasm and denunciations of the "confused jargon" which emanated from the radical Dissenters' "Babylonian pulpits". Having as he thought answered Burke's philosophical charges against the Revolution, Priestley thought there was nothing additional to answer in Burke's anti-utopian expostulations.

Burke's case against utopianism sometimes takes the form of a defence of traditionalism. Ancient institutions and the feelings of reverence that their age inspires are to be upheld partly because they are ancient and inspiring, however they measure in the scales of enlightened philosophy. Priestley meets traditionalism with utopianism. Burke, he says, may cherish these prejudices as much as he pleases.

> Prejudice and error is only a mist, which the sun, which has now risen, will effectually disperse. Keep them about you as tight as the countryman in the fable did his cloak; the same sun, without any more violence than the warmth of his beams, will compel you to throw it aside, unless you choose to sweat under it, and bear the ridicule of all your cooler and less encumbered companions (XXII,219).

Burke's traditionalism and Priestley's utopianism are not dominant strains in their political theories; they are recessive characteristics brought to the fore by the stresses of a revolution too close and too turbulent for a purely detached analysis. Both responses deviate from the requirements of Enlightenment empiricism, Burke deliberately, Priestley perhaps unconsciously; but both seek to preserve their empiricist credentials by appealing to future events to bear out their analyses.

9.3 Revolution and the Millenium

Priestley's progressivism, as we have been observing, was challenged first by events in England, not France. Furthermore, as we shall see, he took the failure of the French Revolution as the lesser of the two disappointments. Although highly sensitive to encroachments upon English liberties, Priestley steadfastly insisted that the anti- libertarian elements of the new French regime are outweighed by the fundamentally liberal commitment of the French constitutions. Most of his fellow liberals gradually - in most cases not before 1792-3 - found the Revolution insupportable, and reluctantly came to concede that Burke had foreseen its outcome correctly. Even Fox, who led the defence of the Revolution in the Commons, could remark: "It is difficult to say whether [Burke] is mad or inspired; whether one or the other, everyone must agree that he is a prophet".<18> This Priestley would not allow. For someone who thought of himself as defending the main trends of modern history he found himself increasingly isolated and embattled. And having expected the sunshine of reason and liberty to bring about the voluntary removal of the artificial coat of ancient prejudices, he found himself allied to a cause that removed heads as well as coats.<19>

We might have expected the failures of the Revolution, the Terror especially, to have sent a shock wave right through to the foundations of Priestley's thought. Instead, we find that he retracts not a single article of his political principles or the moral theology that underlies them. Lovejoy's words (quoted in Section 6.1) about optimists not being "fatuously blind to the realities of evil" come to mind again here. If the Revolution presented no crisis to Priestley, then the language he used to defend it might itself suffer a credibility crisis. William Hazlitt, brought up in the circles of radical Dissent, perhaps had in mind Priestley's kind of political theology when he wrote (in 1816) that

> The French revolution was the only match that ever took place between philosophy and experience; and waking from the trance of theory to the sense of reality we hear the words, truth, reason, virtue, liberty, with the same indifference or contempt, that a cynic who has married a jilt or a termagant listens to the rhapsodies of lovers.<20>

However, before any judgement can be reached on the "trance of theory" we need to take into account another kind of theological "trance", Priestley's millenarianism. It was through millenarian spectacles that Priestley viewed all the various phases of the Revolution, and it was this millenarian perspective which mediated and skewed his vision of the moral issues the Revolution raised. In the end, it will appear, though he is not very articulate or perhaps candid on the matter, his millenarianism eclipses his progressivism. In that respect at least, the Revolution had as strong an impact on him as it had on anyone else.

A discussion of millenarianism here is both unavoidable and awkward. The focus of this study is on Priestley's moral theology. His millenarianism is to some degree an extension of his progressivism, which itself derives from his moral theology. It is also of course biblical, derived from the prophets, and from Daniel and Revelation, and in that regard outside our present scope. It is artificial to have to draw a sharp distinction between these two sorts of sources; at times the two sources converge in Priestley's text, elsewhere they diverge. Some account of this complex relation is required. The complexities arise from the fact that his millenarianism itself falls into no convenient pattern. There is one obvious and tempting interpretation to impose upon the materials but the result fits only part of the evidence. A sketch of this model, and a mention of the qualifications it requires, seems the best way to outline the whole picture without descending into the particularities of biblical exegesis.

There is no difficulty in seeing how Priestley became a millenarian: he always was one, having been educated in an English theological tradition which took eschatological speculation seriously and understood it as literally and "historically" as it understood the miraculous events of the first century. Though "The authority of the book of Revelation was not received in the Christian churches for some time ... it is now justly considered as of the highest rank", he could say in the Institutes (II,127). Clarke Garrett's recent study of late-century millenarianism is aptly entitled Respectable Folly. Nothing better illustrates the respectability of millenarianism then than the fact that the arch-opponent of Priestley's Unitarian interpretation of church history, the staunchly orthodox Bishop Samuel Horsley, was himself an almost frenetic reader of the signs of the times, though from a conservative viewpoint. Richard Watson, another bishop though of a more liberal stamp, was also committed to the same enterprise, and so too was Richard Price from within Dissent. This was perhaps the last occasion that mainstream Christian scholars have expected the real and imminent end of history; the Revolution seems to have eventually extinguished that which it at first inflamed, at least amongst the major theologians.<21>

If "respectable" means "respected by churchmen and academics" then Priestley's millenarianism was decidedly more respectable than, say, his materialism. However, for some of his contemporaries it was more folly than respectable. Thomas Belsham, one of his closest supporters, with whom he discussed these matters, could remark in 1794 on "how grievously the most enlightened minds may err when they attempt to apply the language of prophecy to passing events" (I,2,119n). Even his closest friend, Theophilus Lindsey, thought his expectation of the Second Coming "a little visionary" (I,2,331). Burke abominated the whole business as politics conducted under a spurious religious guise.<22> Even if millenarianism was widely accepted that would not be quite the same as for it to conform to any established standard of rationality.

Priestley, however, does not abandon his epistemological principles when he turns to prophecy. There is a surprising caution evident in his pronouncements which contrasts with the inflammatory rhetoric he sometimes employs. In his 1793 Fast Sermon, for instance, he "does not pretend to prophesy" and he "sincerely pray[s] that the evils which I fear are approaching may be deferred as long as possible, and that the wisdom and moderation of our councils may contribute to so good an end" (XV,497). His 1794 Fast Sermon reminds his hearers of the resurrected Christ's reply to the disciples: "It is not for you to know the times or the seasons, which the Father hath put in his own power" (Acts 1:7; quoted XV,543). In 1795 he remarks in a letter to Lindsey that "happily we cannot tell how long the evil day may be delayed or (for the elects' sake) shortened" (I,2,315). When the prospect of peace between France and England occurs that year he comments that he shall "greatly rejoice, whatever I may think on the subject of prophecy" (I,2,318). In 1798 he tells Lindsey that "my solitary speculations may lead me astray, farther than I can be aware of myself; and for this there is not perhaps any remedy, and therefore my friends must bear with me" (I,2,404). He is sure the prophecies are being fulfilled, "Though we are always apt to magnify present appearances ...." (I,2,410). In 1799 he says that if he has "looked sooner than we are authorized to do, for the fulfilment of the prophecies ... and my apprehensions appear to be ill-founded, I shall only share the fate of many learned and worthy men who have gone before me" (XVII,134).<23> The millennium, it seems, is to some extent an hypothesis, to be tested against experience.

What requires explanation, then, is not his millenarianism itself but internal changes in his millenarian perspective. The first of these is the shift around 1789 from an academic theorizing, which envisages the millennium as the far-distant consummation of present progressive tendencies, to a view - tantamount to the utopianism of his Letter to Burke - in which the millennium is urgent, imminent and instantly glorious. This note is sounded in his first observation on the French Revolution: already in October 1789 he has decided that "There is indeed a glorious prospect for mankind before us" (I,2,38). His eschatological hopes are expressed in language mixing his own progressivism with the words of Isaiah and Micah. At the end of the Letter to Burke "good sense, and the prevailing spirit of commerce, aided by Christianity and true philosophy" appear like four benign (if incongruous) Horsemen of the Millenium, heralding a new era in which men "shall beat their swords into plough-shares, and their spears into pruning-hooks" and "nation shall not lift up sword against nation" (XXII,240).

The second shift occurs as the Revolution fails to meet the expectations it has raised. Moving away from utopian millenarianism, Priestley comes to take greater cognizance of the darker side of traditional apocalyptic. The process is epitomized in a letter to Lindsey of November 1794 after the Reign of Terror has run its course.

> The present state of things confounds all speculation. A new state of things is certainly about to take place, and some important prophecies, I believe, are about to be fulfilled. The late events, and my continued attention to the prophecies, make me see this in a stronger light than I did when I wrote my Fast Sermon [in February]. Many more of the prophecies than I was then aware of indicate the great destruction that will be made of mankind before the restoration of the Jews (I,2,280).

That the millennium involves destruction was not a new discovery in 1794. Even in July 1790 he had declared: "I hope some great good is coming forward, and this is seldom effected without great preceding calamity" (I,2,74) - a view not easily reconciled with the utopianism he also espoused that year. Nor is the destruction all the work of the Revolution's enemies. His first sign of unease about the Revolution occurs in a June 1791 letter to Lindsey: "I am concerned at the difficulties of the French, as I hoped those of that kind, especially, had been over" (I,2,110). In June 1792, he was lamenting "the horrid violences committed in France", though still able to add that "nothing so outrageous can continue long" (I,2,184). In April 1793 "The prospect is very melancholy. The conduct of the French has been such as their best friends cannot approve". In another letter that month, with the war between France and England in mind, "every thing indicates a beginning of troubles in Europe" (I,2,199).<24>

Yet in the Fast Sermon written that same month he can say that "the great catastrophe to which things are ripening ... is probably very distant" (XV,516). Furthermore, the Revolution is given rather little responsibility for the "catastrophe". In August he notes that there have been a number of revolutions in France since 1789, and all, he is willing to think, have been "favourable to liberty and happiness" (I,2,207).<25> In this letter he tells his American correspondent "I cannot give you an idea of the violence with which every friend to liberty is prosecuted in this country". So little liberty is left to his countrymen that "nothing but a general calamity, which I fear is approaching, will open their eyes". Yet the violence which brought the deaths of both Louis XVI (which Priestley opposed [XXV,134n]) and the Girondin leaders, including Priestley's fellow-progressivist Condorcet, is glossed over.

Priestley's defence of the Revolution rests on two premises. One is that the violence that accompanied the Revolution was not itself part of the Revolution. This contention is present from the start, when he tells Burke that the National Assembly is as innocent of the outrages attending the Revolution "as the Parliament of Great Britain, or as yourself". It is perverse for Burke to blame Price for these events: Price "wishes to recommend the Revolution, and is therefore sorry for every thing that disgraces it" (XXII,165). Similarly, in 1797 "the enormities which have been committed in France" are, he believes, events "which no persons lament so much as the friends of liberty in every country" (XXV,132). This defence would be more plausible if there were more evidence of this lamentation in his published writings.

Priestley's wish to recommend the Revolution seems to make him silent about whatever disgraces it. This is to give up judging the Revolution by experience. It conflicts with his attempt to base radicalism not on doctrinaire principles but on Pope's pragmatic "Whatever is best administered, is best". "The conduct of the French [he says in 1798] does not affect the Constitution.... It is only the character of the people in office, who may change tomorrow, as it is to be hoped they will soon".<26> In America he could defend the French Revolution on the grounds that its principles, if not its conduct, are the same as those of the American Revolution (XXV,132); but no such distinction had been allowed in assessing the evils of the ancien regime. He seems unable to come to terms with a "people" who are far from being as virtuous as his progressivism requires. He had seen first-hand that mob actions could be manipulated to political effect in England; but he made little

allowance for the same phenomenon in France, and could only warn in September, 1792 - after the September massacres - against the dangers of the National Convention being dominated by pressures from the public gallery and mob violence. His own brand of rhetoric turned on the notion of a (relatively) "virtuous people", a category so large as to include everyone free from the effects of "idleness", from repentant aristocrats to the sans-culottes. Its generality made it pliable to serve a variety of radical ends; it by no means guaranteed for the middle classes a leadership role that Priestley assumed they deserved. In any case, whatever the internal causes of the Revolution's failure, progress would seem to be considerably less robust than Priestley had imagined.

Priestley's other premise is that most of what went wrong with the Revolution was caused by foreign aristocratic interference in the affairs of the new regime. Had not Louis XVI "been stimulated by others, more ambitious than himself, to recover the power that he had lost, the war, and the consequent enormities, had not taken place. To those princes, therefore, and their wicked confederacy, are all the enormities to be ascribed" (XXV,134).<27> If this is an accurate assessment then the prospect of a general advancement of the cause of liberty in Europe can not be good. Further, the claim would be more plausible if Priestley had acknowledged the aggressive actions of the French revolutionary crusade across the Continent. This crusade, however, exists in Priestley's world only as part of the millenarian drama, first (in 1792-4) as part of the "great troubles" of the end- times, then later (in 1797-9 under Napoleon) as Daniel's new kingdom which shall bring down the nine remaining kingdoms, each horns of the great Beast of the Apocalypse.<28>

For so prolific a political commentator the paucity of moral criticism is remarkable: it suggests by an argument from silence that the Revolution presented difficulties beyond all power of rationalization. Does the catastrophic aspect of millenarianism, which both the "late events" and "his continued attention to the prophecies" drove home to Priestley, act as a lightning conductor to insulate his moral theology from the evils of the Revolution? The best evidence for this is in the preface to his 1799 Comparison of the Institutions of Moses with those of the Hindoos and other Ancient Nations. There he still trusts "that the consequences of that revolution will be great and happy", notwithstanding "all the evil that has taken place". What this passage makes clear is that his grounds for this hope is millenarian rather than political. "The eye of sense sees the calamity, and the eye of faith sees with equal clearness the good that is to follow it" (XVII,137). As the Revolution deteriorated, Priestley's "eye of faith" had come to see the "calamitous" side of Scripture. Yet even when sense and faith both suggest disaster he does not perceive any damage to his optimistic political and moral assumptions. In the millenarian setting catastrophe loses all independent force; it becomes nothing more than a short convulsion before an eon of peace and happiness. By 1797 the secular outlook seemed worse than ever, yet his view of the ultimate outcome remains unchanged.

> Never surely were our general prospects so dark as they are at present.... But the Biblical prophecies assure us that the issue of these calamities will be most glorious and happy, and that, whatever be our fate in this life, there is another and a happier reserved for the righteous.<29>

The Revolution began by promising utopia; it ended as the catastrophic prelude to the millennium. Throughout the excitement and turbulence of the decade Priestley never lost his faith that the outcome of it all would be "glorious and happy". In the process, however, the millenarian framework for these events changed drastically. If Priestley seems very little affected by the moral difficulties of the Revolution, the reason may lie in this change. In shifting from a gradualist to a catastrophic millenarianism he finds a way to absorb the evils that his progressivism could not have accommodated, while preserving his ultimate optimism. One weakness in this interpretation is that it suggests that he discovered the catastrophic side of the millenialist outlook only as a response to the failure of the Revolution. But catastrophism is present in his writings long before the 1790s. His 1782 History of the Corruptions of Christianity, for instance, can say of the millennium: "Calamitous, no doubt, will that time be". But, he adds, in words which pre-figure his later response, "what convulsion in the political world ought to be the subject of lamentation, if it be attended with so desirable an event [as the arrival of the Kingdom of God]?" (V,504). (It was of this passage that Burke remarked: "You see with what a steady eye these gentlemen [Priestley and his fellow radicals] are prepared to view the greatest calamities which can befall their country".<30>) It remains a problem to know how such a catastrophism could have for so long subsisted, however vestigially, alongside his thoroughgoing progressivism.

If Priestley's millenarianism preserved his ultimate hopefulness it did so only by destroying his progressivism, of which little remains after 1794. One indication of this is his changed attitude to the Enlightenment. In 1790 he had believed that the growth of scientific thinking will "be the means under God of extirpating all error and prejudice, and of putting an end to all undue and usurped authority in the business of religion...." (XXV,374f). By 1794 he is ascribing the defection from Christianity by French and English intellectuals to "apostasy in the latter days" (XV,545; XVII,104f). A letter of 1796 speaks of "the present torrent of infidelity" (I,2,393). Yet, considering that his whole philosophical theology was intended to harness the Enlightenment to the cause of Christianity, he is remarkably unperturbed. In the millenarian scheme it is possible to claim that this "defection from Christian principles" is (as another letter would have it) "a certain sign of better times" (I,2,393).

Even so, Priestley's revolutionary ardour survives the worst of the French troubles. It is certainly striking that his Northumberland Letters should have seen fit to endorse a revolutionary-sounding solution to English difficulties in 1799.

> I sincerely wish (if the genuine spirit of the original constitution cannot be revived, which would no doubt be the best for that country) for some more radical change than I have hitherto thought necessary, though I wish it to be effected peaceably, and without the interference of any foreign power (XXV,131).

The central issue for him is still the failure of representation in the English system; "the court, as is well known, always commanding a majority in the House of Commons, and being equally sure of the support of the Lords, in all their measures". Yet how, if the people are conservative, a stricter representation would make much difference he does not explain. He can brush aside the accusation that by advocating "some more radical change" he must thereby "approve of all the atrocities of Robespierre", by appealing again to the wider European and American evidence and take consolation from "the progress that the revolutionary spirit is making in other parts of Europe, where it is still more wanted"

(XXV,132). This defence, and the related contention that the Revolution in France was subverted by aristocratic interference, rings hollow in a further sense: the Revolution failed not only in France, but also in England, for there it failed even to occur. Even on his flexible version of empiricism, a version hospitable to hypotheses and not at all disposed to allow a single counter- instance to refute a well-formed theory, the failure of the Revolution in both England and France (if it was admitted) must be a serious blow. Add to this the difficulty Priestley had in recognizing Revolutionary America in the rule of President Adams, and it must appear that the Revolution had failed tout ensemble. The forces of idleness are, by 1798, finally in command. Priestley's wish for "some more radical change" is, in this context, inexplicable.

How far Priestley is prepared to go in defence of political violence is indicated in the following remark from his Maxims of Political Arithmetic of 1798:

> Many lives, no doubt, will be lost in war, civil and foreign; but men must die; and if the destruction of one generation be the means of producing another which shall be wiser and better, the good will exceed the evil, great as it may be, and greatly to be deplored, as all evils ought to be (XXV,181).

The ends will justify the means: but only on the crucial, and by now very dubious assumption that progress will ensue. Cold-blooded as this sounds, it is notable that he applies a similarly ruthless brand of logic to explain the violence inflicted against himself and his own cause.

> As a part of the general plan of that providence which over-rules all things, I am far from complaining of the treatment I have met with in England, or in this country [America]; especially as such has almost always attended the greatest merit, and we cannot expect to have any commodity without the tax that is laid upon it by the laws of nature. In a system in which infinite wisdom and infinite goodness are equally apparent, nothing can eventually be wrong. Toads and vipers are as necessary in the system as horses and sheep; and noxious plants as much as wholesome herbs (XXV,142).<31>

In both places it is the system and character theodicies that are at work, but in the second the progressivism which grew out of his character-formation thinking is conspicuous by its absence.

His final word on political matters, though brief, seems to abandon both progress and revolution. In his 1803 revision of the Lectures on History he remarks that the revolutions in France, "Though planned by men of the greatest abilities, and the most extensive reading and experience, ... have had consequences that were little foreseen; and the system established at present is the reverse of everything that was intended at the commencement of the Revolution".<32>

Notes to Chapter Nine

1. Priestley is paraphrasing Montesquieu's The Spirit of the Laws, 2 Vols in one, trans. T. Nugent, (New York and London, 1966), Book XI, section 6, p. 161f.

2. From his Letter to the Rev. Mr. Hawkins of 1790.

3. The deficiencies of English toleration are discussed in more detail in his Letter to Pitt (XIX,122-9).

4. For Burke's Irish "Defenderism" see The Correspondence of Edmund Burke, Thomas W. Copeland general editor, 10 Vols, (Cambridge and Chicago, 1958-1978), VIII, 378; and IX, 170.

5. See Reflections on the Revolution in France, edited with an introduction by Conor Cruise O'Brien, (Harmondsworth, 1968), p. 197.

6. From Part II of his Appeal to the Public on the Riots in Birmingham of 1792.

7. On the volatility of mobs Burke agreed with Priestley. Writing to Henry Dundas about the Riots he says: "How variable and unstable popular humour is, and how capable those who today cry up Church and King, are the next of crying them down with equal rage, are things not at all necessary to be stated to one of your sense and experience" (Correspondence, op. cit., VI, 421).

8. Priestley's wife, Mary, could say after the Riots, "I see no reason to sink where there is a good conscience to keep one up" (I,2,365). But if Priestley thrived on controversy, his wife, otherwise noted for her strength of character, seemed to have suffered from it. Their eldest son Joseph spoke of her as having been "harassed in her mind ever since the riots of Birmingham" and of her later preferring the quiet of the American countryside to the cities for that reason (I,2,266n).

9. See James Mackintosh, Vindiciae Gallicae, (Dublin, 1791), p. 138; quoted by D. O. Thomas, The Honest Mind. The Thought and Work of Richard Price, (Oxford, 1977), p. 317.

10. Reflections, op. cit., p.181; Correspondence, op. cit., VI, 91f.

11. Quoted in Melvin Lasky, Utopia and Revolution, (Chicago, 1976), p. 522.

12. See Michael Watts, The Dissenters, (Oxford, 1978), Vol. I, p. 487f.

13. Burke's traditionalism need not be discussed here: see Frederick A. Dreyer, Burke's Politics, (Waterloo, Ontario, 1979), pp. 46-53.

14. See Section 7.1(iii). Priestley is still espousing gradualism in the 1791 Political Dialogue (XXV,104).

15. By 1798 Priestley was forced to revise this opinion and to allow that "Divided as the people of this country are, some in favour of France, some in favour of England", an American civil war is not out of the question.

16. From his Northumberland Letters of 1798. He adds that "The less men have the liberty to speak, the more they will think; and they naturally suspect that what they are forbidden to examine will not bear examination".

17. See Lord Rosebery, Pitt, (London and New York, 1891), p. 120. Lasky's remark is from Utopia and Revolution, op. cit., p. 496.

18. Quoted in Christopher Hobhouse, Fox, 2nd ed., (London, 1947), p. 200.

19. Cobbett devised a variation on this metaphor when he described the period of American pro-revolutionary fanaticism in 1793 as "that enthusiastic season, when the sun of liberty bore down with such violence on our skulls, as made us dance the whirligig, like ducks under the tropics" (quoted in George Spater, William Cobbett. The Poor Man's Friend, 2 Vols, (Cambridge, 1982), I, 45.)

20. See The Memoirs of Thomas Holcroft in The Complete Works of William Hazlitt, ed. P.P. Howe, 21 Vols, (London and Toronto, 1932), III, 155f. At the opening of the Revolution, Hazlitt added, "the path that led to human happiness seemed as plain - as the pictures in the Pilgrim's Progress leading to paradise.... The curb of prudence was taken off; nor was it thought that a zeal for what is right could be taken to an excess".

21. See Clarke Garrett, Respectable Folly. Millenarians and the French Revolution in France and England, (Baltimore and London, 1975). Priestley's millenarianism is discussed in Chapter 6. For Horsley see Richard Allen Soloway, Prelates and People. Ecclesiastical Social Thought in England, 1783-1852, (London and Toronto, 1969), p. 39f. For Watson see The Collected Works of Samuel Taylor Coleridge, Vol. I, Lectures 1795. On Politics and Religion, eds. Lewis Patton and Peter Mann, (Princeton, 1971), p. 89f. Price could speak of "an approaching general amendment in human affairs" in his Four Dissertations, (London, 1767), I, 137.

22. Reflections, op. cit., p. 166.

23. From his Comparison of the Institutions of Moses with those of the Hindoos and Other Ancient Nations (Northumberland, 1799).

24. Reference (I,2,74) is from a letter to Lindsey dated July 16, 1790; (I,2,110) is from a letter to Lindsey dated June 2, 1791; (I,2 184) is from a letter to John Hurford Stone dated June 17, 1792; "the prospect is melancholy" comes from a letter to William Withering dated April 15, 1793, collected in Scientific Correspondence of Joseph Priestley, ed. H. Bolton, (New York, 1892; repr. New York, 1969), p. 135; (I,2,199) is from a letter to William Russell dated April 30, 1793.

25. From a letter to J. Gough dated April 25, 1793.

26. See Margaret E. Leslie's thesis, The Social and Political Thought of Joseph Priestley, University of Cambridge, 1966, p. 304.

27. From his Northumberland Letters.

28. See Clarke Garrett, "Joseph Priestley, the Millenium, and the French Revolution", Journal of the History of Ideas, Vol. 34, 1973, p. 51.

29. From a letter to Lindsey dated August 27, 1797.

30. Reflections, op. cit., p. 148.

31. From his Northumberland Letters.

32. Quoted from a note to the 1803 edition of his Lectures on History in Margaret E. Leslie, op. cit., p.299.

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