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THE SCIENCE OF PLEASURE:

Cosmos and Psyche in the Bourgeois World

Thesis submitted in partial
fulfillment of requirements
for the degree of Doctor of
Philosophy.

Department of Sociology,
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CONTENTS

| | |
|--|-----|
| INTRODUCTION | 1 |
| PART ONE: FUN | |
| One: The Dread of Chaos | 8 |
| Two: The Fearful Cosmographer | 49 |
| Three: The Romance of Signs | 92 |
| The Cosmic Body | 126 |
| PART TWO: HAPPINESS | |
| Four: Hierarchy | 141 |
| Five: Release | 181 |
| Six: Nature | 222 |
| The Mirror of God | 254 |
| PART THREE: PLEASURE | |
| Seven: Harmony | 265 |
| Eight: Mechanism | 308 |
| Nine: Egoism | 344 |
| The System of the World | 373 |
| PART FOUR: EXCITEMENT | |
| Ten: Towards a Critique of Bourgeois Psychology | 383 |
| Eleven: Nature's Strangeness | 425 |
| Twelve: The Charm of Decadence | 466 |
| The Symmetry of Creation | 498 |
| CONCLUSION: Intimate Cosmology | 502 |
| BIBLIOGRAPHY | 514 |

SUMMARY

This thesis investigates the connection between social relations and the development of scientific thought in Western European societies from the seventeenth century to the present.

Scientific knowledge of the natural world (cosmos) is contrasted with scientific knowledge of the mind (psyche), and with non-scientific knowledge of both.

It is argued that scientific thought can be understood as a social relation. The fundamental ideas of the scientific revolution are analysed, therefore, as expressions of the relations generative of developing capitalism. In order to clarify the central issues raised by such an approach, the scientific worldview is distinguished from three other 'cosmologies' which antagonistically co-exist with it.

The thesis is therefore divided into four parts, each devoted to a sociological reconstruction of one of the

separate but connected 'cosmologies' associated with the development of capitalism. Each part focuses on a particular relation between cosmos and psyche and their connection to the social relation distinctive of its particular 'world'.

Part 1 deals then with the 'irrational' cosmologies held to be characteristic of children, 'primitive' societies and the insane; Part 2 with the hierarchical symbolic order most fully realised in 'feudalism'. Part 3 analyses the central ideas of the scientific revolution itself and Part 4 describes the impact of 'modernism' on the image of nature and psyche.

It is argued that the development of science could not eradicate irrational or symbolic views of the world, or prevent the development within itself of 'non-classical' ideas. And it is concluded that the incompleteness of the scientific worldview can be understood sociologically in terms of the changing nature of the social relations most fundamental to the development of capitalism.

PART ONE

FUN

'the tragedy of our age is reason'

Soren Kierkegaard

'in every man there is a world, a universe'

Giordano Bruno

INTRODUCTION

We are all cosmologists. Few of us, of course, are scientists or can claim anything beyond the flimsiest grasp of modern physical theories of the origin and structure of the universe. We can nonetheless, by virtue of our normal social activities rather than in the possession of systematic and specialised knowledge, claim to be practising cosmologists.

Such a claim, unexceptional when applied to an 'exotic' primitive society,¹ is difficult to take seriously in relation to ourselves. In our society 'everyday' social activities seem to have nothing at all to do with the abstract, technically difficult and imaginatively esoteric speculations of the professional cosmologist. The scientist's world is highly specialised. It seems both more profound and less 'real' than the world in which we all, including the scientist, have to live.² If we contribute at all to the imposing edifice of modern cosmology it is surely only in the negative and uninteresting sense of sustaining in our mundane activities the social world from which it departs. We provide in other words the resources of time and opportunity

essential to the professionalisation of scientific activity. We give the cosmologist the freedom to abandon the constraints of the 'ordinary' world. Historians of science therefore have felt justified on 'common sense' grounds in concentrating their efforts upon elucidating the development of modern cosmology as an 'internal' monologue. The present state of scientific theory it is held depends entirely upon its immediately preceding state.

Appearances are deceptive. The cosmologist, in our society no more than in any other, cannot escape the imperatives of a particular way of life. Sociologists have for the most part taken this as an article of faith. 'Society' as a paramount reality can be rediscovered in any aspect of human activity. Its constraints and conventions must as it were reappear in the most recondite of theoretical endeavours. Such arguments have generally been couched within the framework of inclusive 'theories' of society and depend therefore upon general arguments. And where sociologists have taken a particular interest in the development of science it has frequently been as part of a defensive gesture bestowed upon hostile critics. As a synthetic discipline, that is to say, sociologists ought to have something to say about science, but in defending a 'sociological' approach they have usually been satisfied with rather vague blandishments in favour of the social 'context' of scientific ideas. They have said little about the meaning of scientific ideas themselves.³

If the contention that we are all cosmologists is taken seriously however neither an 'internal' history nor a 'contextual' sociology will reveal the full significance of either scientific or nonscientific forms of thought in our society. The justification of any particular sociological approach in this matter is the insight which it allows into specific problems. Thus, rather than engage in another 'methodological' or 'theoretical' dispute the argument will be developed substantively and by example.

The question is specific but daunting. It involves nothing less than a sociological analysis of the bourgeois worldview. Clearly within the limitations of a single volume justice can hardly be done to any aspect of such a question. Yet it is a question that hardly allows of a more modest approach. Some initial distinctions, if they do not make the task any the more manageable, might serve at least as guides to the argument that follows.

The bourgeois worldview, approached in terms of its content rather than its form is first of all qualitative division between 'cosmos', as the order of the material world, and 'psyche', as the structure of experience. Neither can be fully understood in isolation. And the relation between them can only be grasped as a specific social relation.

Although the bourgeois worldview prides itself on its scientific rationality, its relationship to psyche reveals the persistence within it of other, nonrational elements. These elements on closer examination suggest the co-existence of four separate but related pictures of the world. These distinctions can be indicated in a number of ways, but to draw particular attention to their 'deviation' from the orthodoxy of rational science 'subjective' terms have seemed the most appropriate.

Fun thus opposes all fixed and ordered relations with its absolute inner freedom. The difficult and changing relationship between bourgeois 'rationality' and the uncompromising 'irrationality' of fun is therefore explored in Part 1. In addition to repressing fun's subversive liberty the bourgeois worldview has to overcome a longing for Happiness. It attempts to do this by ascribing it to the society it has replaced. Feudalism is thus regarded as a symbolic reality. This particular reconstruction of feudalism forms the subject matter of Part 2.

Scientific rationality faces challenges as it were from the future as well as the past. Modern science and modern psychology is filled with an assortment of non-classical aberrations. Its opposition to orthodoxy is all the harder to deal with in being episodic and unpredictable. Part 4, Excitemenmt, attempts to pin down

some of these elusive objections. Partly for aesthetic reasons therefore, but also to highlight a widely misconstrued relation, Part 3, which deals with the central ideas of the scientific revolution, is titled Pleasure.

These terms are chosen as suggestive not only of different 'subjective' dispositions but as indicative of separate formal and existential 'worlds' expressed in and expressive of their own social relation. They contain and reproduce a series of other distinctions. Each must be approached on its own terms. Each part therefore tries to enter as sympathetically and completely as possible into its particular world. An order of signs is replaced by a hierarchy of symbols, before being reduced to a system of causes, which is hardly formed before dissolving into a network of images.

The bourgeois worldview is only the 'messy' interaction of these incommensurable parts. It is not identical with either 'science' or 'reason' however they are defined. Nor is it founded upon a single type of social relation. It is not possible, thus, to express it in a wholly systematic and non-contradictory manner. This might as well be admitted at the outset, and has the advantage of making the author's preference for Part 4 more obvious than it ought.

ONE

THE DREAD OF CHAOS

Life in bourgeois society is contained within a series of inescapable contradictions.

No description of the human reality of capitalism can resist, nor any history of its culture avoid, the brutalising exclusiveness engendered by almost four hundred years of inconclusive struggle. Its loving polarities, subject/object, mind/matter, theory/fact, form/content, being/nothingness, exchange/use, are so many ways of rendering experience coherent by dividing it against itself. In its world all possible phenomena are categorised through the successive invocation of a universal Either/Or. In this, of course, bourgeois society is not unique. 'Dual organisation' is the central organising principle of many cultures.¹ And the bourgeois world cannot be defined, therefore, solely in terms of such formalisms; it must be

described by reference to the entire range of social meanings embedded in the antagonistic differences specific to its ideal order.

A direct analysis of these meanings, however, tends to reproduce rather than to interpret the very categories we wish to investigate. A cautious, elliptical approach has to be adopted. Before looking more closely into the favourite antitheses of bourgeois culture, the larger implicit distinction between the possibility of any such ideally ordered existence (reason) and its apparently inconceivable negation (unreason), must be examined.

Bourgeois cosmology includes, that is to say, not only the familiar rational ordering of nature and human experience, but also and simultaneously a kind of negative image of itself. It is thus something more than that self-conscious 'worldview' that generations of 'theorists' have tried to make safe for reason by assiduously excluding from it everything chaotic or frivolous. It was a process of purification that never quite succeeded. Fun could not be completely excluded from the rational cosmos. It persisted in the diminishing but never eliminated residue of 'unexplained' phenomena. Its awkward presence was felt more generally, within the literary tradition at least, as an uncomfortable intuition of cosmic disorder.² And it challenged, with growing confidence, a century of metaphysical radicalism with a number of rather obvious

'facts' of experience.

If bourgeois society was the realisation of universal order, then human nature must be, in itself, the embodiment of reason. The evidence of history told against such a view, but for the philosophe, secure in the new cosmopolitan world of commerce and letters, history could be viewed (with some difficulty it is true) as a perverse story of ignorance and error. Those obstacles removed, reason, nature and society could be linked together in mutually re-enforcing enlightenment.³

More recalcitrant than the broad sweep of narrative history, the spectacle of children, savages and lunatics posed special difficulties for any comfortable theory of human self-improvement. Human, yet by no means reasonable, each existed alarmingly within self-enclosed worlds of their own. They did not share, it seemed, in the universe illuminated by Newton and Locke. A brief sketch of the philosophe's response to defiant irrationality reveals the extent to which they failed to exclude from the realm of enlightenment all that was dangerously incoherent.

Simplifying a good deal, we can say that throughout the eighteenth century, especially in Scotland and France, men of letters gave themselves to the task of self-examination. As rational individuals they could, in following an introspective method, recover a universal

human nature. This ambition is as evident in the magisterial coolness of Hume's Treatise on Human Nature as it is in the flamboyant emotionalism of Rousseau's Confessions. Both in fact sought to expose, systematically and unreservedly (one might almost say carelessly) the elements of a shared humanity. In this project reason came to play a dual role. It served to designate both the common criteria of the human as a species, and the method by which such an enquiry should be conducted.⁴ Without reason we could not be human, and in the absence of reason we could not begin to describe the special character of humanity bestowed upon us by its possession.

In other words, during the period of confident capitalist expansion reason was not simply a logical or intellectual faculty. It was that certainly, but it was also more than that. Reason was the synthetic unity of human nature itself, and not just one of its 'powers'. It must therefore be the common property of mankind, and could not, by being made dependent upon a technical function, become a monopoly enjoyed exclusively by the educated. Reason propelling before it a spirit of democracy must constitute the very 'frame of man'.

The divisions proper to reason (the components of human nature) underwent continuous modification throughout the eighteenth century. The simplicity of those abstract dualisms which had their origin in Descarte's project of

pure thought, gave way before the claims of moral and aesthetic sensibilities.⁵ Terminology varied but some such set of distinctions, comparable to that of intellect, emotion, and will was general. Hume's Treatise, for example, was divided into three books, 'Of the Understanding', 'Of the Passions' and 'Of Morals' corresponding in an approximate fashion to such a threefold classification. The point of such schemes was to define the absolutely irreducible and 'simple' processes common to human nature; those internal 'mechanisms' which transformed the contents of a sensory manifold into perceptions of the world.

Human nature could be defined, therefore, as an internally ordered system of relations among intellect, emotion and will. The Enlightenment might then be characterised as the choice of intellect, as the medium of humanity's synthetic unity. Reason progressively came to stand both for the irresistible expansion of knowledge and understanding, and for the mechanism of coherence unique to human nature.⁶ It ought perhaps to be noted that there was no necessity in such a view. In principle either emotion or will (or some more remote 'transcendental' faculty) might have furnished such a mechanism, as indeed they were subsequently held to do. Bourgeois culture however, even at a later date when in full possession of Schopenhauer's and Freud's alternative reconstructions of the human subject (the first

from 'will' the second from 'emotion'), remained remarkably faithful to its first choice; to Man as Reason, and to reason as thought.⁷

Socially, these internal divisions can be related to the major spheres of collective life; to circulation, to production and to consumption. Such a connection can, for the moment, only be suggested intuitively.⁸ Production and the will 'belong together' as the energy of all humanly creative processes. Consumption and emotion, dissolving into an access of pleasure or grief, are linked as the termini of processes of exchange. And circulation, especially during the eighteenth century, evidently shares with the intellect a realm of ideal freedom. Neither in 'thought' nor in the circulation of commodities can anything be created or destroyed. Both are perfectly conserved worlds filled with objects of terrifying abstraction.⁹ The epoch of merchant capital is not accidentally also the era of enlightenment.¹⁰ Deserting systematic metaphysics, however, the philosophe cultivated a form of literature (varied, self-possessed, humane), that exemplified the virtues of synthetic reason rather than those of 'cold logic'.¹¹

These parallel divisions allow us to grasp more securely the significance of children, lunatics and savages as prototypically disordered lives. There was more than academic issues at stake here. It was not just a game about

the limits of conceivability. It was a matter of conduct. Reason, it seemed, could be negated and the human world inverted. Children, lunatics and savages were human and yet they were not rational. They were living paradoxes whose existence undermined every certainty. Each, in addition, was non-rational in a particular way so that together they formed a strangely logical sequence; an organised multiplicity in the forms of chaos; an underground system to mock the careful elaborations of the orthodox cosmologist.¹²

Unreasonableness might be approached then in two rather different ways: as a 'normal' human synthesis of one or more 'inadequate' faculties, or as an inadequate synthesis of normally functioning faculties. In practice, of course, both interpretive techniques were employed in the effort to shed light on these difficult subjects.

Caprice

'We know nothing of childhood', Rousseau flatly declares, setting out to exploit his own ignorance.¹³ Childhood for him as for his contemporaries had become a cultural enigma and children held for them all the fascination of an alien species. However exaggerated or over-simplified the claims of a generation of sociologists directly linking the 'emergence' of the modern nuclear

family with the rise of the bourgeoisie may be, there seems little doubt that the image of childhood has undergone significant changes during the development of capitalism.

It was specifically in bourgeois society that an association between age and dependence was established. Aristocratic youngsters of the sixteenth and seventeenth centuries could lead lives as liberated and independent as those of their parents, while during the same period economically unfree peasants, unable to marry or to establish households of their own, were held to exhibit well into their thirties those intellectual and moral characteristics the bourgeois age came to regard as 'childish'.¹⁴ Liberated from the necessity of labour yet excluded from the adult social world, childhood became an increasingly puzzling phenomenon. Its sequestration was justified on the grounds of children's 'immaturity' and 'helplessness', on their evident need to be 'looked after'. Yet, as a general type, childhood could not be understood solely in terms of a 'developmental' process. The non-rationality of the child was not simply the absence of 'adult' qualities which would, in due course, make their appearance. Were they, for example, completely bereft of intellect? If so, then from what source did logical faculties subsequently spring? And what of the will? In some ways children seemed possessed of a will more highly 'developed' than that of the typical adult. Clearly there was not just a change in scale here but an internal re-

ordering of the basic elements of human nature.

The key to the different 'structure' of childhood subjectivity was found in the special character of the childish 'will'. This follows directly from the fact of their exclusion from the process of production, which is the social form best adapted to the expression of the will. The child's will, in being wholly 'liberated' from the necessity of labour, appears perverse, violent, unpredictable, transparent and insincere. As a critic of bourgeois domestic indulgence as well as aristocratic indifference, therefore, Rousseau complains that, 'If we did not spoil our children's wills by our blunders, their desires would be free from caprices'.¹⁵ And he notes elsewhere that, more properly speaking, children cannot be said to have desires at all. They want nothing in particular, and in expressing their wishes they are subject to nothing more substantial than a whim. Children altogether lack that settled self-identity which is the precondition and consequence of the will. They can only wish; a free and lively mobility of feeling that is directed towards nothing but the growth of their own faculties (if they are left alone), or the borrowed vanity and presumption of their elders (if they are not).

Children's actions are remote from their 'real' needs which depend for their satisfaction upon the indulgence of adults. Wishing therefore, which is the subjective

corollary to a dependent relationship, is held to be typical of their 'inner' life.¹⁶ The 'natural' activity of children thus came to be defined as play. Locke's letters to Edward Clarke are an early recognition of this fundamental proposition. Children, 'must play and have play-things', he insists; a view echoed from a different perspective by Rousseau and every child psychologist since.¹⁷

Play supposes a world of utopian abundance. Ignorant of the practical necessity of labour, there is no material reality to resist the child's tyrannical caprice. In play all things become possible, or rather nothing has yet become impossible. The 'object world', variously differentiated as the toys effortlessly conjured into being by the momentary exigencies of a game, is dissolved and reformed without limit. Play treats the 'objective' characteristics of the world as the paraphernalia of fun. And, since its endless metamorphoses are purely subjective, the 'laws of nature' can be ignored or contradicted. Who has not at some time swooped effortlessly over distant countryside, enraptured by the liberty of unaided flight?

The play world completely absorbs the child. Within it nothing is difficult. Rousseau noticed that, while playing, children frequently 'endure without complaint, hardships they would not submit to otherwise without floods of tears.'¹⁸ Fatigue is alien to its spirit of continuous

originality. Even a simple repetitive game is never tedious; the hundredth bounce and catch of a ball is as fresh and lively as the first. The child thus engaged is unaware of our world surrounding and threatening his own.

This subjective freedom is neither private nor egoistic. It cannot be 'planned' or deliberately invoked. It has merely to be granted its own possibility to 'happen'. And if it does not 'come off' children complain of 'boredom' and ask in bewilderment 'what shall we play?''¹⁹

Such a world is sensed rather than conceptualised. 'The child's first mental experiences are purely affective, she or he is only aware of pleasure and pain', claims Rousseau, anticipating Freud, and goes on to suggest that the child takes, 'a long time to acquire the definite sensations which show him things outside himself.'²⁰ The senses, indeed, are originally undifferentiated, 'in the imperfect state of his sense organs he does not distinguish their several impressions; all ills produce one feeling of sorrow.'²¹

The child's wishfulness is part of a general physical, moral and emotional mobility. Children are never still, their lives oscillate wildly between extremes that we find difficult to comprehend. Seemingly incapable of the stoicism espoused by Hume or Ferguson 'A child has only two

distinct feelings, he laughs or he cries. The child's unreasonableness is dangerously radical, his 'ideas', if he has any at all, are without order or connection. It is a veritable 'sleep of reason', that function of the mind which 'compounded' of the rest of our faculties 'is the last and choicest growth.'²² We cannot therefore infer from speech or action anything about the 'state of mind' of the child, 'the child's sayings do not mean to him what they mean to us, the ideas he attaches to them are different.'²³

'Who of us is philosopher enough to be able to put himself in the child's place?' asks our celebrated author, discreetly proposing himself for the honour. But if Rousseau could celebrate the absolute inner freedom contained within the bourgeois image of childhood, others (almost all others), less secure in their possession of adult reason, were more ambivalent. Viewing caprice (mistakenly) as recalcitrant will, they set about breaking its resistance. Ideologically opposed to personal submissiveness, the bourgeois parent nonetheless recognised the necessity of imposing authority upon the child. It was no longer a matter of extracting tokens of obedience or affection, but of disciplining the anarchic playfulness to which children seemed naturally disposed.²⁴ If children were not to be forced to work, they could neither be permitted an unlimited licence to play. Schooling, therefore, was as much a means of 'rationalising' play as it was of 'disciplining' work.²⁵

The unreasonableness of children, that is to say, consisted in a perversity of the will, so their 'education' had to take the form of 'training'. No abstract pedagogic procedure could impart to the unreasoning child the correctness of conventional behaviour, nor any system of rules be made to appear to him as a logical necessity derived from some general principle. The child could not be 'reasoned' with. The benefits of enlightenment, which was the goal of the educational process, had to be held in trust by adults rather than explicitly invoked. It was a goal reached only by way of a long detour through mindless obedience. This was a view espoused by 'progressive' educators, who sought to subvert the natural process of play in order to harness it to rational ends, as well as by the traditionally brutish.²⁶

Reason was introduced to the child, in fact, not through personal example or intellectual precept, but in the organisation of the classroom. The classroom operated as a small enclosed market. Each of its members, initially regarded as equal, was differentiated through a process of exchange (marks for exercises) which established a 'rational' order among them. Differences were instituted and re-enforced through continuous measurement of 'abilities', in seating arrangements, in the allocation of tasks, in the ritual of punishment.²⁷ A 'universal' code of rules gave rise to the distinctions of individuality,

and to inequalities justifiable by an appeal to a general principle of justice (reward for effort).

The practical schooling of children was inaugurated well before the practise of developmental psychology. The separate 'reality' of childhood was given recognition directly in response to the moral and political problems that it posed. It was only much later that such a reality became the object of 'scientific' interest and the literary imagination. Bourgeois society's 'serious' interest in childhood, its fascination with the dangerous romance of play, only developed with the adoption by adult society of 'civilised' manners.²⁸ The peculiar status of the child became marked by the domestic boundaries of separate mealtimes and special foods;²⁹ a particular geography and architecture (nursery and school); and by the emergence of 'experts' (govrnesses, teachers, doctors) who patrolled the ambiguous boundaries of the rational world.³⁰ Children were dressed with sumptuary precision in clothes suddenly appropriate to their years, and encouraged to enjoy the 'freedom' of approved games. Outside the classroom, the 'official' life of the child in practice became a heavily censored version of Europe's pre-industrial popular culture. The carnival, ruthlessly suppressed by the demands of the new rationalism, thus survived in a degraded form as the variety of 'childish amusements'.³¹

The emergence of the bourgeois family, with its

internal non-market relationships of affection (however idealised a picture that might be), could appear at times to threaten the coherence of the society instituted on its behalf. Might not such a family become excessively introverted and, coming to dote too much upon its offspring, forget the larger world? The bourgeois individual's double role as man and citizen created a painful conflict. As a private individual he was indulgent and loving towards his children, but as a citizen he realised the necessity of education outside the protection of the family. This conflict, a version of the more pervasive but less well defined contest between the freedom of play and the necessity of work, was resolved in favour of the latter. Childhood became a phase. a short, disorderly period safely contained within the categorical divisions of the domestic life-cycle.

Childhood, one prototype of the world of fun, could not however be completely annihilated. For a somewhat later period (though Rousseau once again anticipates the general tendency), childhood and its playworld came to hold a somewhat different significance. Everyone after all has been a child, and though fortunately we cannot accurately or completely recall the experience, its presence as unreliable recollections preserves within us an unacknowledged residue of disorder. The more the bourgeois rationalist heaped upon childhood the degraded forms of subjectivity for which he no longer had any legitimate use,

the more certainly he gave way to its caprice and the more intimate he became with its image of careless freedom. Hence the fascinating ambivalence of childhood as a suppressed but unconquered 'cosmology', as a way of seeing the world so radically opposed to reason that we cannot any longer remember what it is like.

Hence, too, the emergence of the autobiographical and confessional genre that became so much a feature of post-Renaissance European literature.³² Rousseau is better known still for his Confessions than for Emile. It is the childhood of the author, as the hidden source of his creative inspiration, that interests us. Yet even the Confessions would have lost their savour if they served only to 'explain' the artistic accomplishments of their mature author, or conveyed in the process nothing but gossip that has long since lost its value as scandal. We need share nothing of the author's immediate social world, however, to remain enthralled. What we share with him, which is much more important, is the longing to rediscover a primordial experience of ourselves, and to sense the richness of the world, sensuous, unbounded and playful, which has slipped from us. The charm, similarly, of Swann's Way is the glimpse it offers of our own, rather than its author's, childhood.

The attractive naiveté as well as the infuriating temper of children, consisted primarily in the spectacle of

unformed will. Subject to the uncontrollable perversity of wishes, they were absorbed in restless fluctuations of mood and behaviour. Their 'intellect' could be no more than an amorphous pre-conceptual 'mind', incapable of those acts of discrimination and synthesis in which genuine reason existed. Childhood existed as a perpetual wish, yet the nature of the world and of man was ordered by a rational will. In a rather deep and perplexing sense then the world of childhood must be illusory: it was at any rate an object lesson in the shortcomings of any simplistic empiricist psychology.³³

Childhood with its playworld, in knowing nothing of nature was reason's most unselfconsciously hostile critic. It was not, however, its only critic.

Bewilderment

Precapitalist Europe entertained a long history of contact with 'alien' peoples.³⁴ The philosophical problems posed by the 'savage' were contained however, for some time at least, within a generous view of human universality. The plenitude of creation demanded nothing less than the existence of all possible variants of human being. The variety of the savage, thus, constituted for the sixteenth and seventeenth centuries, so many marvels of nature: exotic phenomena to be collected and displayed in the

cabinets de curiosites encouraged by amateur enthusiasm for the inductive sciences. They belonged with the newly founded botanical collections and zoological gardens as evidence of God's providential abundance.³⁵

Problems appeared when the variety of customs and diversity of manners seemed to outrun any credible definition of human nature. Could the brethern of Noah, within such a short period, come to live so differently? Was it simply the case that, forgetful of religion, some had fallen into barbarism?³⁶ More serious still, for the eighteenth century humanist, the savage manifestly lacked reason. And, as reason and human nature were mutually defining, the common sense approach was to regard the savage as a literally inhuman or nonhuman creature.

Even among the philosophes such a view became popular. Lord Monboddo became prominent in the wide-ranging, serious, and inconclusive debates over the precise nature of recently discovered orang-utangs.³⁷ The idea that they might be a specific subspecies of the human seemed plausible to those who held it to have been already adequately demonstrated that in the same area there lived tribes bereft of all the 'arts of life: lacking in speech, the social conventions of marriage, domestic settlement, the rudiments of cooking, or the most primitive forms of exchange'.³⁸ In such a condition, regulated only by the periodic fluctuations of natural appetites, no moral or

aesthetic distinctions were possible and a fortiori no form of reason could be sustained. Cannibalism, for example, existed among such peoples because no action had yet been defined as disgusting.

More moderate commentators agreed that savages lived in a state of perpetual intellectual confusion. Lord Kames, for example, who enjoyed considerable authority upon such matters, considered all savages 'capable of higher powers', and detected in reports of their customs a kind of rudimentary religion, a 'sense of Deity'. Yet so impoverished were their mental faculties that, lacking a sufficiently developed language, they were incapable of giving shape, in the form of explicit 'beliefs', to their diffuse feelings. About nature they were, not surprisingly, held to be, 'grossly ignorant of cause and effect'.³⁹

The savage lacked the most rudimentary of concepts. His language being restricted to the names of concrete and particular things, he was unable to carry out the elementary operations of comparison, generalisation or analysis.⁴⁰ As a consequence, he remained innocent of himself as an individual and as a moral being. His behaviour was inconsistent, his actions unreliable. The initial friendliness, for example, with which Columbus was met by the Caribs turned quickly and inexplicably to hostility. The treachery of the savage became legendary. It was not, however, malice (a rationally comprehensible

motive) but thoughtlessness that made them wholly untrustworthy.

Savages had not really succeeded in separating themselves from nature, which was the first step in bringing life under control of the intellect. Their instincts, which were in the circumstances more or less adequate to the purpose, guided all their behaviour. Indeed, they had survived only by a quirk of nature. Living in lands of natural abundance they had no need to labour to procure their daily subsistence. 'We possess already all that is necessary for our existence' points out the Tahitian native. Unmoved by necessity, they could not make the initial effort of the mind which subsequently revealed itself as the first stage in the progress of the arts and sciences; the foundation of all human self-improvement.

Unresponsive to the prompting of reason the savage could be enslaved but not employed.⁴² He might even be domesticated and, with training, become a loyal servant; but he could not, given his lack of calculative ability and insecure self-identity, survive if released onto the market place. To become the beneficiary of reason the savage must therefore, first of all, be deprived of his natural livelihood. The colonial trader and the missionary justified one another.⁴³ In introducing the savage to the life of reason he must first be made to feel the necessity of work and the exchange of commodities.

Throughout the eighteenth century, innumerable tours were also conducted to imaginary islands whose fabulous inhabitants satisfied an insatiable demand for the exotic and threw into yet bolder relief the technical, moral and commercial advantages of civilised life.⁴⁴

The simplicity and brutishness of savages prompted, in addition, a number of conjectural 'histories' of the development of the civilised state. The authors of the best known of such accounts divided man's putative history into 'epochs', arranged chronologically and systematically (narrative and system happily coinciding) according to the relative 'progress' of reason which was the accomplishment of each.⁴⁵ And even those scorning complacent histories, such as Rousseau in his prize winning Discourse on the Sciences and the Arts, or those, such as Swift and Diderot, who used their hypothetical voyages of discovery as vehicles for satirical and critical intentions, concurred in viewing the savage as a 'natural' and therefore thoughtless being.

Rousseau subsequently developed his ideas on the nature of savage man in his important essay, A Discourse on Inequality. This is not an attempt to write an empirical history of human society; such an undertaking would be impossible if for no other reason than the absence of the materials upon which it might be based. It is rather an

analytic description, suggested by the spectacle of contemporary savage life, of man's 'original' condition.

His method, he feels, avoids the major difficulty of the well known 'contract' school who, in invoking a 'state of nature', succeed only in hypostatizing the less visible but no less conventional institutions of their own society; 'All those philosophers talking ceaselessly of need, greed, oppression, desire and pride have transported into a state of nature concepts formed in society'.⁴⁴ As clearly as he had seen the difficulty in describing the real experience of childhood, Rousseau takes seriously the gulf between ourselves and a presumptive 'original' state of man. Society (Reason) cannot be deduced from itself; it must spring from something other than itself. Rousseau therefore suggests a 'mechanism' through which society might have come into existence. This hinges on two related principles whose interaction led 'blindly' to the establishment of social life. 'The first gives us an ardent interest in our own wellbeing and our own preservation, the second inspires in us a natural aversion to seeing any other sentient being perish or suffer, especially if it is of our own kind.'⁴⁵ From these principles, which Rousseau takes to be self-evident, he deduces the possibility, though not the necessity, of private property, the division of labour, the development of language, and the birth of reason. 'In this way we are not obliged', he comments, 'to

make a man a philosopher before we can make him a man.'⁴⁸ Reason does not 'develop' of its own accord as if by some inner necessity, it springs to life as an adjunct of passion: 'we seek to know only because we desire to enjoy; and it is impossible to conceive a man who had neither desires nor fears giving himself the trouble of reasoning.'⁴⁹ In spite of its heretical implication (that civilised man tended to an 'unnatural' suppression of passion in favour of intellect), Rousseau's vision of original man enjoying a 'solitary and idle' existence that demanded nothing of him beyond instinctual responses, seemed far from implausible.

The contemporary savage can be understood, then, not as an 'original' man, but as a being nonetheless in many ways closer to that primordial condition than that of civilised man. His intellect is little developed, and the urge to self-improvement has not yet taken hold of his passions. His needs are simple, his wants easily satisfied. He lives immediately, incapable of the act of abstraction which so complicates our relation to the world: 'his soul, which nothing disturbs, dwells only in the sensation of its present existence.'⁵⁰ He cannot envisage anything beyond the 'end of the day', which is the 'extent of the foresight of the Caribbean Indian.'⁵¹

Sunk within himself, as absorbed as the child at play, 'everything appears to remove the savage man both from the

temptation to quit the savage condition and from the means of doing so.'⁵² The original impersonal 'happiness' of man is something unrecognisable to us; it is a world anterior to the metaphysical niceties upon which our own particular existence has been stretched.

Rejecting Rousseau's method of reconstruction Adam Ferguson, at almost the same time, described the society of 'rude nations' in rather similar terms. A sober and reserved philosophe, he also rejected Moboddo's popular natural history. 'Men have always appeared among animals as a distinct and superior race', he notes, 'he is, in short a man in every condition; and we can learn nothing of his nature from the analogy of other animals.'⁵³ The distinctions among men are exclusively social and cultural, but between man in a 'rude' condition and the more developed 'barbarian' there is what amounts to a qualitative distinction. A classificatory difference even more evident in the later emergence of 'civil society' as a uniquely sophisticated way of life.

The social relations of the savage resemble, 'more the suggestion of instinct, than the invention of reason.' And while the condition of 'rudeness' is not to be taken for a 'state of nature' it recalls the 'nascent society' to which some of the most imaginative pages of A Discourse on Inequality had been devoted.

Drawing on somewhat unreliable accounts of North American and Caribbean Indians, Ferguson tried to establish the general characteristics of those societies in which there is 'little attention to property.' Subsistence is there a daily renewed process of hunting and gathering. It is the difficulty rather than the ease in securing a livelihood directly from the wild that, he argues, prevents the emergence of the institution of private property and the intellectual elaboration that goes with it. The savage acts in direct response to his appetite, without calculation or co-operation. And since property depends upon a 'method of defining possession' and a 'habit of acting with a view to distant objects', he concurs with Rousseau in describing the savage world as an immediate and overwhelming reality confined within a timeless present.⁵⁴

Knowing nothing of the exchange of goods (or the circulation of ideas), savage relations are formed from the 'commerce of affection'. Incapable of the intellectual detachment of cynicism or hypocrisy, their sentiments are open and honest. A gift, for example, is always the expression of a pure act of kindness: 'they delight in them, but do not consider them as a matter of obligation.'⁵⁵ Ferguson's admiration of their benevolence, fortitude and skill in warfare does not blind him, however, to the 'childish imbecility', of their 'grovelling and mean superstition'.⁵⁶ Prompted by appetite alone they 'go in pursuit of no general principles'.⁵⁷ are incapable of

understanding their own surroundings, and fall victim to groundless fears.

The intellectual feebleness of the savage is the most striking feature of his unreasonableness. His will, in consequence, is weak and amorphous. When not pressed by an immediate need, savages do not even exercise themselves in play. 'Their aversion to every sort of employment', remarks Ferguson, 'makes them pass a great part of their time in idleness or sleep.'⁵⁰

Neither children nor savages, it was held, have the possibility of mastering themselves. They were beyond reason. The former, in being excluded from labour, acted wishfully; the latter, subsisting directly from nature without labour, existed in a state of bewilderment.

Derangement

The nearness of lunacy made the philosophe uneasy. The child and savage could be excused on the grounds of 'immaturity' from the responsibilities of reason. But the adult who became a lunatic did so in open defiance of his already established nature. In turning his back on reason the madman created a glaring contradiction. Nature could not act against itself.⁵¹ No self-possessed individual could deny himself by plunging voluntarily into the abyss

of chaos: yet madness could not be other than unreasonable.

This had not always been the case any more than it had always been the case that children or savages had been seen in the image of disorder. Foucault's pioneering work draws attention to the inconspicuous origins of such an image and, in charting the emergence of new visions of lunacy, reveals the history also of a specific conception of reason.⁶⁰ The antithesis of reason and madness, Foucault argues, is founded upon the imperative order of the market conceived as a set of logical relations. The mad 'distinguished themselves by their inability to work and to follow the rhythms of collective life.'⁶¹ The ability to labour becomes a badge of reasonableness. Those unable or unwilling to work are absorbed into the residual category of unreason and consigned to the safety of the asylum.

The seductive rationalism of the market is not restricted, however, to the organisation of work; it embraces the social process as a whole. Foucault imputes to eighteenth century writers a view of madness (as disordered intellect), which is characteristic in fact of a somewhat later period.⁶² The philosophe viewed madness, first and foremost, as derangement of the affections or passions. This was a view quite consistent with the significance they accorded the passions in the 'moral economy' of human nature. ⁶³ There were other and better

examples of intellectual confusion and perverse will. The character of madness, then, should be sought first in the sphere of consumption (the social domain of the affections), rather than in that of production or circulation.

Diderot, one of the supreme polymaths of the century, provides for us in Rameau's Nephew a portrait of the contemporary madman.⁴⁴ Its central character is more than eccentric but is clearly not without intellectual gifts. His conversation indeed sparkles with cleverness. What is immediately striking however is his physical appearance and manner: 'At times he is gaunt like somebody in the last stages of consumption... A month later he is sleek and plump'.⁴⁵ This variability is not the outcome of confusion or personal neglect for he 'thinks of nothing but himself', and like a savage 'lives for the day'.⁴⁶ His behaviour is disconnected from the rhythm of nature felt by normal people as the regular periodicity of appetites. A chaos of wants is evident in his completely unpredictable behaviour. Unkempt one day, he appears luxuriously attired the next. He hardly sleeps twice in the same place. He pays no attention to the value of things. And beyond himself, 'the rest of the world is not worth a pin'.⁴⁷ It is a form of irrationality which begins, in other words, with disordered consumption, in a superficial and accidental relation to the object world.

Samuel Johnson provides a comparable and equally lucid exposition in his biography of that 'strange, gifted psychopath', Richard Savage.⁶⁶ 'His mind was in an uncommon degree vigorous and active', we are told, 'his judgment was accurate, his apprehension quick.'⁶⁷ The madness that afflicted him had nothing to do with perturbed thought, his intellectual powers were acute and, 'his attention never deserted him.'⁶⁸ It was rather 'an irregular and dissipated manner of life', already indicative of unruly appetites that led him to become the 'slave to every passion that happened to be excited by the presence of its object.'⁶⁹

Profesasional observers adopted a similar standpoint. Tuke, for example, went so far as to, 'conceive that mind is incapable of injury or destruction',⁷⁰ claiming with Pinel that, 'passions are the most frequent causes of mental aberrations'.⁷¹ Affections as the 'inwardness' of acts of consumption, might logically be disordered in two rather different ways.⁷² This gives to lunacy its basic division between melancholia, a disease of under consumption, and mania, the frenzy of excess.

The melancholic suffers from passivity, lassitude and disinterest in the world. Since Elizabethan times, melancholia had been the affliction of the sensitive, the cultivated and the scholarly. As a 'character type' it already enjoyed a rich cultural heritage, which Burton was able to draw upon in fashioning his medico-philosophical

Anatomy.⁷⁴ The old humoral psychology, however, had undergone a profound change. It was replaced first by vague 'animal spirits' flowing through fine channels in the nerves, and subsequently by a more strictly mechanical image of organic fibres vibrating under various states of 'tension'. The melancholic are, literally, too relaxed: their nervous fibres, weak and flaccid, refuse the stimulation of the senses. The outside world, in consequence, is rendered vague and insignificant.

The nerve fibres of the maniac on the contrary, stretched to breaking point, are set violently in motion at the slightest external stimulus. The delirium typical of the maniac is a consequence of the distorting and magnifying effects of these taut, vibrating nerves.⁷⁵ The tension of the nerves regulates appetite. Nervous afflictions could be treated, therefore, by physical means. This had been the orthodox view since Thomas Willis had linked hysteria to disturbances in the brain and 'nervous stock'.⁷⁶ The melancholic requires the world to be brought close to him, he needs the 'stimulation' of physical extremes. Alternating hot and cold baths was a good starting point. He could also benefit from a rich diet, narcotic tonics and the distraction of music and lively company.⁷⁷ The violent gyrations imparted by a variety of specially designed pieces of apparatus might also prove beneficial. The 'raving' lunatic, conversely, needs to be constrained, secluded, isolated and calmed. The 'vice or

fault of the brain'. was difficult to control and much ingenuity was spent in pursuit of effective measures. In this regard 'management did much more than medicine', and a period of calm allowing the 'natural' tension of the nerve fibres to be restored: 'confinement alone is often times sufficient.'⁷⁰

There was no question here of 'suppressing' the emotions or affections. Each 'faculty' contributed to human nature its essential element. The emotional life, therefore, required cultivation rather than simple restraint. The significance of aesthetics in the Scottish Enlightenment finds its counterpart here in the adoption of specific codes of civilised 'manners'. The mode of experiencing bodily sensations itself became an aspect of 'cultivated' feelings.⁷¹ And it is in just those forms (ordered, calm, predictable, friendly and in everything moderate) that we discover the civic virtues of consumer rationality.

In setting the boundaries of rational consumption, melancholia and mania were, for the most part, associated with different ranks of men.⁸⁰ Melancholia remained an affliction of the privileged. Their material wants satisfied they withdrew from society and enjoyed the company of their own imagination. Johnson, continually struggling against the temptation to melancholia, was saved by the insecurity of having to earn a living.⁸¹ Mania, as

an uncouth display of emotionality, correspondingly found its place among the pauper lunatics that came to litter the asylums of the nineteenth century. There were of course exceptions. Waves of a more fashionable frenzy swept the bourgeoisie from time to time. Hale, writing in 1720 and commenting on the consequences of the South Sea Bubble, draws attention to the numerous respectable people, 'whose heads were turned by the immense riches which fortune had suddenly thrown their way', releasing in them a 'force of insatiable avarice' that quickly succeeded in 'destroying the rational faculties'.⁸² A loss of cultivation alluded to more cryptically by Pinel who notes that, 'The storms of the revolution stirred up corresponding tempests in the passions of men'.

Madness was not a matter of quantitative extremes alone. The affections were perverse as well as inflamed or flacid. The lunatic consumes, immoderately, things that are worthless. Johnson fearing that 'all power of fancy over reason is a degree of insanity',⁸³ conceives of a melancholic as a person who consumes only himself emotionally, who lives upon 'fancy'. Then, 'fictions begin to operate as realities, false opinions fasten upon the mind, and life passes in dreams of rapture and anguish'.⁸⁴ The maniac, on the other hand, has no emotional interior, he is completely 'open' and unmannered. His extravagant passions, expressing unbounded appetite, betray a complete lack of discrimination. He tries to consume the entire

world. but in rage and bewilderment his rage can only alight upon a succession of trivialities.⁶⁵

Self-control was admittedly difficult to achieve. The madman, an ever-present possibility to us all, could be tolerated only by being confined. A hundred years of profiteering demonstrated the superior efficiency of a system of 'moral management' within the asylum.⁶⁶ The introduction of 'enlightened' treatment was little more in fact than a technical improvement in the art of incarceration. 'Therapy' was slow to be introduced and was rarely practiced with conviction. The minute regulation of daily life within the safety of a 'retreat' ideally provided a Sallean 'schooling' of the passions. But while the child had first to submit to the authority of a master as a precondition of instruction, the doctor ought to forge a relationship of equality with his patient. He must trust in the humanity of the madman. This was an 'extreme' but consistent view, most frequently practised by way of some 'safe' and tentative gesture.⁶⁷

During the eighteenth century, the prototypes of unreason were organised conceptually as caprice, bewilderment and derangement; politically as education, slavery and confinement; commercially as the school, the plantation and the asylum. Each excluded from the general social process those incapable of acting in conformity with

reason. And each was defined by inadequacy or perversion in one of those specific faculties whose synthesis normally constituted human nature. An imperfection in one faculty thus corrupted the others. The child was, to a degree, bewildered and deranged as well as capricious; but he was so because of his overwhelming propensity to playfulness. The general unreasonableness of the savage and lunatic stemmed similarly from their particular and respective deficiencies.

Within their secure enclosures the unreasonable were made the subjects of small utopian societies.⁸⁸ Sheltered from the harsher reality of capitalism, they enjoyed a special kind of 'humanitarian' protection. The slave and the madman, like the child, was sufficiently 'helpless' to require constant supervision. They needed the perpetual care of professional custodians. It was an ideological opportunity that proved irresistible.⁸⁹

They were contained but not forgotten. The fascination with unruly passion and the exotic, disordered intellect was undiminished by the growth of 'enlightenment'. Bedlam, for over a century, was a place of popular entertainment, an attraction as popular as any literary Bougainvillier and as morally ambiguous as the growth of a sentimental attachment to childhood.⁹⁰

United as it was in the acceptance of the commercial

world and the image of man's rational nature it supported. the enlightened bourgeoisie could not suppress an urge to look upon the world in its primordial nakedness. There was something of a sense of loss in their relation to the varieties of unreason. A hint of regret that gradually intensified into a longing, infrequently and timidly expressed, to renounce civilisation. Fun, as reason's antithesis, became the subject matter of the new sciences of child psychology, anthropology and psychiatry. It was through them that reason could be cleansed of its impurities, but it was also through them that a frisson of contact with the cosmology of fun could still be felt."

Notes to the Introduction

1. See, for example, Leach (1982), p. 212-20.
2. On the distinction between 'everyday' reality and theoretical constructs; see Schutz (1976), and Schutz and Luckmann (1974) pp. 3-18.
3. Or the discussion becomes almost exclusively methodological, for a recent example see Komesaroff (1986). There are of course some notable exceptions, see below notes (1) and (2) to ch.8.

Notes to Chapter One

1. This includes many primitive societies. See Durkheim and Mauss (1970), Durkheim (1915), Lévi-Strauss (1968), pp. 132-67, Needham (1973).
2. As diversely as, for example, in Swift's Tale of a Tub and Dostoevsky's Notes from Underground.
3. Gay (1966), pp. 120-5; a theme developed generally in Turgot (1973), and Condorcet (1955), a good deal less complacently than in their nineteenth century followers. See also Simon (1963).
4. Cassirer (1966), p. 5, remarks that: '"Reason" becomes the unifying and central point of this century', and makes it plain that even as intellect reason had a much wider meaning that is common for us. 'Thought consists not only in analysing and dissecting but in actually bringing about that order of things which it conceives as necessary, so that by this act of fulfillment it may demonstrate its own reality and truth', *ibid.*, p. viii. See also Hazard (1965), pp. 37-55.
5. Notable particularly in Hutcheson's An Enquiry into the Original of our Ideas of Beauty and Virtue, a vigorous argument in defence of the autonomy of aesthetic sensibility. A line of thought which influenced Hume, see Norton (1982), p. 92; Vereker (1967), p. 56.
6. Goldmann (1973), critically following Kant (1963), takes a somewhat narrow view in castigating the Enlightenment ambition to liberate 'thought' from 'reality'. See above, note (4). Not all of course were as subtle as Hume, Holbach, for example, declares bluntly: 'theology is only the ignorance of natural causes reduced to a system',

quoted in Manuel ed. (1965), p. 58. While Reid, from a completely different standpoint argues nonetheless similarly that, 'philosophers, pitying the credulity of the vulgar, resolve to have no faith but what is founded upon reason', Robinson ed. (1961), pp. 139-40.

7. The implication of such a view is that The World as Will and Representation is no more than Locke's Essay Concerning Human Understanding a genuine 'precursor' of The Interpretation of Dreams.

8. The differentiation of social life into production, circulation and consumption is more often than not simply taken for granted. The most impressive recent attempt to utilise these distinctions is to be found in the work of Braudel (1979, 1983 and 1984), see particularly (1983), pp. 20-3.

9. This argument will be pursued below, Chs. 9 and 12, the basic insight is contained in Sohn-Rethel (1978), Thompson (1961), and before them Lukacs (1971) and Simmel (1979).

10. For detailed persuasion see Febvre and Martin (1976), pp. 143-66, and more generally Braudel (1983).

11. Hume wrote more on history than on philosophy, Rousseau wrote on music and chemistry as well as everything else. And it was for his versatility that, as Cassirer notes, Diderot was idolised. See also Gay (1966), ch. 1.

12. A system as potentially complex as that sketched for the rational cosmos by Foucault (1970), who somewhat surprisingly oversimplifies the internal relations of the unreasonable.

13. Rousseau (1911), p. 1.

14. Ariès (1973), pp. 60-2, 98-111. But note critical remarks by Pollock (1983), pp. 33-67, and Hunt (1970), pp. 32-51. See also Porter (1982), pp. 284-6, Stone (1979), pp. 254-303, Wrightson (1982), pp. 108-18, Davidoff and Hall (1987), pp. 335-56, MacDonald (1981), pp. 85-8.

15. Rousseau (1911), p. 50. Children, he says, experience 'desires which are not true needs, desires which can only be satisfied with the help of others'. Childhood, as a consequence, 'has its own ways of seeing, thinking, and feeling'. *ibid.*, p. 54.

16. Ferguson (1983), pp. 146-51.

17. Locke (1968), p. 143. Though Locke as representative of a declining aristocratic tradition in this respect was less wholehearted than were his followers. Bantock (1980!), vol.1, p. 277.

18. Rousseau (1911), p. 95.

19. Locke (1968), p. 232, remarks the 'Sauntring Humour' which he describes as a 'listless condition', that, 'I look on as one of the worst qualities that can appear in a child'. See also Ferguson (1983), pp. 139-40.
20. Rousseau (1911), p. 29.
21. Ibid., p. 32, typically inverting Freud's later formulation in which all satisfactions are felt as a single pleasure.
22. Ibid., p. 53.
23. Ibid., p. 72.
24. Ibid., Hunt (1970), pp. 133-9.
25. Ariès (1973), especially stresses the 'roughness' of school children before the era of bourgeois discipline. The masters of the sixteenth century had to 'cope with armed revolts', *ibid.*, pp. 302-15
26. Locke (1968), p. 145, recommends that authority be established 'as soon as he is capable of submission'. And as, 'Children are not to be taught by rules', which will only be thwarted by 'the perverseness of their Will', discipline must precede instruction. Even Rousseau recognises the difficulty: 'No doubt (Emile) ought to do what he wants, but he ought to want to do nothing but what you want him to do', quoted in Bantock (1980), vol.2, p. 11. See also Ferguson (1983), pp. 123-4.
27. See particularly la Salle's Conduite des Écoles Chrétiennes (Avignon, 1720), reprinted in Cahiers lasalliens (n.d.), which is the most precise of the teacher's manuals of the period and makes clear the intimate relationship between reason and conduct. See also Foucault (1975), pp. 184-94. Such disciplinary systems were, of course, ideal, the reality in many instances was pedagogically less fussy. See, for example Cole (1950), pp. 444-8.
28. Elias (1978), vol.1, remains the fundamental work. In stressing the aristocratic and courtly models of good manners, however, it tends to obscure the specifically bourgeois conception of individual reason as a form of conduct.
29. Rousseau (1911), p. 118, believing the consumption of meat predisposing to cruelty, recommends a vegetarian diet for children
30. Donzelot (1979), pp. 48-95.
31. Ariès (1973), pp. 48-59. Bakhtin (1965) has completely transformed our view of the carnival tradition.

32. France (1987), pp. 108-12, Pascal (1960).

33. Gay (1969), p. 89, notes a general unease evident in a number of French writers in this regard: 'The relationship between reason and the will, and between the will and the passions, that Condillac developed is symptomatic of the paradox of the Age of Reason... in which reason unexpectedly turned upon itself and, by its own rigorous application, struck at the very foundation on which it rested - an intellectual development of baffling circularity and continuing relevance'. See also Cassirer (1955), pp. 93-134.

34. Braudel (1984), pp. 24-70, 115-30, 207-34, insists that the European economy was always a world economy. See also Scammel (1981). Ashtor (1983), pp. 367-82, points out that maritime insurance was developed as early as the mid-fifteenth century.

35. Hodgen (1964), p. 117, Lovejoy (1960), pp. 144-83.

36. Hodgen (1964), p. 213, Montaigne (1958), pp. 105-19, was exceptional.

37. Lord Monboddo (James Burnet) (1773), p. 204, holding that there was, 'no natural proensivity to enter society', proposes a 'natural history' of human society. Many nonhuman species, he suggests, display characteristics wrongly considered to be exclusively human and social, for example, 'herding' together, and inversely many human societies lack, 'all social arts'. In particular language makes a relatively late appearance in his developmental scheme. Schneider (1967), pp. 271-87. Burnet's approach owed more to Buffon than to Rousseau, who had begun his influential Essais sur L'Origine des Langues with the categorical statement that, 'La parole distingue l'humane entre les animaux', Rousseau (1969), p. 27. As, 'la première institution sociale', language must be derived from a non-rational source, from sounds which are at first mere 'vives et figures', *ibid.*, p. 41. See also Cassirer (1968), vol.1, pp. 139-55.

38. The approach was effectively criticised by Henry Home (Lord Kames), and by Adam Ferguson. Kames' Sketches of the History of Man, continually revised and enlarged, was however part of the same popular tradition: 'a veritable speculum mirabilis, reflecting even the popular interests and tastes of the time - the current interest in "natural history", in the manners of remote peoples, and in at least a semi-scientific effort at social and historic interpretation', Lehmann (1930), p. 213.

39. Kames, in Schneider (1967), p. 257.

40. James Beattie (1974), for example, following Rousseau, traces the origin of language to animal cries as the

'audible expressions of the passions', *ibid.*, p. 236, and explicitly links intellectual 'development' to 'progress' in language.

41. Diderot, in Gay ed. (1973), p. 394.

42. Which is not to say that the institution of slavery can be explained wholly in terms of such beliefs. See, from different viewpoints, Davis (1970), pp. 187-48, and Miles (1987), pp. 73-93.

43. 'During the Dutch East India Company's two centuries of existence, the directors sent out to the East and maintained at their own expense a total of nearly 1,000 Calvinist predikants, and several thousand lay readers and schoolmasters.' Boxer (1965), p. 133; they presumably felt it a worthwhile investment.

44. Gulliver's Travels, exceptional in its satirical intent, provides only a partial model. Diderot, also critical, was more openly exotic and popular in form. See particularly Chinard's 'Introduction', to Diderot (1935).

45. Turgot (1973), pp. 41-59. Condorcet distinguishes ten such epochs. Neither assume however that the process terminates in the present: 'Nature has set no term to the perfection of human faculties; the perfectability of man is truly indefinite': Condorcet (1955), p. 4.

46. Rousseau (1984), p. 78.

47. *Ibid.*, p. 70.

48. *Ibid.*, p. 70.

49. *Ibid.*, p. 89. A point which quite escaped Burnet or Beattie, but not Hume, whose distinction at the outset of the Inquiry, into the active and reasonable aspects of human being anticipated it. Hume indeed recognises that the two are never fully united. In the most 'civilised', 'The feelings of our heart, the agitation of our passions, the vehemence of our affections dissipate all conclusions, and reduce the profound philosopher to a mere plebian': Hume (1854), vol. 4, p. 3.

50. Rousseau (1984), p. 90.

51. *Ibid.*, p. 90.

52. *Ibid.*, p. 90.

53. Ferguson (1966), p. 6.

54. *Ibid.*, p. 82.

55. *Ibid.*, p. 87.

56. Ibid., p. 90
57. Ibid., p. 89.
58. Ibid., p. 93.
59. Cassirer (1966), p. 41, argues that, as Nature is 'now an original formative principle which moves from within (it) signifies the integration of all parts into an all-inclusivce activity and life'.
60. Foucault (1967), particularly pp. 65-85. Note also Doerner (1981), Rosen (1968), and for some useful critical comments Sedgwick (1982), pp. 125-49.
61. Foucault (1967), p. 58.
62. Foucault is by no means unique in this. Very generally the social history of madness has been coloured by later conceptions of the relation between lunacy and reason. Porter, for example, in an interesting essay on Samuel Johnson, ascribes to the period a view of madness as defective reason, rather than disturbed appetite. Bynum, Porter and Shepherd (1985), vol.1, pp. 76-7.
63. As expressed particularly by Adam Ferguson (1973), vol.1, chap. 1, and vol.2, chap. 1. Ferguson, rejecting the synoptic 'histories' of Condorcet and others, defines man's 'progressive' nature in a complex fashion.
64. Diderot (1966). He exemplifies the ideal philosophe as 'a cultivated man, a reputable scholar and a scientific amateur', Gay (1966), p. 14.
65. Diderot (1966), p. 34.
66. Ibid., p. 37.
67. Ibid., p. 37.
68. Wain's comment on Savage, in Johnson (1976).
69. Johnson (1973), p. 377.
70. Ibid., p. 378.
71. Ibid., p. 379.
72. Quoted in Skultans (1979), p. 58.
73. Pinel, in Zilboorg (1941), p. 330. Sade is the most complete modern madman, see Barthes (1976).
74. Klibansky, Panofsky and Saxl (1964). Also Yates (1979), pp. 49-59, Babb (1951), (1959), Orrù (1987), pp. 64-93.

75. Foucault (1970), pp. 117-35. Hunter and Macalpine (1963), extracts by Willis, Whyte, Battie, Cullen and White.
76. 'We are at length persuaded... that the distemper named from the womb, is chiefly and primarily convulsive, and chiefly depends on the brain and nervous stock being affected', Hunter and Macalpine (1963), p. 190.
77. Doerner (1981), p. 106. Tuke (1882), p.109, reports John Wesley's treatment of both melancholia and mania; for the former 'juice of ground ivy with sweet oil and white wine as an ointment' is recommended.
78. Whytt, in Hunter and Macalpine (1963), p. 407. Wesley recommends for 'raving madmen', 'binding' then 'set the patient with his head under a great waterfall, as long as his strength will bear', Tuke, (1882), p. 109.
79. The Scottish intelligentsia were united as much by manners and 'style of life' as by ideas, though many subscribed to a form of Stoicism. See Kettler (1965), pp. 33-9.
80. And not with women, who begin to go insane in an interesting way only when they are recognised as rational consumers in their own right. Skultans (1979), pp. 77-97. Similarly, in more recent times, the interest of children to psychiatrists, rather than developmental psychologists, marks their integration into bourgeois society as consumers.
81. Porter, in Bynum, Porter and Shepherd (1985), p. 73.
82. Mead, quoting Hale, in Hunter and Macalpine (1963).
83. Johnson, Rasselas, p. 190.
84. Ibid., p. 191. Rousseau (1979), p. 91, agrees, less timidly, 'and during these wanderings, my soul rambles and glides through the universe on the wings of imagination, in ecstasies which surpass every other enjoyment'.
85. Swift (1909), is both an exposition and an example; a genuinely manic work full of disjointed vigour and restless energy, it has all the appurtenances of modernism, see particularly pp. 93-7, 'A Digression in Praise of Digressions'.
86. Scull (1982), pp. 76-125, Bynum, in Scull (1981), pp. 35-58, Bynum, Porter and Shepherd (1985), Parry-Jones (1972), pp. 168-281, Jones (1955), pp. 49-66, Tuke (1882).
87. An insight subsequently overlooked, or deliberately ignored, in the professionalisation of psychiatry.

88. See, for example, the striking analysis of Fitzhugh's writings by Genovese (1971), pp. 118-245.

89. Davis (1970), pp. 221-48.

90. Even if the figure of 96,000 visitors a year to Bedlam is a gross overestimate, there is no doubt the figure was large and continued at a high level over a lengthy period. Alderidge, in Bynum, Porter and Shepherd (1985), pp. 17-34.

91. Foucault (1970), pp. 322-8, and (1978).

TWO

THE FEARFUL COSMOGRAPHER

The close and difficult relationship between Hume and Rousseau exposes the inherent instability of reason in the Age of Enlightenment.¹ Aspiring to the broadest freedom within the republic of letters, they pushed beyond the boundaries more cautious philosophes had accepted as the limits recommended by Nature to human conduct. But while Hume remained secure and at ease within an everyday world that his intellect had time and again completely undermined, Rousseau, the less radical metaphysician, could not resist the temptation to experience directly, as will and passion, the world's unreasonable aspect. Rousseau's emotionalism, his 'terrifying eloquence', testify to an existence just beyond the reach of conventional reason; an existence Hume could only grasp intellectually. Each clinging to the conventions discarded by the other, their mutual admiration as writers could not withstand the shock of a personal encounter.

Rousseau and Hume in fact, from the perspective of a later period, become twin critics of the Enlightenment.² If reason were a genuine synthesis of human faculties, then it must be a goal beyond the reach of practical life. Most people, however, including most philosophes, were less exacting and less disturbed. The harmonious inter-relation of will, intellect and emotion was largely taken for granted. The subversive genius at the heart of the Enlightenment was ignored and their writings, during the nineteenth century, became unfashionable.

The distinction between reason and unreason became simplified in accordance with new social imperatives. Reason, at once more specific and more practical, became defined as an exclusively intellectual function. It was not, however, simply another term for the intellect. Reason was the instrumental use of intellect; a practical intelligence. It was only in pursuit of a practical goal that thought became reason. More specifically, it was the form given to thought in the process of our gaining mastery over the natural and social world. Reason was both the precondition and consequence of our power to subdue nature; a power represented primarily by science.³

In this context the shrinkage in the scope of reason is associated with a growing awareness of the underlying productive mechanism of social life.⁴ Capitalism is viewed

more as the means of producing commodities and less as the universal system of their exchange. Reason, modelled upon this process of production, becomes the most general 'means' at our disposal. Distinguishing itself from the complex of 'civic virtues', it takes on a hard, unyielding aspect. As the social logic of production, it reduces all forms of unreasonableness to equivalent instances of the irrational. Thus, while many eighteenth century writers might for the sake of literary embellishment draw comparisons between, say, children and savages, nineteenth century scientists saw the development of child psychology, anthropology and psychiatry as genuinely cognate disciplines.

This was given formal and somewhat belated recognition in Ernst Haeckel's 'biogenetic law'.⁵ The conceptual condensation which allowed madness, for example, to be viewed as ontogenetic and phylogenetic 'regression', however, had taken place a good deal earlier. And, more generally, the theory of 'development' of which such views were a part was enunciated well in advance of Darwin's demonstration of its specific scientific validity.

Auguste Comte's Cours de philosophie positive might be taken then as one of the earliest, and certainly the most systematically ambitious, expressions of the new point of view.⁶ It remains the most comprehensive attempt to render history intelligible through the use of 'intellectual

evolution as the preponderant principle.''' Written during the 1830's, and delivered first in the form of private lectures, Comte assembled what he took to be the materials requisite to an inductive demonstration of his celebrated 'law' of the three stages. At the outset, he makes explicit the assumption which justifies merging into a single category of the irrational all previous varieties of the unreasonable. 'The point of departure of the individual and of the race being the same', he claims, 'the phases of the mind of man correspond to the epochs of the mind of the race'." Both are to be measured and judged by the standard of the 'positive sciences'.

It is a standard established by the totality of human historical development. In opposition, therefore, to his Enlightenment predecessors, Comte insists upon the inherently progressive character of religion. The 'theological stage' through which all forms of thought must pass, is not viewed negatively. It is not simply an obstacle to the attainment of a rational truth but a necessary stage in the development of a science that will ultimately free itself from finalistic prejudices. There is indeed nothing in the past which is not in some sense 'progressive'. This dogmatism is a consequence of Comte's conviction that sociology, in becoming a positive science, can express the entire history of humanity in terms of invariable laws. All discernible differences in modes of thought and ways of living must be reducible to elements

within an unbroken series. All events must find an appropriate place within the continuous process that finally delivers reason into the world.'

In resting his entire 'philosophy' upon an historical classification of the sciences, Comte forcefully expresses the intellectualist vision that was to dominate the rest of the century. He insists that, even at the earliest stages of development, man requires the world to be conceptually ordered. And, in constructing such an order, Comte assumes the primitive 'must begin by supposing himself to be the centre of all things.'¹⁰ Bewildered by the world of appearances, archaic man can organise the world only upon the basis of his own inner experience. His knowledge is exclusively knowledge of himself. It is his internal states and feelings, particularly the fear generated by his impotence in the face of nature, that prompts his first stumbling efforts in conceptualisation. The most primitive form of thought is thus a direct projection of subjectivity upon the external world. This fetishism is the initial disposition towards the world of things.'¹¹ Behind every natural phenomenon, each event or occurrence, there is held to stand some spiritual entity as its 'cause'. Fetishism, 'allowed free exercise to the tendency of our nature by which Man conceives of all external bodies as animated by a life, analagous to his own, with differences of mere intensity'.¹² Subjective 'feelings', in other words, were held to account (directly) for human experience and

(projectively) for the natural world.

The fundamental difference, therefore, between the savage and ourselves is not that we possess reason where he has none, but that our reason has been 'liberated' from the feelings in which it was originally entangled.¹³ Even in the earliest times, man sought the causes of things. The savage reasoned, however, on the basis of false assumptions and untested judgments of reality. Only very slowly could the rational faculty establish its supremacy. That human history is the story of this gradual ascendancy Comte has no doubt. For him, it is self-evident that the 'development which brings after it the improvement in human society', is a process of subjecting, 'all our passions to rules imposed by an ever-strengthening intelligence.'¹⁴

This 'development' is not an unequivocal blessing. 'Savages, like children', he notes, 'are not subject to much ennui while their physical activity, which alone is of any importance to them, is not interfered with'.¹⁵ The lassitude of reason is, nonetheless, much to be preferred to the terrors of fetishism. Comte purges himself of all sentimental attachment to the primitive. The primordial world has no value of its own. It exists only as an initial, faltering, step towards the accomplishment of that rational control over every aspect of life. The underlying interconnectedness of nature making itself felt, as it were intuitively, through man's improving adaptation to the

world, gradually expresses itself as a system of spiritual forces. When fully developed the powerful intellectual apparatus of the theological stage mutates into a metaphysical extravagance, the preparatory interlude to the wholly disenchanted positive stage. The prehistory of positivism is in fact reduced to a series of inadequate but inescapable anticipations of science's final triumph.

Associations

Victorian social thought, in calling on the scientific evidence of evolution, gave fresh impetus to what remained a broadly Comtian version of positivism.¹⁶ Increasing emphasis was placed, however, on the character of the savage cosmos itself, rather than the narrative of reason's ineluctable progress beyond it. Since all such descriptions were, in practice, reconstructions by western academic rationalists of the unreliable testimony of missionaries and travellers, the result is liable to tell us more about the image of the cosmos the bourgeois scholar felt compelled to renounce than it is to inform us directly of the primitive worldview.

An aura of impropriety clung to even the most austere of these works. In dwelling on the irrationalities of primitive life, a way was opened to discuss everything enlightened opinion and good manners had already settled.

It was therefore the ethnographic detail and not the theoretical reflections they contained that made such books popular.¹⁷ Their neglected analyses were, notwithstanding, of considerable significance. If reason is defined instrumentally as efficiency, and in evolutionary terms as adaptation, then the unreasonable becomes irrational and can be nothing other than a form of maladjusted thought. An ineffectual and therefore misguided science.

Sir Edward Tyler's Primitive Culture, published in 1871 best illustrates these tendencies. As confidently as Comte, he holds to the 'scientific naturalism' characteristic of the period.¹⁸ The present state of the 'industrial arts' in Western Europe and America could be adopted without argument as the standard against which the 'level' of development of any other society might be judged.¹⁹

At various points, Tylor also makes an open comparison between the 'stage of thought' typical of the savage and of the child in modern advanced society. Children's games, for example, 'keep up the record of primitive warlike arts'.²⁰ And in children we see the same facility in the imitative function of speech that had proved, 'so important in the formation of language.'²¹ There is, in addition, a similar fascination with riddles, games of chance and, most significantly of all, in a propensity to magical thought.²²

The child, the savage and our archaic ancestors are alike in their thought world being mythic: 'in our childhood', he assures us, referring to our collective childhood in archaic society as well as our personal infancy, 'we dwelt at the very gates of the realm of myth'.²³ And myth is an outgrowth of the same basic movement of projection that Comte had defined as fetishism. 'First and foremost among the causes which transfigure into myths the facts of daily experience, is the belief in the animation of all nature, rising at its highest pitch to personification'.²⁴

This is for Tylor, however, an aspect of a broad philosophy of nature rather than a 'mechanical' reflex. The animism typical of children and savages springs directly from primordial intuition of nature. Incapable of reducing the world to an ordered set of relations, they yet strive to discover within it a meaning deeper than appearances. The operation of an unanalysable intuition, proper names are given to natural phenomena; the sun and moon, for example, become the living embodiment of sexual difference. It is a cosmology 'deeper than metaphor'.²⁵ Against Max Muller and the dominant philological school, Tylor argues that, far from betraying an elementary linguistic confusion, the universality of such a vision of the world (the diurnal romance of the sun and moon, the living monster of the rainbow, the sky populated with

ancestor spirits condensed into points of light), springs from an original and 'deep consciousness of nature'.²⁶ It involves 'a direct comparison of object with object and action with action', resting 'on a basis of real and sensible analogy'.²⁷ Myth indeed is more profound than poetry which survives as its linguistic echo. And, in passages reminiscent of Rousseau, he argues that language itself begins in myth, in the adaptation of imitative sounds to proper names projected into the cosmos as the 'grammar of nature'. Through it, the savage does not simply communicate, he draws himself into the 'reflection of a mythic world'.²⁸

The romantic and visionary side of Tylor's work has been somewhat neglected, yet there is little in Lang that is not taken directly from the master.²⁹ Primitive Culture is nonetheless fundamentally unlike Rousseau's Discourse. The Victorian moralist restrains and finally suppresses the initial tendency towards romanticism. Magical thought and the myths grown from them may be formed intuitively, but from the perspective of our own controlled reflection, we can detect the associative mechanism which in fact guides savage thought. The association of ideas, that is to say, a principle central to our own rationality, covertly organises the savage cosmos. It is 'a faculty which lies at the very foundation of human reason', and, he adds soberly, 'in no small degree human unreason also'.³⁰ Once formed, the most superficial associations tend to persist,

'frozen' into superstitious and magical beliefs. Tylor exposes the contemporary popularity of spiritualism, for example, as just such a vestigial belief.

The savage finds connections everywhere. It is all too easy to discover 'similarities' among things. The network of symbolic relationships expands alarmingly and quite unsystematically. New links are continuously generated, drawing the savage into a richly interconnected and interactive world. It is the association between experiences in dreams, reveries and imagination, on the one hand, and the events of the 'real' world, on the other, that prove particularly powerful and pernicious. These metaphorical relations are taken, as are all relations of similitude, to be causally effective.

Reality and its representation is confused. The process of association, the psychological mechanism which carries the potential of reason, remains at an unconscious and therefore uncorrected level. It acts in an uncontrolled fashion as an intermediary between an original intuition of nature, and the completed mythological world within which everything stands transformed. Thus, 'any idea shaped and made current by mythic fancy may at once acquire all the definiteness of a fact.'³¹ The underlying process remains opaque, and causal relations, uncritically inferred from every associative bond, are understood as spiritual forces. The cosmos thus becomes a web of immaterial forces

giving rise, at various unpredictable points, to the sensible transformations of the physical world. Given that it is a 'theory' resting on nothing but accidental relations, the intimate cosmology of the savage is a kind of spiritual terrorism. The savage is helpless in the face of nature. Divining relations within it, he represents these unsystematically as the controlling spiritual forces to which he also is subject. Unpredictability is hypostatized; yet his security depends upon regularity. The savage creates for himself an uncomfortable cosmos; a reality more frightening than the 'raw' nature from which it sprang.

Tylor's work became the foundation, in conception and method, for a generation and more of ethnographic compilations. His ideas were continually discussed, often distorted, and rarely surpassed.³² Victorian intellectualism found ample confirmation within the generous proportions of Primitive Culture before losing itself completely in the luxuriant growth of The Golden Bough. Victory over the German philological school secured, Frazer could go on to develop Tylor's method on a global scale.³³ First published in 1890, The Golden Bough was subjected to a continuous process of revision and enlargement. Not content with reviewing ethnographic literature from all parts of the savage world, Frazer arranged his sources 'developmentally' in such a way as to lead effortlessly into the more complex mythological field

of ancient neareastern civilisations and their contemporary degraded remnants that clung still to European soil in the form of peasant superstitions.

Frazer asserts the unity of human thought not only in terms of a single underlying mechanism (association) common to primitive and to advanced peoples, but also historically in terms of its content. 'The melancholy cry of the Egyptian reapers', he tells us in a typical generalisation, 'which down to Roman times could be heard year after year sounding across the fields. Similar cries...were also heard in the harvest fields of Western Asia... And to this day Devonshire reapers utter cries of the same sort'.³⁴ Cries that is to the corn god, that might still be fleetingly sighted making its way across the edge of half-cut fields into wooded areas. For people 'unable to discriminate clearly between words and things', the natural world could take on a living appearance; it must certainly be experienced as a profoundly different place to the world in which we lived.³⁵ Nature, for them, was not a system of fixed relations. It was constantly, and quite literally, changing shape. The corn-spirit, for example, might appear and reappear in the guise of any number of apparently different beings. The savage cosmos was possessed of such an extraordinary liberty of metamorphosis that, 'magical change of shape seems perfectly credible'.³⁶

Frazer considerably elaborates on Tylor's basic

insight into the origins of magical thought. The association of ideas can follow either of two fundamental paths. Similitude, which reduces to the simple idea that 'like produces like', is the foundation of 'mimetic' magic; and continuity, which assumes that things once in contact remain 'linked' by invisible forces, flows into chains of 'sympathetic' magic. Both principles are slavishly followed as the invariable indicators of efficient causality, binding the world into an unbroken but chaotic network of determinism. It is to the latter that Frazer traces the spirit of scientific enquiry, 'Whenever sympathetic magic occurs in its pure unadulterated form, it assumes that in nature one event follows another necessarily and invariably without the intervention of any spiritual agency. Thus its fundamental conception is identical with that of modern science.'³⁷

It is a conviction of determinism, however, in the absence of a suitable conception of nature. It is applied universally, to every accident of immediate experience, in complete ignorance 'of the nature of the particular laws which govern its succession.'³⁸ In attempting to render the complexity of empirical reality directly into a science, magic, rather as Comte had complained of political economy, 'systematises anarchy'.³⁹

Again echoing Comte, Frazer goes on to suppose that this purely intellectual error was itself the stimulus to

progress: 'the shrewder intelligences must in time have come to perceive that magical ceremonies and incantations did not really affect the results which they were designed to produce.'⁴⁰ As a technology, magic was a failure; the mere repetition, symbolically or actually, of specific events or circumstances associated with some desirable state of affairs was held to be sufficient for the reappearance of such a state. The coincidence, of course, is not generally repeatable, and it is this failure, Frazer suggests, which prompts the development of religion.⁴¹

Frazer goes to some lengths to distinguish the separate intellectual mechanisms and motives at the roots of religion and magic. Religion is not just the 'application' of magical thought to specific problems of life. Magic, he had pointed out, is in fact bereft of spiritual forces so that Tylor's discovery of animism was in reality a description of the most primitive form of religion rather than the beginnings of science. 'Our primitive philosopher must have been sadly perplexed', he remarks, 'by the impotence of his magical technique'.⁴² This failure must be due to the de facto control of the world by beings more powerful than man, 'beings, like himself, but far stronger, who, unseen themselves, directed its course and brought about all the varied series of events which he had hitherto believed to be dependent on his own magic'.⁴³ Magical practices therefore gave way to religious rites, to rituals, that is, designed to influence

by paying tribute to those spiritual beings responsible for nature.

In subsequently concentrating upon the development of religious beliefs and practices, Frazer renders the simultaneous development of 'rationality' a somewhat mysterious process. Is the growth of reason a slow liberation at the hands of the unusually insightful, or a series of happy accidents consequent upon misguided technologies? The latter possibility is suggested in relation, for example, to the Matlock Islanders who, conscious of the practical advantages of reliable navigational aids, 'incidentally stumbled upon the elements of another science, which is astronomy', without fully understanding its rational principles.⁴⁴

The rationalist rejection of magic can also be seen as an intellectualisation of its world; a means of maintaining 'at a distance' our relation with its primordial irrationality. By tracing its distance in evolutionary terms from our own, scientific concepts a chain of continuity was established, lending empirical weight to the abstract similitude said to link modern rationality with the most primitive mode of thought. It was itself, in other words, a piece of intellectual 'magic', which served to legitimate the tangible closeness of the vanished cosmos, allowing us once again the sense the 'real and substantial bond' between words and things. Among 'civilised' people,

it was not only the peasants who' 'in their hearts (could) never really abandon their old superstitions'.⁴⁵

Frazer was only the most prominent of a widely held viewpoint.⁴⁶ Through a theory of animism, the Victorian rationalist momentarily escaped into the cosmology of fun. It is a universe within which all things become contiguous and the similitudes uniting all things spring spontaneously to light. The only law of change within such a cosmos is the unrestrained freedom of metamorphosis. Wholly enmeshed in boundless associations the 'subject' is drawn into 'nature'. All the distinctions proper to his individuated ego are obliterated. The separateness of the human body is barely recognised, the distinction between 'inside' and 'outside' barely applies. 'Subjective' dispositions cease to be the primary experiences, upon which is modelled a picture of the cosmos, and become instead the real forces of nature.

Frazer and most of his contemporaries, however, shrank from the implications of their theories. They avoided direct contact with the cosmos of fun, preferring in the mechanism of association and the theory of animism a glimpse of chaos from the safe perspective of an undisturbed ego. This half-heartedness is precisely the weakness of their 'theory'. From Comte to Frazer (and beyond), an individuated 'bourgeois' consciousness lurks just beneath the surface of ethnography. The foundation of

animism, the projection of subjectivity on to nature, assumes an elemental separation of 'subject' from 'object' the evolutionary perspective had itself denied to those societies in which it was made to play a leading role. The whole process of projection, that is to say, is incomprehensible unless we assume the savage, as well as his theoretical observer, is possessed of a typically modern ego.

It is as if the social theorist, suddenly finding himself in the midst of a primitive society, assumes everyone else there has similarly arrived, as if in a time machine, just a minute or so before him. Bereft, but not forgetful, of civilisation, they assess their predicament still encumbered by many of the psychological features of 'advanced' cultures. The world therefore becomes a frighteningly dangerous place. Without the control over nature exercised by instrumental reason, ethnographer and savage live in a condition of perpetual insecurity. Nature appears ferocious and unpredictable.⁴⁷ Magic develops spontaneously in a vain attempt to avert periodic catastrophe, illness and hardship. Having failed, religious rites are instigated to enlist the aid of those responsible for forces beyond human control.

The conception of reason as the instrument of nature's subjugation and of the irrational as intellectual confusion, brings together the previously separated

prototypes of unreasonableness within a single category. Madness, which had been viewed as a disorder of the affections, thus became a disease of the mind whose 'symptoms' might have been culled from the ethnographic literature.

Baron Ernst von Feuchtersleben's Principles of Medical Psychology, published in Vienna in 1845, and generally regarded as the first modern psychiatric text is not, therefore, just a 'medicalisation' of previous notions. He defines 'health' as 'the perfect adaptation of the body, without injury to its integrity, to the purposes of the mind'.⁴⁸ As man's 'material nature is not wholly material', madness is quickly transformed into a disease of the mind. Bodily appetites are effective only when represented to the mind as desire. And the mind itself, to remain healthy, must establish its own internal order as self-conscious reason.⁴⁹

Just as Tylor, therefore, criticised popular spiritualism, Feuchtersleben attacked an earlier fashionable interest in 'magnetic' states.⁵⁰ Such altered states are 'not a more exalted but a more fettered state of mind'. No longer an instrument of self-conscious reason, the mind, like the body, falls under 'self-delusions'.⁵¹ It destroys the 'free self-regulation' which alone is genuine rationality.

The common general cause of madness is traced to 'the erroneous combination of manifold ideas often united with the patient's own inclinations without his being aware of the error, or being able to overcome it'.⁵² The patient begins to 'see' causal relations where none exist and, in consequence, his perceptual world becomes distorted. The process, if unchecked, ends in individual cases of 'animism'. Examples of such 'mental alienation' abound.⁵³ Thus, the madman 'is not called mad because his brain is over-excited but because he judges and acts absurdly'.⁵⁴ Once the process of association becomes disordered, 'fancy rules without control' and reality, as the savage myth world, becomes 'a waking dream'. Quoting Reil with approval he argues that 'Fools have no ruling idea... Besides their general craziness there is a remarkable weakness of all the powers of the mind, especially of the judgment'.⁵⁵ It is just in this intellectual feebleness that Feuchtersleben recognises the 'regression' typical of the madman, 'amusing themselves and playing pranks like children'.⁵⁶

The madman was then, like the savage, a poor scientist. He formed hypothetical connections among things without ever subjecting them to the test of experiment. The subsequent errors were never corrected and became magnified, ultimately into a wholly delusional reality. That uncontrolled association was responsible for individual cases of lunacy, became an orthodox doctrine of

the new science of psychiatry.⁵⁷ It survived to receive its most elaborate exposition in Eugene Bleuler's authoritative text Dementia Praecox. It was in this work that Bleuler introduced the term schizophrenia to describe a loose grouping of symptoms characterised by a disorganisation of the associative function.⁵⁸ The train of associations may lose its continuity, or be subject to periods of relentless spontaneity; to pathological 'blocking' or the 'flight of ideas'. Thoughts are not related and organised through a hierarchy of logical concepts but are led from one to another by way of superficial and accidental relations: 'a senseless compulsion to associate may replace thinking proper'.⁵⁹ Thought is reduced to 'an automatic compulsion, quite independent of its content'.⁶⁰

The same irrationality (the maladaptive absence of self-conscious control over the process of association) defined the world of childhood. Inspired by the different works of Darwin and Froebel, there emerged a specific genre of works on the psychology of children.⁶¹ Firsthand observations of children, usually the author's children, were adduced as evidence of the child's undeveloped powers of thought. The child was conceptualised as an undifferentiated sensorium undergoing a gradual process of organisation into specific functions. The entire process was viewed from the perspective of the maturing intellect; it was its gradual discovery of logic which most clearly

expressed the underlying process of development observable in all aspects of child life. A leading spokesman outlines the general approach: 'The infant is contemplated in the process of gaining command over himself. His sense organs gradually become available for perception; his muscles become controllable by his will. Each new acquisition becomes in turn an instrument of further progress'.⁴²

The fact that children 'naturally' grew up gave to these works a somewhat different tone to ethnographic or psychiatric texts. The optimism of associationist psychology remained unclouded. The many arbitrary and 'mistaken' connections formed in the mind of children, their characteristically 'mythological' fantasies, their confusion over the limits of reality, were reported as the charming details enlivening otherwise sober works. Intellectual development, the central process of maturation, was guaranteed as the natural unfolding of an immanent power of thought.

The uncompromising sensuousness of the playworld, celebrated by Rousseau and Schiller, was reduced, therefore, to a sensori-motor 'practice' for adult life.⁴³ The new pedagogy similarly subverted the playworld by harnessing it to the goal of self-development.⁴⁴ Play, from being beyond reason, became the most powerful of educative technologies. This 'developmental' approach distorts the work of the most perceptive of pre-Freudian

child psychologists. James Sully, for example, begins his Studies of Childhood with a perceptive analysis of play as the 'imaginative transformation of objects... the sheer liveliness of wanton activity'. But he was unable to free himself from intellectualist prejudices. The child, he insists, 'when at play is possessed of an idea'.⁴³ Play is the ill-formed medium more or less adequate for the expression of immature ideas. It is reduced to being an initial 'stage' of development whose significance rests solely upon its relation to later, more adequate, conceptions. Sully's original deeply felt chapter on play, like Tylor's introduction to the mythic world, is rapidly forgotten in the overwhelming onrush of 'rational' analysis: 'We are learning at last that the inventive fantasy of a child, prodigal as it is of delightful illusions, is also a valuable contribution to the sober work of thought'.⁴⁴ Play, in becoming self-conscious as thought, becomes 'like that of primitive races... a crude attempt at a connected system'.⁴⁵ At first 'a picturesque fancy, and a crude attempt at explanation', it rapidly gravitates towards 'sober reality'.⁴⁶

Child, savage and madmen belong momentarily together as instances of the irrational. They are beings who have failed, or have not yet learned, to subjugate nature to human intentions, intentions to intellect and intellect to science.

Identities

The mystery of growing-up remained and could not, by an appeal to the biogenetic law, be ignored or avoided.⁶⁹ What governed the succession of stages in the ontogenetic development of thought? Did not the conception of 'stages' lead ultimately, in a formal sense at least, to the rejection of any notion of continuous maturation? Such difficulties (together with circumstances to be examined later) combined to promote a gestalt approach to child psychology. In its nascent form, this is already evident in Comparyé's pioneering book, and it constitutes the real advance of Stern's work, both of which were written well before Buhler's theoretically more sophisticated examination of the issues involved.⁷⁰

The attempt to grasp childhood subjectivity as a whole, and to understand its principles of organisation from within, was not accompanied by any fundamental revision of the broadly functionalist and intellectualist standpoint from which the analysis was conducted. 'Development' thus becomes a series of discontinuous jumps and rearrangements; a progressive shifting of inter-related elements through which the familiar adult 'faculties' become crystallised. Such schemata were ordered, however, according to a certain vision of intellectual 'progress': an order established by an unswerving commitment to the

norm of adult rationality as self-possessed instrumentality. What might easily be regarded as a fundamental change in the history of psychology, is a much less decisive break with the past than it at first appears. Reason remains the telos of development, and is still conceived as the instrument of adaptation to the world.

The change in method and approach, however, is real enough and by no means restricted to child psychology. Piaget's description of 'syncretic' thinking in children, for example, echoes Bleuler's depiction of the 'autistic' intellect in schizophrenia and Lévy-Bruhl's evocation of the 'pre-logical' mentality of the primitive. The irrational here is not simply the mistaken result of reasoning logically upon faulty assumptions, it is a 'mode' of thought which is in itself incoherent by our standards.

In Piaget's early work, as in Sully's, the child's world is both a playworld and a world of thought. It is not, however, composed only of intellectual fallacies. We cannot understand the child's thought if we assume that it is nothing but a feeble version of our own mode of reasoning. The child's utterances, thus, should not be viewed as efforts to articulate feelings or intentions, but should be seen rather as part of the material resources of play.⁷¹ Children of four or five talk together but do not really converse. Their speech is not 'adapted to reality', and 'creates for itself a dream world of imagination.'⁷²

Childhood thought, which is hardly thought at all, so different is it from our own, is fundamentally 'ego-centric'. Adult intelligence and ego-centric thinking, 'represent two different forms of reasoning, and we even say without paradox, two different forms of logic.'⁷³ It is a thought world arising spontaneously on the basis of primitive distinctions rather than being constructed on the foundation of conceptual classification. Piaget argues that children do not articulate their ego-centric world to any great extent because they do not believe it is necessary to do so. For them, thought is as 'real' as anything else. And, not being distinguished from physical reality, it is therefore 'obvious' to all. Every child thus 'has his own world of hypotheses and solutions which he has never communicated to anyone.'⁷⁴ Young children live in a strangely lucid world. Like schizophrenics they believe themselves to be 'transparent' to others.

Logically relations remain virtually unknown. Ego-centric thought jumps intuitively from premise to conclusion by making use of general 'schemata' of imagery and analogy. 'The child', Piaget points out, 'does not compare perceptions but perceives comparisons.'⁷⁵ For the purpose of forming perceptual wholes identities rather than associations have to be established.

In childhood, that is to say, reality is not constructed from associations. The child does not venture

general concepts upon the basis of chance contiguities or similitudes. He lives, rather, as part of a complex subjective synthesis within which everything is immediately interconnected. New, unfamiliar objects may not arouse curiosity, therefore, because all possible objects are defined in advance as aspects of one, single, known world.⁷⁶ This 'syncretism' is just another aspect of the 'realism' children ascribe to their subjectivity.

Piaget, in spite of all this, is not prepared to abandon his general biological functionalism. 'There is nothing unintelligent in these schema', he claims.⁷⁷ The 'condensation' and 'displacement' of child thought may be reminiscent of dreams rather than self-conscious intellect, but it is to the latter that these intellectual perversities is somehow 'aimed'.

Psychiatric studies similarly had challenged intellectualist assumptions. Bleuler, beginning his analysis of the schizophrenic with a conventional account of his confused and distorted associations, went on to explore the characteristic symptoms as expressions of 'autistic' or 'derealistic' thinking. It is a 'caricature' of reality, a 'compulsive' form of thinking which appears to the patient as completely 'objective'. His thoughts are assimilated to the work of nature. They are no longer due simply to an 'accidental insufficiency of logic', but are the consequence of an 'inner need'.⁷⁸ Delusions, he

points out, as if directly challenging Frazer, 'have their psychological analogy not in error but in belief'.⁷⁹ It is the power of their personal (mistaken) convictions that creates the world anew for them, making of 'reality' a simulacrum of their ideas.

A new ethnographic perspective completes this reformed intellectualism. Lucien Lévy-Bruhl thus makes conceptual indifference the central feature of 'primitive mentality'. The primitive of course distinguishes innumerable 'objects' in the everyday world: if he did not, he would not survive. His mental world, nonetheless, sustains a good deal of the preconceptual innocence of the child. Although his world is filled with an overwhelming abundance of concrete differences, he is able to suppress abstractly all particularity in favour of an immaterial homogeneity that binds all things together. The primitive intuits a 'mystic reality' which, including himself within it, allows him to 'participate' directly in the fullness of the cosmos. Its underlying unity is 'felt rather than represented'.⁸⁰ Every conceivable thing 'participates in the same essential nature, or in the same ensemble of qualities'.⁸¹ The intellectual ambition of the primitive is represented for us by Spinoza rather than Aristotle. The task of division and classification, where it takes place at all, is subordinated to the task of revealing in any phenomena the degree of the 'soul' possessed by its particularity.

To grasp the thought world of irrational subjectivity we must 'imagine a being, knowing nothing of the distinction between mind and body'.⁸² Within such a world, animistic 'projection' is the basic form of cognition. And as the noumenal essence of things is directly perceived as at times both threatening and benevolent, the task of knowledge is to probe nature for its moral secrets. 'Everything happens as though nature were the outcome, or rather the reflection of a mental activity whose reasons or intentions the child is always trying to find out.'⁸³ Each object is related, not directly to another, but to the quantity of mana or imunu it contains.⁸⁴

The psychotic, alone in his cosmos, discovers a world he does not understand and cannot control. He adopts animistic 'theories' as a measure of self-defence. The necessity of primitive thought becomes clearer in this context. The psychotic is identical with a world that threatens him with indescribable torments. As the world is contained within himself he must, if he is to survive, 'project' it into some other domain.

The simultaneous subjectivity/objectivity of experience is viewed by the outside observer as a hideously mistaken 'omnipotence of thought'. The psychotic 'introjects' the cosmos and then 'projects' its fearful, threatening aspect in a single, unanalysable movement. The most remote regions of space and time become intimately

personalised. Equally, portions of the body may become 'detached' and appear as lumps of inert matter. Less ominously, in young children, the discovery that parts of the body respond directly to his wishes conveys the magical charm of 'action at a distance'. In the infant's smile on watching himself manipulate his own limbs, 'one has the impression of the joy felt by a god in directing from a distance the movement of the stars'.⁸⁵

Through the logic of identities, the 'appurtenances' of the individual (secretions, hair, nail clippings, shadow, footprints etc.) possess 'magical' attributes. They retain, directly rather than merely by association, the undiminished essence of the person. The 'action at a distance' typical of sympathetic magic is not a (fallacious) logical manipulation so much as an attempt at direct physical coercion. The distance is illusory. To manipulate the 'part' is in fact no different to operating with the whole. The Des'chagga mother thus hides nail clippings and hair stolen from her sleeping child so that he will not stray, during the day, from the village.⁸⁶

Hardly surprising then that the names of things are also the things themselves. The word 'sun' contains the quality of hotness. 'What are names for?' Piaget asks obscurely of one of his young philosophers: 'They are what you can see when you look at things', comes the prompt reply.⁸⁷ Some, without the benefit of Anselm's guidance,

claim that God in creating things simultaneously planted their names in men's heads. In like fashion, a man and his shadow, or the psychotic and his spiritual persecutors, are not conjoined by a mechanical association of ideas, so much as separately express the underlying unity of a single substance.

Intentionality and purpose, as soon as they can be felt as subjective dispositions, thus become nature's organising principles. The sun and the moon follow the young child about. They move, therefore they are alive. And their movements are governed, as are the child's, by purposes given in the nature of living things themselves. The sun exists 'in order' to keep us warm and give us light. Rain falls 'because' we need water to quench our thirst.⁹⁹ Nature exists by virtue of the moral finalism manifest in the fact of our own existence. Life, which is the essence of things, exists to preserve the harmonious relations among its various aspects. The Deschagga for example conduct precise rituals in relation to bees, a species abundant in the human spiritual essence, in order to gain access to the reservoir of their own inner being, and in doing so reaffirm their nature as human beings.⁹⁹

All things, appearing ideally as momentary aspects of an undivided substance, become interchangeable. Man, plant and animal undergo endless spontaneous transformations. Every creature is potentially deceptive. A frail body may

house a dangerous animal. A man might be a metamorphosed tiger. A child, intuiting such transformations, believes himself capable of flight. The psychiatrist becomes a 'fleetingly improvised figure' concealing the divine presence intent upon the destruction of his final victim.⁹⁰ These relations, once again, are not the outcome of distant metaphorical connections; they are aspects rather of an immediately sensed reality. It is only the existence of such a reality, indeed, that allows analogies subsequently to be drawn.

This is an intimate cosmos. Everything is close at hand because, directly sensed, it cannot extend beyond the range of the senses themselves. The child sees the moon resting in the branches of a nearby tree. Nothing can reach higher than the top of the tallest visible building.⁹¹ The psychotic's intimacy with the cosmos grows more exalted. Expanding himself he literally explores once distant regions of space. He too can reach up a hand and touch the stars. Time is no more a barrier to the senses than space. The ancestors are only our contemporaries who happen to exist in a somewhat different way to the living.⁹²

The primal thought world is a veritable 'orgy of identification'.⁹³ It is constructed, formally, by the substitution of parts for wholes, rather than through the association of pre-existing elements. Identical predicates

are transformed into identical subjects. 'The Virgin Mary was a virgin, I am a virgin, therefore I am the Virgin Mary' claims one modern schizophrenic.⁹⁴ And Bleuler tells us of a man who claimed to be Switzerland; 'Switzerland loves freedom, I love freedom, I am Switzerland.'⁹⁵

The formal 'similitudes' linking the world of children, primitives and psychotics as forms of primal thought are the focus of a comprehensive 'morphological' study by Werner.⁹⁶ And the stress on 'intellectual development' recedes in favour of bringing to light the subtlety, depth, and internal coherence of each evolutionary 'stage'.⁹⁷

Common to both associationist and identificatory forms of intellectualism is the view of primal subjectivity as responsive primarily to fear of the 'external' world. Reason is the 'proper' instrument of adaptation to the world; irrational beings who do not possess the intellectual 'maturity' adequate to the tasks of life, are therefore conscious of the world as a threatening and terrible place. The practical exigencies of life are 'assimilated' to their own irrational view of the cosmos. Kelsen, for example, holding genuine causal thinking to be 'utterly beyond the grasp of primitive man', argues that nature is first conceptualised finalistically as retribution.⁹⁸ Revenge, he supposes, is a simple and easily understood motive, physical hardships are therefore

viewed as the punishments for moral transgression.⁹⁹

Associationism was overthrown, in part at least, because it assumed an 'advanced' individuated ego where none could be expected to exist. Lévy-Bruhl's great merit was to show that the savage did not project his ego upon the natural world for the simple reason that he had not yet discovered his ego.¹⁰⁰ Yet the process of identification appears often to rest upon a similarly individualistic account of 'motives' as the content of consciousness. Why should fear and retribution be assumed more 'primitive' than any other feeling? The child's anxieties indeed ought not to be confused with adult fears. They do not yet know of what they should be afraid.¹⁰¹ And psychotics, Bleuler remarks, will describe the most horrifying delusions in a calm and 'unnaturally' detached manner.¹⁰² More generally, since it is the unpredictable which is held to be a particular source of terror, the primitive can only be expected to recognise such a category of events as deviations from a view nature as a continuously functioning and integrated order. The very conception, that is, denied to him by the intellectualist tradition.

The bourgeois world of course, as a rational order, ought already to have transcended fear. The intellect, as the instrumental mastery of nature, ought to have

superseded the magical or religious techniques of coping with threats to life. Yet fear, like play and superstition, persists. The fear that is said to motivate the primal cosmos is really a bourgeois unease 'projected' upon it as an unwelcome anachronism inexplicably persisting within the midst of its world.

Notes to Chapter Two

1. France (1987), pp. 5-8.
2. They remain also, of course, among its chief exponents.
3. Weber (1978), vol.1, pp. 24-6, uses the term zweckrational to refer to a particular type of social action. Rationality in the present context is restricted to a particular 'mode of thought'.
4. The philosophers were only expressing abstractly what was already known to practical men. Andrew Ure's Philosophy of Manufacture (1825), appeared before Comte's Cours.
5. 'The History of the Evolution of the Organism consists of two kindred and closely connected parts: Ontogeny, which is the history of the evolution of individual organisms, and Phylogeny, which is the history of evolution of organic tribes. Ontogeny is a brief and rapid recapitulation of Phylogeny': Haeckel (1874), pp. 1-2. See Gould (1977), for a comprehensive and critical study.
6. Manuel (1962), Charlton (1959), pp. 11-12, and generally Kolakowski (1968), pp. 20-59.
7. Comte (1883), vol.2, p. 149.
8. Ibid., vol.1, p. 3.
9. All history is 'development', which, 'brings after it improvement', assumptions which he declares, 'we may consider to be admitted as facts.' Ibid., vol.2, p. 89.
10. Ibid., vol.2, p. 159.
11. The term fetishism had been coined by Charles de Brosses in 1760. See Evans-Pritchard (1965), p. 20, van Gennep (1914), vol.5, pp. 161-78, Jevons (1896), p. 166, Schmidt (1931), pp. 56-7.
12. Comte(1883), vol.2, p. 186. Later this 'subjectivity' was taken as evidence of the disordered state of the primitive mind. Thus Jevons (1896), p. 16, 'one primitive man's experience must have consisted of a stream of events as disjointed and disconnected as the successive incidents in a dream'.
13. A point of view which proved remarkably persistent. Kelsen (1946), p. 1, claims the primitive mind is dominated by 'the emotional component', which leads to 'ideas which neither describe the world nor satisfy our curiosity and desire for knowledge'.

14. Comte (1883), vol.2, p. 151 (emphasis added).
15. Ibid., p. 152.
16. See particularly Turner (1974), pp. 8-37. Also, Burrow (1966), pp.65-100, Peel (1971), pp. 131-65, Moore (1979), pp. 153-73, Simon (1963), pp. 19-72, Charlton (1959), pp. 86-157.
17. A species of intellectual pornography that was more refined but hardly less hypocritical than the moralising that was so much a part of the period. See, for example, Marcus (1974), Turner (1974), p. 50-9.
18. Turner (1974), pp. 17-24.
19. 'The savage state in some measure represents an earlier condition of mankind, out of which the higher culture has gradually been developed or evolved': Tylor (1913), vol.1, p. 32.
20. Ibid., vol.1, p.74.
21. Ibid., vol.1, p. 237, Tylor, as Comte, borrowing here from de Brosses.
22. 'Just as no one is likely to enter into the real nature of mythology who has not the keenest appreciation of nursery tales, so the spirit in which we guess riddles and play at children's games is needed to appreciate the lower phases of language'. Tylor (1913), vol.1, p. 237.
23. Ibid., vol.1, p. 284.
24. Ibid., p. 285. Compare Jevons (1896), p. 11: 'The savage imagines that even lifeless things are animated by a will, a personality, a spirit, like his own'. Either might have been quoting directly from Comte.
25. Tylor (1913), vol.1, p. 288.
26. Ibid., pp. 297-300. It was just such a 'deep consciousness of nature', of course, that the philological school attempted to bring to light. See, for example, Muller (1887), pp. 77-86, and (1898), vol.9, pp. 58-62, 102. The specific mechanism of myth creation, the 'confusion of language', is not far removed from the uncritical 'association of ideas', that Tylor held to be of central importance.
27. Tylor (1913), vol.1, p. 299.
28. Ibid., p, 303.
29. 'In psychology the savage is he who (extending unconsciously to the universe his own implicit consciousness) regards all natural objects as animated and

intelligent beings': Lang (1887), vol.1, p. 31.

30. Tylor (1913), vol.1. p. 116.

31. Ibid., p. 306.

32. See particularly Jevons (1896), and for a comprehensive review, Schmidt (1931), Evans-Pritchard (1981), pp. 91-95, and (1965), pp. 20-32. The important exception is the work of John H. King (1892), in which the most 'primitive' categories are 'pre-animistic', impersonal forces of 'luck' and 'ill-luck'. His work was ignored, but Schmidt (1931), p. 151 goes so far as to claim that, 'King's account of the real origins of the idea of magic is still the best'. Tylor's influence survived the development of ethnographic methods. It is still evident in the work of Lowie (1924), Murphy (1927), Allier (1927), and many others including, in spite of a somewhat crude 'materialistic' approach, Radin (1937). But compare Rivers (1924) for a more specific ethnography of the medical context of magical practices.

33. The arguments had been rooted more in academic politics than anything else. 'Theoretically' the savage and the ancient were equivalent, but anthropologists in establishing their university credentials needed to monopolise a specific field of study. Frazer's universalism was born of greater professional confidence.

34. Frazer (1900), vol.3, p. 290. The combination of potent narrative and forbidden modes of thought proved highly popular and exercised a lasting influence over the development of anthropology, see Stocking (1983).

35. Ibid., vol.1, p. 403.

36. Ibid., vol.3, p. 290.

37. Ibid., vol.1, p. 61.

38. Ibid., vol.1, p. 62.

39. Comte (1883), vol.2, p. 63.

40. Frazer (1900), vol.1, pp. 75-6.

41. This is contradictory on Frazer's part. Having argued that magical thought is a result of the savage's failure 'to recognise those limitations to his power over nature which seems so obvious to us': Ibid., vol.1, p. 128, he should not then claim the origin of religion can be traced to intellectual disillusionment in such a belief. Marett (1936), p. 78, repeats the argument, attributing it to Tylor: 'Loose and illogical as man's early reasonings may be, and slow as he may be to improve them under the check of experience, it is a law of human progress that thought tends to work itself clear.'

42. Frazer (1900), vol.1, p. 71.
43. Ibid., vol.1, p. 77.
44. Frazer (1922), vol.3, p. 134.
45. Ibid., vol.3, p. 43.
46. A viewpoint which owed almost everything to Tylor, see Burrow (1966), pp. 228-59.
47. Radin (1957), p. 52, quoting Rasmussen's report of a dialogue with an Eskimo respondent: 'What do you believe? We do not believe, we only fear'. Or Murphy (1927), p. 178: 'What primitive man does not understand, while yet it forces itself upon his notice, he fears'. And Allier (1929), p. 92, claims that for the savage 'uncertainty is the dominant feeling' and 'uncertainty inevitably begets fear'.
48. Feuchtersleben (1847), p. 83.
49. Doerner (1981), pp. 64-97.
50. Ellenberger (1970), pp. 57-85.
51. Feuchtersleben (1847), p. 110. In such states, he admits, 'the mind is a conjuror', however, 'it is so only at the moment, and involuntarily, which entirely deprives it of all merit'.
52. Ibid., p. 111.
53. Scull, in Bynum, Porter and Shepherd (1985), vol.1, pp. 103-50.
54. Feuchtersleben (1847), p. 246. It is 'the erroneous combination of manifold ideas often united with the patients own inclinations without his being aware of the error, or being able to overcome it'. Ibid., p. 211.
55. Ibid., p. 270.
56. A characteristic elaborated in another classic of psychopathology, Dostoevsky's House of the Dead, and under the term 'degeneration' was made popular by Morel. See Ellenberger (1970), p. 281.
57. Robertson (1910), p. 22, for example declares that 'American Mythology and Religion are alike but aspects of the general primitive psychosis'. (emphasis added).
58. The basic nosology had been established by Kraepelin, see Ellenberger (1970), pp. 284-5. It is Bleuler's work however that: 'remains until today the most complete description of the symptoms of the schizophrenic from a phenomenological point of view.' Arieti (1974), p. 11.

59. Bleuler (1950), p. 27.

60. Bleuler (1916), p. 81. Or again, Bleuler (1950), p. 16: 'Only the goal-directed concept can weld the links of the associative chain into logical thought.' He quotes as an example of undirected, pathological associations a short essay written by one of his patients, 'The Golden Age of Horticulture', of which the following is an extract: 'At the time of the new moon, Venus stands in Egypt's Autumn-sky and illuminates with her rays the commercial ports of Suez, Cairo, and Alexandria. In this historically famous city of the Califs, there is a museum of Assyrian monuments from Macedonia. There flourish plantain trees, bananas, corn-cobs, clover, and barley, also figs, lemons, oranges and olives. Olive-oil is an Arabian liquor-sauce which the Afghans, Moors and Moslems use in ostrich-farming. The Indian plantain tree is the whisky of the Parsees and Arabs. The Parsee or Caucasian possesses as much influence over his elephant as does the Moor over his dromedary...' Ibid., p. 15.

61. Darwin's 'A Biographical Sketch of an Infant' was first published in 1877 about thirty-seven years after its initial composition. Reprinted in Gruber (1974). Froebel (1897) formulated his pedagogics within the tradition of Hegelian dialectics. Particularly indebted to the 'biogenetic law' were the works of Baldwin (1895), and Hall (1904).

62. Harris in 'Preface' to Preyer (1896), vol.1. p. vii.

63. Most notably by Groos (1898) and (1901).

64. 'Preface' to Preyer (1896), vol.1, p. vi. For a fuller statement see Harris (1898), pp. 23-31, and Ladd (1897), pp. 193-227.

65. Sully (1896), pp. 35, 37.

66. Sully (1896), p. 70. A view shared by Rasmussen (1920), vol.3, p. 105, and Stern (1924), pp. 222-3. Compayré (1893), pp. 209, 270-78, stresses the importance of positive education.

67. Sully (1896), p. 91.

68. Ibid., p. 70.

69. Problems anticipated to some extent by Compayré (1893), p. xxiii, 'quand il s'agit de l'historique de l'enfant, c'est-à-dire d'un être en formation, dont les facultés sont en train de s'organiser, chez qui les phénomènes divers... constituent comme des couches successives, comme une série de palimpsestes superposés.'

70. Stern (1924), p. 148, treats speech development as non-

associative: 'Early speech is innocent alike of grammar and logic.' See also Buhler (1930).

71. Piaget (1926), p. 27: 'The child does not in the first instance communicate with his fellow-beings in order to share thoughts and reflexions; he does so in order to play.'

72. Ibid., p. 43.

73. Ibid., p. 46.

74. Ibid., p. 79. 'The same phenomenon', he points out, 'is undoubtedly to be found in Dementia Praecox and other pathological cases.' Ibid., p. 101.

75. Ibid., p. 135. Rather than comparing child thought to the active associations of reasoned memory, it is more revealingly likened to the dissociation of spontaneous recollection. Piaget refers here to Bergson, he might equally have mentioned Proust: 'the tendency of every memory to gather others around it can be explained by a natural return of the mind to the undivided unity of perception.' Ibid., p. 132.

76. Ibid., pp. 140, 154, 159, and Piaget (1929), pp. 49-109.

77. Piaget (1926), p. 159.

78. Bleuler (1916), p. 90. Reil had already talked of the 'ideal assimilation of the universe' as typical of pathological thought. See Feuchtersleben (1847), p. 85.

79. Bleuler (1916), p. 90.

80. Lévy-Bruhl (1928), p. 17.

81. Ibid., p. 19. It is characterised by 'lack of concepts rather than the contradiction among concepts.' Lévy-Bruhl (1975), p. 10. And with specific reference to notions of individuality he says, 'The participation of the individual in the social body is an immediate datum contained in the feeling which the individual has of his own existence'. Ibid., p. 83.

82. Piaget (1929), p. 49. It is therefore thought which has 'not become conscious of itself.' Ibid., p. 46.

83. Ibid., pp. 236-86.

84. Lévy-Bruhl (1928), p. 20. He thus 'sees no difficulty in metamorphosis.' In this he went far beyond the original account of mana. See Codrington (1891), pp. 117-27.

85. Piaget (1929), p. 176.

86. Ibid., p. 156. Thus, 'the shadow, the likeness, the reflection etc. are confused with the man whose form and features they represent.'
87. Ibid., p. 80.
88. Ibid., pp. 350-2.
89. Lévy-Bruhl (1928), p. 21.
90. Schreber (1955).
91. Buhler (1930), p. 66, quotes Helmholtz recollecting an incident from the age of three or four: 'I can remember as a child passing by the spire of the garrison church in Potsdam and seeing people on the balustrade, whom I took to be dolls. I asked my mother to take them down for me, believing she could do this by merely reaching up with her hands.'
92. Lévy-Bruhl (1975), p. 3.
93. Arieti (1974), p. 231.
94. Ibid., p. 230.
95. Bleuler (1950), quoted in Arieti (1974), p. 231.
96. Werner (1957).
97. See particularly Kohler (1927), Buytendijk (1935), and most significantly Uexküll (1926).
98. Werner still regards the intellect as a mechanism of daptation, but the notion of 'development' as a continuous function has all but vanished.
99. Kelsen (1944), p. 3. Constrained to think entirely in terms of personal motives they have no means of 'discovering nature'. Ibid., p. 43.
100. Note also Piaget (1929), p. 294, on children's tendency to attribute to things 'such powers as they would need either to obey us or resist us'. And Lévy-Bruhl (1928), p. 19. For an eccentric exception see Marrett (1932).
101. For example Lévy-Bruhl, p. 70. The human individual, 'exists by virtue of his participation in the essential principle of his group'.
102. Ferguson (1983), pp. 139-46.
103. Schreber (1955), for many examples. And Bleuler (1950), p. 118: 'They are dissected, beaten, electrocuted; their brain is sawn to pieces, their muscles are stiffened. A constantly operating machine has been installed in their

head. Someone has injected something into their tear-ducts. Their eyes have been exchanged for those of an old woman...' It is the lack of affect in recounting such phenomenal nightmares that justifies the term schizophrenia.

THREE

THE ROMANCE OF SIGNS

Has reason abandoned the relation between means and ends? Surely not. It is, nonetheless, tempting to argue that increasingly throughout the twentieth century the self-conscious identification of reason with rationality, and rationality with instrumental efficiency, has been, if not broken, then certainly weakened.

Our society, of course, is just as dedicated to the production of commodities, and our lives just as constrained by this necessity, as before. Yet in establishing its openly acknowledged and unchallenged supremacy over the social world, the entire process of production has been rendered strangely invisible. In being revealed as the most fundamental of social relationships, production has been stripped of any lingering enchantment.¹ It is only the most fundamental of social relations;

important but interesting.² Reduced to being the ultimate cause of life's startling diversity, production relations are constituted as a brute, insensitive force.³

It is the extraordinary 'objectivity' of the modern production process which makes it both more fundamental and less significant than ever before. It provides, underneath all the interesting superficialities of modern culture, its own dull account of things; an explanation, appealed to on the point of conversational exhaustion only 'in the last resort'.⁴

Production no longer, or appears no longer, to depend upon a voluntaristic commitment on the part of all those whose activities are in fact required for its daily reconstruction. Demanding no more than passive assent it persists rather from neglect than from sedulous activity.⁵ It is as if the goal of mechanical efficiency (the reciprocal interdependence of rationality and production), had been achieved once and for all, releasing the subject into a new 'liberated' existence outside of all exterior necessity.⁶

This is just another way of expressing the critical understanding of capitalist society as so many forms of 'alienation'.⁷ It is within this perspective that a specifically 'modern' notion of reason emerges. 'Modernist' revisions have not so much transcended, as viewed from a

different angle, the classical bourgeois notion of reason. Bourgeois rationality could be seen as just another 'version' of the process of alienation.⁸ Society's vital processes, however, having been wholly 'objectified' as the direct expression of natural laws, its members could be allowed an unlimited, inner, 'subjective' freedom of thought and feeling. 'Ideology' has consequently become oddly insignificant. This is not to say that 'values' have ceased to play a meaningful part in people's lives or that modern culture, in being radically secularised, has been simultaneously emasculated.⁹ All such considerations have, however, been trivialised into 'aesthetic' categories, or the spiritual turmoil of private uneasiness.¹⁰ Subjectivity would hardly have been liberated had it been otherwise.

Reason is no doubt still organically linked to the process of production. But it cannot any longer be defined as instrumentality. The new freedom of subjectivity has led to a certain blurring of once well defined boundaries. Once it has been 'detached' from production, subjectivity is able to discover, or rediscover, a rational image of itself in hitherto neglected or degraded forms of life. Having passed, in turn, from the sphere of circulation to the sphere of production, reason (partially) evaporates into the sphere of consumption. The distinction between reason and unreason consequently becomes more difficult to sustain. Both undergo a thorough relativisation.¹¹

The primordial forms of experience untouched by reason have not simply been absorbed into general philosophical discourse, they have secured certain metaphysical privileges. Children, primitives and the insane have preoccupied modern writers to an unprecedented extent. Their fascination has intensified. From being equivalent examples to a common irrationality, they have once again drawn apart and established around themselves a dense world of unique experience. They have become the centres of cosmologies unlike but related to each other and to our own. What had been 'merely' the irrational is revealed as the 'human'; a fullness and purity of thought and feeling that reason had led us to neglect. Here are located those 'unalienated' worlds out of which our own was born, and from which it has become severed. Their thought worlds, therefore, could not be the antithesis of reason; rather, they constituted the plenitude from which the life of reason must itself be replenished. 'Irrational' beings, thus having a value of their own, were quite suddenly discovered to have 'rights', and to be due the respect we demanded for ourselves.¹²

Now that reason, in being stamped upon the world as man's 'second nature', has achieved an enviable security, man himself has been freed of the responsibility of taking it altogether seriously. The timidity of the Victorian Theorist lay in his belief that the 'real' world still

depended in some way upon his own efforts; upon his ability to think and act rationally. Now we are able to relax. Liberated by impotence we can begin to dream again. But we have almost forgotten how. No matter, the primitive lives near by on the diminishing margins of the civilised world, the insane can be rescued from their hiding places and subjected to yet another tormenting examination, or we can simply recall something of our own early childhood. These primordial worlds are inexhaustible. And closeness to them can still shock our imagination back to life.

Reason has ceased to be an instrument of human perfection, or a tool of adaptation. It seeks dominion, not over nature, but over a realm truly its own. It is master of a purely subjective domain which exists for consciousness as a variety of signs. Neither synthesis nor causality are of much importance here. Those are the goals of reason's previous incarnation when, still ambitious to define a reality 'other' than itself, it was constituted as a 'mechanism' linked directly to nature.¹³ Reason as a system of signs, however, is composed, as it were, from its own substance. It no longer points beyond itself. It seeks only the perfection of an inner order, matching by analogy rather than reflection the crystallised structure of the modern production process. The sign, as pure relation (humanity), has no material reality of its own and remains indifferent to the medium through which it expresses itself.¹⁴ It is an elementary particle of human

subjectivity, a quantum of meaning. And as such can only be defined in relation to other such elements.¹³

The modern conception of reason then seeks to perfect itself in the image of man as a consumer of signs.¹⁴ It becomes the systematisation of play, and in maintaining a strictly arbitrary relationship to the object world, finally frees thought from the dead weight of matter.

The social world, that is to say, as a process of production has become 'frozen' into fixed relationships 'independent of our will'. The human can be realised, therefore, only subjectively in the absolute freedom of aesthetic categories. The division between reason and unreason gives way to the gradation from the human to the social. No longer an instrument of calculation, reason presides over a reconstructed playworld of signs. Its task is to illuminate the inner meaning of these signs by revealing the systematic relations they maintain one with another. The human sciences are dissolved in this process into the specialised techniques of interpretation.

Reason loses its clarity. A victim of crumbling dichotomies, it recognises itself in the midst of its opposites. The primordial worlds of childhood or insanity or the primitive are equally rational and non-rational. The irrational, strictly speaking, has almost ceased to exist. Its only meaning now can be that of a 'meaningless'

act; the contradiction of an empty signifier.¹⁷ The semiotic view of reason begins with a clear distinction between the 'meaningless' and the 'inconsequential'.¹⁸ It is, in fact, precisely in the trivial debris of consciousness and action that the modern psychologist and anthropologist have found the special signs of the human. It is just among those cultural objects, uncluttered with older rationalist associations and freed from the prejudices of historicising mythologies and utilitarian banalities, that the fullness of reason can rediscover itself. It is, then, outside the realm of everyday necessity that reason can observe itself as the power of signification.

There is no condescension in extending humanity to previously stigmatised cases of the irrational; we do so entirely upon our own behalf. We hope to borrow back from them the unlimited freedom of signification in which we think our lives consist.¹⁹ We have completely inverted the judgment of the Enlightenment. The primordial world is a semiotic wonderland. Linguistics therefore becomes the first of the human sciences, the discipline to which all others must turn for their method.²⁰ And it is in Ferdinand de Saussure's Course in General Linguistics that we find one of the first clear statements of the modern conception of reason. The long trek through historical philology comes abruptly to a halt.²¹ It is a meaningless story. Language is best understood synchronously as an

interconnected system of signs, each of which is constructed arbitrarily and maintained by convention. Language resists 'reduction' to explanation in terms of the materials from which it is composed. It is a reality sui generis and, as such, furnishes reason with its model.

Signatures

Within the order of signs constitutive of bourgeois culture, those defining personal identity have become particularly problematic. Bourgeois society presupposes a set of relationships among individuals, each one of which is conceived as an integrated 'ego'. The 'ego' is the function of reason within a personal context and operates by an apparently infinitely expanding memory. Memory and personal identity are simply different aspects of the ego's function. So it was with the problems clustering around the memory that a distinctively 'modern' psychology began.

Every act of memory has become guided by the overwhelming necessity of sustaining the 'self' as an imaginable entity; an entity which is in fact nothing but the operation of repeated acts of recollection. In this way the world is reconstructed from a unique viewpoint. 'There is no perception which is not full of memories', Bergson insists;²² so that, inverting the direction of the rational faculty, he can claim that 'our consciousness of

the present is already memory'.²³

Classical rationalism had insisted upon a practically demonstrative reason. Modern consciousness, aware of its own impotence, seeks to test itself inwardly. Kierkegaard, before Freud or Proust, thoroughly explored the baffling psychology of 'advanced' consciousness and constructed an autobiographical work, Either/Or as a testament to its paradoxes.²⁴ Yet, in spite of himself, his writings turned into dialectical masterpieces that led, unpredictably but inescapably, towards a revised version of traditional religious salvation.

A purely secular psychology had to make do with memory alone. But, unaided, memory could not pierce the mystery of our own origin. The foundation of our identity remained a secret to ourselves, and the frustrating amnesia obscuring our early experiences only heightened the conviction of its overwhelming but undefined significance.²⁵ Nor could observational studies of other children adequately substitute for this failure of recollection. Other children (or even our own for that matter), as they are reintegrated into bourgeois society as consumers (and are dignified therefore as at least quasi-rational beings), cease to exert their charm.²⁶ The simple fact of childhood amnesia, once reason had settled upon memory rather than foresight as its vehicle, became tormenting. Why did our active, rational memory fail to

stretch back to the very origin of ourselves? It was not simply the distance it had to traverse. It could only be because our initial experience of the world was so profoundly different from that of the mature 'ego' that our memory could not grasp its 'otherness'. Our initial experience of ourselves was forgotten as a corollary to the growth of reason within the personalised psyche.²⁷ The primordial world was, in other words, literally and profoundly irrational; a pure sensuousness from which nothing could 'escape' into the disembodied world of signification. Such sensuous density could not simply wither away through neglect or distance in time. Its being 'forgotten' was a clear indication of the active role of memory in creating the ego from protean subjectivity. Reason began with an act of repression.²⁸

Repressed, forgotten, but not annihilated childhood lies still within us, revealing itself from time to time in small inexplicable 'accidents', or momentary, incomprehensible pleasures. Distributed over our body, expressed in sudden clumsiness or local paralysis, in tiny rebellions against our will, in unpredictable sensations of dissolution, there is a curious, mute form of personal memory.²⁹ Superficially no more than bodily jokes these parapraxes, like dreams or minor neurotic 'symptoms', seem quite meaningless. But properly approached, with a relaxed uncalculating consciousness, such tiny irrationalities spread within us a rich network of 'associative'

connections.³⁰ Spontaneous recollections, which Proust noticed never failed to announce themselves in an anticipatory and quite generalised thrill of pleasure, are not quite meaningless. This is memory of another sort. It does not so much lead us back intellectually (and falsely) through an unbroken sequence of events to a presumptive origin, as reveal to us, with the vividness of an original perception, fragments of our buried past.³¹ Bergson, as clearly as Freud or Proust, distinguishes between these fundamentally different memory-images, between the rational ego and the primordial world of pure sensuousness. 'The first, conquered by effort, remains dependent upon our will; the second, entirely spontaneous, is as capricious in reproducing as it is faithful in preserving.'³²

Freud is often credited with 'demonstrating' the persistence of the 'irrational' impulses in normal and pathological behaviour; in fact he achieved something much more important. In succeeding in interpreting dreams, symptoms, parapraxes, he shows the manner in which the residues of our spontaneous recollection are formed into systems of signs. He thus extends a rationalising principle over the entire content of the psyche.

Freud's initial approach to the problem was somewhat 'mechanistic'. In a famous phrase from the 'Preliminary Communication' to the Studies in Hysteria he claims that

hysterics 'suffer mainly from reminiscences'.³³ A spontaneous recollection which could not be expressed as a rational memory is 'converted' into a physical symptom. This is almost always the result of some initial 'traumatic' event, the circumstances of which prohibited the discharge of a powerful affect which had been aroused. Rage, or shame, or sexual excitement for example, which it would have been inappropriate to express openly, was actively and consciously suppressed.³⁴ The event was 'forgotten' but another occasion, perhaps years later, which bore some superficial 'associative' resemblance to the suppressed original, recalled the undischarged emotion. Now however, as circumstances are never more than remotely similar, the originally 'natural' response no longer 'makes sense'. The affect is now discharged, however, in its 'converted' form as a physical symptom. The 'choice' of symptom is always extremely cunning. It both conceals and reveals. It is a physical 'representation' of the original event, but in using an alien medium expresses itself cryptically. Symptoms, as coded messages rather than conscious memories, always require interpretation.³⁵ They exist somewhere between rational, abstract memory and spontaneous, sensuous recollection. It is only incidentally that an individual may 'fall ill' from them.

Freud's analytic work, and especially his self-analysis, convinced him that such symptoms were always unconscious recollections of childhood events. For a time

he favoured a 'seduction' theory which he quickly abandoned, partly on empirical grounds, but more compellingly in response to a deepening insight into his own method of interpretation.³⁶ Hysterical symptoms were not reminiscences of actual events, but of fantasies; wishes which it was just as necessary and just as difficult to suppress.³⁷ Symptoms, that is, recalled suppressed wishes by exploiting the conscious memory's associative network.

In all this there was little that was specific to the neurotic. The wishes preserved in symptoms were the common inheritance of us all. Their suppression, however, was usually so effective that when Freud reminded us of them many were unwilling to accept their reality.³⁸ The neurotic's troublesome reminiscences were the result of inadequate forgetting, and analysis was designed as an aid to forgetting more than as a technique of recollection. By revealing the meaningful connection between the symptom and the wish it partially expressed, the symptom could be made to vanish. This, however, was a temporary relief. A purely intellectual method could not serve to annihilate the wish which remained, temporarily thwarted, to pour itself into a new deformity. Just as in a joke, analysis destroys its effectiveness but does not erradicate the idea contained within it.³⁹ The aim of analysis became, therefore, a comprehensive re-education of the heart, rather than a mechanical removal of specific symptoms. A

'cure' could be effected only through transference and counter-transference⁴⁰; that is, by a 'repetition' of the process of growing up through which the patient could finally forget those wishes which had survived his first attempt to do so.

Symptoms, then, do not join two events distant in time so much as connect two separate and continuously present realms of meaning. Like dreams they point simultaneously in different directions. In referring to some contemporary situation, they take on the guise of memory and address themselves to the conscious, rational ego; but in carrying within themselves the remains of older wishes, they preserve a psychic life that knew nothing whatever of the ego. To be interpreted a symptom must be 'read' as a sign of this 'primary process'. Freud is at pains to point out that such a primary process is not to be identified with simple organic functioning. Sensuousness cannot, any more than memory or reflection, be grasped biologically.⁴¹ It should be understood rather as wishes. The wish is a kind of approximation, tolerable to the ego, of the unfathomable primordial psyche. The primary process is known only as the unlimited mobility of the wish. In place of the fixity of the self, preserved in deliberative acts of memory, there is the absolute inner freedom, the 'polymorph perversity', of uncorrupted libido. It is the shock of this freedom that we feel as the thrill of spontaneous recollection.⁴² Less intensely, but more regularly and predictably, it is

in dreams that we re-experience the world of fun.

Reason breaks into this freedom, selecting through a process of progressive inhibition, specific aims and objects to which wishes might be attached. It is misleading to see this process as the superceding of an original 'pleasure principle' by a 'reality principle'. No such simple dualism is implied by Freud.⁴³ Reality (which can hardly be a principle) is created from the primary process; it is a specific 'selection' from its infinite possibilities, a part of its whole. Nor should the process of inhibition which defines reality be regarded as the 'repression of pleasure'. It is fun, not pleasure, which must be forgotten. Pleasure indeed is the reward we gain for undergoing the process of inhibition.⁴⁴ As a relation of the ego pleasure must await the loss of childhood to our conscious memory. Then, when we can no longer enjoy the immediacy of the wish, we taste its socialised afterthought as pleasure. Bourgeois culture, in Freud's view, being directed towards the psychic completion of the ego, is built upon the pursuit of pleasure.

The renunciation of fun is the renunciation, but not destruction, of the 'primary process'. In a deeper sense, pleasure may be seen as its continuation in an 'adult' form. The inhibition and differentiation of the primary process, its continuous fragmentation through the

'developmental' stages of psychic organisation, and its establishment of the opposition between the ego and its 'object world', preserves an echo of itself. Pleasure is itself 'symptomatic' of primary narcissism, and all its forms derive from a common source. Pleasure is yet another form, in fact the most general possible form, of recollection. The neurotic symptom is a physical perversion, a recollection of a forbidden wish. But normal pleasure is qualitatively the same; no pleasure is wholly 'innocent'.⁴⁵ In satisfying legitimate desires, the ego is in fact 'borrowing' psychic satisfactions rooted in the primary process. All pleasure leads back (whatever its function in consciousness) to the primordial, undivided world. Hence, once again, the necessity for disguise, censorship and amnesia. Legitimate pleasure must be separated, arbitrarily but categorically, from the forbidden wishes of the primary process. If it were not, we would continually fall back into infancy.

If the connection between pleasure and fun were actually severed, the real aim of conscious psychic life would be lost. To disguise itself as 'innocent' pleasure, the primary process must make use of a richer set of structural principles than those allowed by Tylor or Frazer as constitutive of 'magical' thought. Processes of 'condensation' and 'displacement' conceal the real origin of pleasure.⁴⁶ These processes are 'playful' transformations of the 'rational' sign system of narrative

memory. 'Condensation' joins together elements usually separated along what Saussure terms the 'syntagmatic' or linear axis of speech. In dreams, for example, events and places distant from each other in time and space, can appear contiguous. And by 'displacement' any sign can be replaced by another lying along its 'associative' axis.

Dreams, jokes, symptoms, parapraxes, are the different materials from which the same system of signification is constructed. Each effects in its own way the transformation of fun into pleasure, of primary narcissism into object love. In doing so, each threatens a dangerous proximity to our own childhood and its subversive freedom from the ego.

Childhood has become a personal 'signature', the hidden origin of ourselves. Within us it still wishes, inexhaustibly, for what it can never have. Happily, the advanced economies need more than the specific desires of the pleasure-seeking ego to sustain their passion for commodities; they need the insincerity of the wish. A little more of the child, therefore, can be allowed to reappear, and in our relation to the commodity world even a certain 'playfulness' can be encouraged.*

Gestures

It is only superficially that the recollection of our childhood charms us. However much we might be attracted by the idea of intimate self-knowledge, we take care to shield ourselves from the primary process. Direct contact with the primordial experience of ourselves is an abyss of sensuousness from which we might never return. We protect ourselves therefore by interposing between ourselves and the uncompromising radicalism of fun a complex string of personal signifiers.

These signifiers serve also to protect us from the equally uncompromising abstraction of reason. Those who cannot or will not experience themselves in terms of such images we call insane. Here more than anywhere the historical opposition between reason and unreason has been in practice clouded, yet nowhere else has the conceptual language of its outmoded dualities persisted with such tenacity. The opposition between reason and madness has nonetheless finally succumbed to the terrifying conventionality of the distinction between sanity and insanity.⁴⁹

The social logic of consumption, which is the general context of modern views of reason, cannot afford to be neatly prescriptive. As use values are held to be subjective and therefore arbitrary, it must begin by

acknowledging a realm of conventionality. A particular but constantly shifting boundary of tolerable eccentricity is defined. This is a classification which cannot yield in advance to the establishment of a fixed 'rational' norm. It has to be allowed the general freedom of subjectivity in responding to 'fashion'.²⁰

However insecure the boundary, beyond it insanity luminously beckons. In Kandinsky's circles, Artaud's physiognomic essays, Nietzsche's aphoristic genius, art, literature and philosophy all suddenly side with madness as the realm of truth.²¹ They share with the insane a vision of life deprived of its personal mythologies.

The tradition of enlightenment has been finally and completely abandoned. For the eighteenth century, to be mad was to be under the sway of illusion; now it is just in the conviction of a certain kind of conventional illusion that we can claim to be sane. We cannot defend this sanity by a sincere appeal to 'reason': it has deserted to the other side. In constituting itself as a system of signs 'detached' from the impurities of immediate experience, reason discovers in itself an analogy to the 'primary process'. Reason, that is to say, as pure 'mediation, enjoys the unlimited freedom of transformation among arbitrary signifiers. Being wholly abstract, reason accepts no practical limit upon the range of its internal self-reference.²² And, as pure 'relation', it avoids the

compromises and contradictions of empirical reality. Sanity exists, however, in tolerating the contradictions, inconsistencies, and incompleteness, which has been expunged from the life of reason. Our 'signatures' are composed from just such impoverished and imperfect materials. Insanity, therefore, is as much a temptation to reason as a resurgence of the primary process. Both tendencies are visible in the abundance of modern psychopathology.

In using their inner freedom, perversely, to refuse the consolation of 'signatures', the insane become transparent to us.⁵⁵ Defenceless before the world, they act as passive recording devices of all its most fundamental processes. There is an appalling directness in the gesture of the insanity. It is the truthfulness of their symptoms which frightens us, their helplessness as signifiers.

The neurotic, burdened with partially discarded wishes, is too honest to accept the cunning of conscious memory, and too demanding to be satisfied with the intermittent pleasure of spontaneous recollection. The assumption of continuity, implicit in the operation of conscious memory, is too great a leap of faith for the neurotic.⁵⁶ The neurotic tries to live without the illusions of time. Experience is decomposed into discrete moments accidentally occurring as a linear series. Each

moment might be the last. None carry the promise of a successor which, should it materialise, might do so in some unimaginable way. Equally, however, as their lives are only 'gestures' to the truth, the neurotic tries to co-exist with a conventional world in which he cannot believe. There is no escape to the playfulness of the instant. The work of inhibition proves irreversible. Instead therefore of a release into the atemporal paradise of fun (the primary process), the neurotic suffers the torment of anxiety, which is simply a fear of time. Anxiety manifests itself in the 'freezing' of movement. It is an inability to act. Each moment, heavy with doubt and possibility, threatens both to appear or not to appear. The neurotics defensive gestures, the ritualisation of behaviour, symptomatic obsessive acts, endless preparations for actions which never take place, prolong the present beyond its 'normal' duration.⁵⁶ Anxiety, like play, is open before the world of infinite possibilities. But whereas in play each momentary metamorphosis is without consequence, in anxiety each instant becomes an absolutely decisive choice. Reason is helpless; only the biographical fiction of an extended 'self', projected into the future by a reflex of the will, can guide the subject through such fearful discontinuities.⁵⁷

'Hovering above existence' the neurotic in a sense retains an ideal humanity. Refusing to become one person rather than another he contains, crammed into the anxiety

of each timeless moment, the unalienated essence of endless possible identities. The neurotic, to put it crudely, cannot make up his mind; or, more accurately, tries too hard to make up his mind. In attempting to 'think ahead', the neurotic suffers from a surfeit of reason as well as an excess of sensuousness.⁵⁰ He cannot 'realise' himself in spontaneous action because his 'self' exists as a kind of volatilised essence desperately leafing through a catalogue of its own future. In seeking to be led by reason the neurotic comes to a standstill, unable to decide upon the correct path.⁴⁰

The neurotic cannot rid himself of childhood. Endless metamorphoses, interiorised and made anxious, circulate within him. Attempts to 'solve' the problem (avoidance rituals, obsession, hysterical symptoms), rather than crystallising from the flux of subjectivity a fixed personal identity simply make him more 'nervous'. It is tempting to interpret these signs as an appeal to be 'looked after'. But there is no hypocrisy here. Neurotic helplessness is more a measure of seriousness than irresponsibility.⁴¹

The neurotic is all terrified openness, unable to pick his way through the overwhelming complexity of the object world. For the psychotic the moment of choice lies irretrievably in the past. Everything is settled and complete. He must set about conforming the object world to

his decision. He has traversed the entire length of the road upon which the neurotic cannot set out. He has become the unique individual which is said to be the goal of rational self-development. He has an absolutely clear and determined identity which 'reality' must vindicate. The psychotic withdrawal from the world is a logical transformation of the neurotic's anxious sign-system.⁴³

The psychotic 'illness' is primarily a disease of space. The literature reveals a truly formidable variety of examples.⁴⁴ The object world is dissolved into a plastic medium from which can be created, effortlessly, an entire cosmos to confirm and threaten the psychotic's chosen identity. Not simply unique among other unique beings, the psychotic leads a solitary existence. He is the only individual, the sole survivor of a cosmic catastrophe. Empirical reality is a deceptive appearance populated by the 'fleetingly improvised' creatures 'miracled' up by his enemy.⁴⁵ He is continually threatened by the world he creates, which appears to him as the macabre invention of a demiurge. Spatial relations are arbitrarily transformed. He finds himself stretched across vast reaches of space. Distant stars are felt as the pores of his own skin.⁴⁶ But he might just as easily shrink to nothing. The interior of his body becomes a laboratory of hideous experimentation. It is metamorphosed into a series of mechanised contraptions. Schreber's description of 'miracles' perpetrated on his body is the most ample of modern

pornographies. All those distinctions normal to the developed ego, self/other, inside/outside, body/world, melt away.⁴⁶ If he is wholly 'objectified' and fixed then all else must be 'subjective', malleable, and transitory. The world is dangerous because it is never still; each contact with it threatens the frozen personality of the psychotic. Space itself is dangerous and must be contained. Where the neurotic seeks safety in the abolition of time, the psychotic, fearful of everything other and therefore beyond himself, annihilates extension. He takes the cosmos into himself and attempts physically to master it.⁴⁷ Nothing should be 'left over', no place remain uncolonised by the psychotic's expanding soul.⁴⁸ But realising he cannot succeed, he fears that the cosmos will master him, that he will be 'absorbed' by it, that already every other human being has been sucked into some hideous machine of destruction.

The fear of time and the fear of space constitute the fundamental axes of psychopathology, the signs of insanity.⁴⁹ In this respect confirming the judgment of the Enlightenment, the unreasonableness of the insane is manifest in disturbed consumption. The neurotic is too anxious to consume. He cannot bear the doubt of selection. He wants everything and has nothing. The psychotic, having already swallowed the cosmos, can find nothing else to consume and becomes a voracious anorexic.

Gabel ingeniously argues that these opposing tendencies can be readily conceived as respectively an underestimation and an overestimation of the level of alienation characteristic of 'normal' social relations.⁷⁰ We cannot tolerate the truth of capitalism. We resist, psychologically, the fact of our alienation into 'objective' relations and live instead under the illusion of personality.

The neurotic goes too far in this refusal. He insists upon the real individual humanity of everyone he sees. He cannot act in a partial or fragmented fashion. He cannot accept the facility of stereotypes. His is a disease of sensitivity. Burdened with the duty of authenticity in a wholly unalienated world, he is overwhelmed by its plenitude. The psychotic, on the contrary, does not resist enough. In accepting the present reality of alienation, he refuses to accept the comfort of an imagined past. His life is absorbed into the general process of production. As the last human survivor, he realises his predicament when it is already too late, and shrinks from a world whose touch would transform him into a lifeless commodity. Neither can tolerate the superficial inconsistencies of sanity.

Our normal personality is 'opaque'. It reaches towards the 'primary process', retracing its own path of 'development', by an indirect route. It exists in the small delusions of a personal 'signature'. By comparison,

the 'gestures' of the insane are 'transparent'. Insanity then, like childhood, comes to enjoy a privileged status, not as some exotic deviation, but as an exemplary instance of the life of reason.

Representation

Signatures are 'rational' illusions, gestures 'rational' disillusion. In the age of consumption, reason spills over from the totality of the productive process (instrumentality) to reappear, fragmented and transitory, in the most 'perverse' forms of subjectivity.

The radicalism once espoused by reason becomes softened by innumerable relativising tendencies.⁷¹ The extremism of any view of life as an integrated totality is found only in the limiting cases of 'sensuous immediacy' (childhood) or 'abstraction' (insanity). Our view of the primitive has similarly been revised: from the antithesis to the epitome of rationality. Signatures and gestures are but fragments of modern culture, isolated forms of the new subjectivity of reason. The primitive, however, as a type 'beyond' our own society, provides us with an image of reason which can be both modern and holistic. Here are recombined into actual living matter the disparate tendencies of sensuousness and abstraction, the simultaneous and opposing temptations of the cosmology of

fun.

Reason consists only in the relation among signs; and signs are indifferent to their material 'carriers'. There can be no society without signs and no thought without difference. Durkheim realised this very clearly and, abandoning his initial picture of simple societies as undivided unities, inaugurated the modern view of the primitive with an arbitrary act of classification.⁷² The very notion of society implies division.⁷³ We will never arrive at an understanding of the rational foundation of society by an appeal to some alien form of 'necessity'. Reason, as a system of signs, must be understood from within; society comprehended from its very beginning as a reality sui generis. In claiming therefore that, 'the classification of things reproduces the classification of men', Durkheim implies a common principle of division that is necessary to both.⁷⁴ It was this common principle which provided, he believed, an explanation of the universality of primitive religion.

The Elementary Forms of the Religious Life is, if nothing else, an important statement of the modern conception of reason. The necessity which reason and society share begins in an artificial act of separation; in the differentiation of the sacred and the profane. All societies, in order to exist at all, create and express an internal order. This order has no basis other than its own

conventions: rules which cannot be deduced from the laws of nature or the principle of utility.⁷⁵ Durkheim claims in The Elementary Forms that, whatever their content, all conventions presuppose an original distinction, arbitrary and universal, which is the foundation of society.⁷⁶ It is the first division which creates the cosmos. All objects must be either sacred or profane: 'there exists no other example of two categories of things so profoundly differentiated or so radically opposed to one another'.⁷⁷ It is a transparently subjective distinction, since 'the sacred character assumed by an object is not implied in the intrinsic properties of this latter; it is added to them'.⁷⁸ The sacred is defined by a specific attitude and by rituals of avoidance which sets apart a specific category of objects from everyday use.

The sacred exists as the most general of social conventions. It is a 'pure' rule. It draws an arbitrary line and insists upon its being observed. The sacred is the possibility of society and evades any more specific definition in terms of its purpose or consequences. It is an empty rule, a demonstration of man's power to create social life.⁷⁹ In positing society, the distinction between sacred and profane also rouses reason to life. The social order, as conventionality, is rational not by virtue of any ideological judgment but because reason and society are composed of the same system of representations.

The sacred/profane distinction, as the first system of classification, is the principle of representation itself. Durkheim's students developed this insight in a variety of contexts.⁸⁰ Again, it was less a case of claiming that primitive thought 'modelled' itself upon a primordial social opposition as the discovery at every turn of divisions 'participating' in the arbitrary exclusiveness of the sacred. However 'obvious' or 'natural' they might appear to us, classificatory distinctions, such as left/right, living/dead, male/female, depend upon the continuous application of a social rule. Reason, liberated from nature, must be capable of rediscovering itself in every social relation.

The peculiarity of primitive thought lies not in its lack of differentiation as such, but in the nonspecialised nature of its signs. 'Thought' does not constitute for primitive society a 'category' separate from any other relation.⁸¹ In like fashion, the 'gift' is not a specific economic relation, or 'sacrifice' its peculiar religious rite.⁸² The totality of society is represented in each domain of its activity, all conjoined through a common 'spiritual matter'.⁸³

Magic is not then a kind of dissolution of society into a mass of uncontrolled identities. In apprehending mana and its cognate forms, the primitive generates a complex series of relations, each propagating as it were

the conventional order of his society. The same conventions are discovered, in each division of the natural world, in every possible arrangement of its parts. Magic is neither inadequate science nor impoverished religion, but a form of perception. Its aim is neither explanation nor understanding, but representation.⁸⁴

Magic renders the social process into a system of signs.⁸⁵ In pursuing this approach, the tradition of Durkheimian sociology slowly undermined its own foundation. If all representations in primitive society are versions of the same thing, the most mundane of acts becomes laden with the 'sacred' signs of social totality. The 'sociological' interpretation of the distinction originally offered by Durkheim (that the sacred represents the totality of society where the mundane does not), is lost.⁸⁶ In primitive society all is totality, therefore everything is sacred and the radical exclusiveness upon which all distinction was based dissolves into nothing.

Lévi-Strauss, sensing this difficulty, returns beyond Durkheim to Rousseau in search of the difference immanent in social life. In society there is nothing which is not a sign. Representation therefore is not a specific 'faculty' of social life to be grasped functionally in terms of its consequential 'solidarity'.⁸⁷ Durkheim's fundamental insight is embraced more radically. All social life is sacred, and its various aspects, which can be described

broadly as a series of exchanges, are ordered grammatically as transformations of each other. The rules, implicit and explicit, for example, in the preparation and consumption of food are just as basic to our understanding of primitive society as are the conventions ordering kinship, or hunting or warfare. They are, indeed, the same conventions, variously 'embedded' in practical activities. Just as Freud could reveal the variety of childhood wishes in the arbitrary diversity of dreams, jokes and parapraxes, so Levi-Strauss seeks to uncover the 'savage mind' from the insignificant details of primitive social organisation.²²

Primitive cosmology is therefore 'lived' as much as it is 'thought'. The demand for intellectual order and coherence, for rationality, is just as imperative as it is for the bourgeois theorist, but the signs through which it is expressed serve simultaneously as the descriptive labels of the sensory world. The differentiation of animal species might be used, thus, to represent certain differences among the groups within a society.²³ These totemic relations are 'structural' rather than 'symbolic'. There is no direct relation between a specific species and a social group. A particular animal is not 'adopted' out of admiration for some specific physical or moral attribute imputed to it. Nor is totemism simply indicative of primitive 'confusion' over the boundary between the human and the animal. Totemic species rather form a system through which the order of society can be expressed.

It would be misleading, however, to regard totemism as only that. It is a system of representations rather than the representation of a system in some sense other than itself. Levi-Strauss never returns to Durkheim's functionalism. Totemism 'expresses' social relations only as it were accidentally. It is because social relations are themselves systems of representations that such analogies appear compelling. It is in both being constituted as orders of signs that they can be said to represent each other. The relations among separate domains of social exchange (food, women, stories), do not therefore replicate one another metaphorically, but are linked according to rules of grammatical transformation.⁹⁰ This formal linguistic rationality of representations is not 'added' to their primary function of designation and discrimination. For Lévi-Strauss it appears indeed that grammatical correctness were the first constraint upon human action.

Lévi-Strauss nonetheless dissociates himself from any such formalism.⁹¹ Representations are always representations of something, and must always be considered in relation to some specific content. Like dreams, they can only be interpreted in relation to a complex ethnographic context.⁹² The 'latent content' of all sign systems, however, is the power of representation itself. All specific signs embody the general distinction between

nature and culture. Nature is transformed into signifiers. As a realm of necessity, nature is 'useful' primarily in providing 'reason' with a series of empirical differences (species, gender, season etc.) which can stand as the 'phonemic' elements of culture.⁹³ 'Social structure', therefore, as the grammar of social life, 'has nothing to do with empirical reality'.⁹⁴

The structural rules implicit in representations are as well disguised as the primary process is in our 'signatures'.⁹⁵ Lévi-Strauss turns consequently, like Freud, to what appears to be the most unpromisingly 'irrational' of signs (myth and ritual) to demonstrate the generality and coherence of such rules. Divested of its spurious narrative form, primitive myth is revealed as a universal form of self-consciousness. In analysing its complex internal relations the anthropologist, as much as the psycho-analyst, is engaged in the pursuit of self-knowledge. Myth operates according to a logic immanent in the human power of representation. The commentary upon the myth itself becomes part of the anthropologist's material.⁹⁶ His own analysis does not escape the magic circle of reflexive signifiers. Myth 'absorbs' human thought in much the same way that play absorbs human activity. From its perspective, bourgeois science becomes yet one more transformative pattern within which to inscribe its code.⁹⁷ In being liberated from material constraint, reason first takes on the characteristics of

'subjectivity' (relativism, malleability, plasticity, the marks of consumption), before reconstructing itself as the formal relations which make subjectivity possible.⁹⁸ Reason proclaims then, as its only necessity, a principle of inner freedom.

The subject as well as the object become predicated upon reason. The exemplary types of unreasonableness are transformed in consequence into the most free and therefore the most truthful of signifiers. As the hidden foundation of individuality, as the frank inhumanity of social relations, as the universal power to generate meaning, signatures, gestures and representations are three orders of signs 'in but not of' bourgeois society. They lie uneasily along the margins of the productive order. We often wish they might refer exclusively to a 'mythological' world beyond our reach. Each is in its own way quite dreadful, at once attracting and repelling the ego with their purity.

THE COSMIC BODY

'Fun' is the dissolution of all concepts and categories;⁹⁹ a subversive germ we cannot live without. In its absolute freedom, no principle is acknowledged or served other than the possibility of its own unrestrained mobility. It therefore exists as the limit to the known world. Yet we feel as a palpable reality its continuing presence in the very form and structure with which we lend order to experience.¹⁰⁰

The bourgeois order, like any conventional order, is built first upon the renunciation of fun: in fact upon a stern rejection of the plenitude of its possibilities in favour of the creation, in reality, of a single conceptual and practical world. In bourgeois society, the contrast between this reality and its dissolution as fun has, for the most part, been conceptualised as the opposition between reason and unreason. Fun, however, evading all linguistic designation, playfully insinuates itself into the life of reason itself.

In the development of rational cosmology, fun has been more than a boundary of logical speculation. It has

nurtured its own vision of the world. The cosmology of fun, paradoxical as the notion might appear, has remained integral (by negation, exclusion, division), to the bourgeois worldview and appears time and again as reason's shadowy companion.

As a 'mode of thought', fun refuses to leave the body. It 'begins with the mouth' and does not flatter itself by 'escaping' into some other, more ethereal medium.¹⁰¹ The body, as appetite, mechanism or memory-image is its exclusive locus. Its cosmos is directly felt. Sensuousness is not simply the empirical 'basis' upon which its concepts are erected, it is itself the cosmos.¹⁰²

The 'thinking body' is, with the establishment of capitalism, an evident contradiction. The body is here defined first of all as the source of unruly perversities, the origin of all unreasonableness. It is in a regrettable lack of self-possession that the irrationality of fun is manifest. Then, as reason is identified with instrumentality, the cosmology of fun takes shape as a universal 'undeveloped' consciousness. But as the initial point of a linear process of change, fun can be separated from reason only by an arbitrary act of classification. A process of 'rationalisation' must then be present from the outset and immanent in the variety of sensuous metamorphoses. The 'modern' forms of subjectivity, finally, have carried fun into the very heart of reason.

The frankness, concreteness and lack of constraint typical (but not definitive) of fun suddenly appears in a new light favourably contrasted to the 'frozen' artificiality of reason founded upon the ineluctable order of production.

In terms of its 'object-relations' rather than its 'consciousness' fun is unlimited playfulness. Its unfettered movement creates from the empirical world a theatre of dreams. There is nothing 'beyond' its own transformations to resist the prodigality of its own creativity. Its world is the momentary creation of an interior whim. It is action outside of the constraint of labour, which, as the 'reasoned' use of the body to serve its own 'needs', is dedicated to a single reality.

The cosmic body enjoys unlimited freedom without 'evaporating' into abstraction. As sensuous immediacy it performs 'intellectual' operations by metamorphosis. It is a direct sensing of internal relations we can only grasp conceptually. For a long time, 'advanced' rationalist thought found the primordial world of fun somewhat distasteful. 'Primitive thought' in all its guises, appeared obsessively 'stuck' in physicality; in widespread mythologies about the origin of the world as a process of birth,¹⁰³ as neurotic wishfulness, or psychotic delusion, as the primary process. But now, as reason's double, it enjoys a new respectability. The body as a concretion of signs is a thinking mechanism, the first and most

fundamental site of reason's architectonics.¹⁰⁴ In the differentiation of bodily feelings we feel the impulse of reason. The categorical opposition with which we began: mind/body, subject/object, theory/fact, begin to disintegrate. Each term is recognisable in the other. Metamorphosis is reborn. And just for a moment we believe that the primordial world is once again within our reach.

Fun however cannot be reached by rational action or reflection. It cannot become the aim of social life. The moment we deliberately seek out the infinitising movement from sensuousness to abstraction and back again it dissolves into nothingness.¹⁰⁵ To make the attempt would be to suppose that fun is no more than a differentiated segment of a larger world of experience. But this contradicts the only thing we might 'reasonably' know of fun: that it is infinite. Our world is already contained within its countless possibilities.

Responding to a fugitive presence, a new style of art, the 'little phrase' of a sonata, a face glimpsed against a backdrop of sea,¹⁰⁶ we pursue, in order to make it our own, the object in which it seems embodied. We are disappointed. Fun is not to be mastered by deliberate appropriation.¹⁰⁷ It remains tantalisingly beyond our grasp. Fascinated, we cannot stop analysing its litter of abandoned forms; a process which, playing host to the spirit inadvisedly sought in objects themselves,

occasionally springs to life.¹⁰⁰

Notes to Chapter Three

1. Marx, it should be remembered, presents his analysis of production as a critique of political economy. Piercing the mystery obscuring the source of profit is here something rather more than the provision of an adequate causal account of its origin. See Marx (1976), vol.1, pp. 163-77. Value 'transforms every product of labour into a social hieroglyphic', *ibid.*, p. 167. In this respect Marx might be considered a modernist. See Berman (1982), pp. 90-115, Frisby (1985), pp. 20-7. Freud and Proust, it is worth noting, developed a similar 'critique of bourgeois psychology', by uncovering the source of pleasure accumulating in the normal process of psychic exchange.

2. 'Uninteresting' that is in Kierkegaard's precise use of the term. See, The Concept of Dread, p. 16. The interesting always retains at its core something of personal significance, in being 'objectified' social relations therefore become uninteresting.

3. And, paradoxically, becomes dematerialised. Cf. Baudrillard (1975). Again, following Kierkegaard (1967), the 'systematic' is taken up into purely reflective categories and becomes metaphysical. Genuine materialism must, in a rather particular sense examined below, ch. 11, remain unsystematic.

4. Thus Engels well known letter to Joseph Bloch, 'According to the materialist conception of history the ultimately determining element in history is the production and reproduction of real life'. Feuer ed. (1959), pp. 397-8.

5. Weber (1965), p. 181, notes that 'The Puritan wanted to work in a calling; we are forced to do so'.

6. See particularly Kierkegaard (1968), pp. 169-224, Löwith (1964), pp. 235-51.

7. Marx (1975), pp. 243-58, 323-34. And for useful comments, Ollman (1971), pp. 131-225, Mészáros (1970), pp. 93-122, Schacht (1970), pp. 65-112.

8. As in Lukács (1968), and Sohn-Rethel (1978).

9. See Abercrombie, Hill and Turner (1980) for a vigorous argument. This is not to be confused of course with the once popular notion of the 'end of ideology', traceable to Saint-Simon, but in its contemporary revival owing most to Bell (1960).

10. Once again Kierkegaard provides the first and most

compelling examples, particularly, in this instance, in the Either of Either/Or.

11. See below ch. 11.

12. For example, Lévi-Strauss (1973), Szasz (1961), Holt (1974).

13. A tradition analysed by Rorty (1980). Freud S.E., vol.14 p. 122, it should be remembered defined 'instinct' (Trieb) as 'the psychical representative of the stimuli originating from within the organism and reaching the mind'.

14. Saussure (1966), p. 66, expresses it thus: 'The linguistic sign unites, not a thing and a name, but a concept and a sound-image. The latter is not the material sound, a purely physical thing, but the psychological imprint of the sound, the impression that it makes in our senses'. And Delacroix (1934), p. 131: 'Le signe linguistique, dans son essence, est incorporel; ce qui le constitue, ce n'est pas sa substance son image acoustique de toutes les autres'.

15. Saussure (1966), p. 120: 'in language there are only differences'. See also Barthes (1967), pp. 38-9. Martinet (1969), pp. 20-2.

16. Cassirer's Philosophy of Symbolic Forms vol.1, p. 69, as a "morphology" of the human spirit', which aims at 'the specification of pure subjectivity', is one of the most impressive efforts along these lines. It is a similarly 'morphological' perspective which informs Uexküll's romantic biology. For example: 'No attempt to discover the reality behind the world of appearances, i.e. by neglecting the subject, has ever come to anything, because the subject plays the decisive role in constructing the world of appearances, and on the other side of that world is no world at all'. Uexküll (1926), p. xv. And again: 'In the world of the physicist there are only objects which react on one another through the medium of space; in the world of the biologist there are only appearances which react on one another through the medium of the subject', *ibid.* p. 31.

17. A limiting possibility approached, ironically, in the contemporary relations of production. The 'boredom' of work has been commented upon for well over a century.

18. A distinction implicit in both the title and the bold opening statement to The Interpretation of Dreams, 'every dream reveals itself as a psychical structure which has a meaning'. It is equally evident in many of Simmel's finest essays, for example Simmel (1971), pp. 121, 179-86, 294-323.

19. Particularly striking in Jaspers monumental General Psychopathology, a work which more than any other succeeds

in convincing us of the profound arbitrariness in the systematic structure of what we take for everyday reality.

20. Lévi-Strauss (1968), pp. 55-100. And making use of an older anthropological tradition Onians (1951), and Benveniste (1973).

21. Koerner (1973), pp. 166-74.

22. Bergson (1911), p. 24.

23. Ibid., p. 195. Thus: 'Perception is never a mere contact of the mind with the object present', *ibid.*, p. 170. 'With the immediate and present data of our senses we mingle a thousand details out of our personal past experience... In most cases these remains supplant our actual perceptions, of which we then retain only a few hints, using them merely as "signs" that recall to us former images.' *Ibid.*, p. 24.

24. Ferguson (1983), pp. 51-7.

25. Freud S.E., vol. 7, pp. 174-5, asks 'Why should our memory lag so far behind the other activities of our minds?' An anomaly that appears even more striking when we realise that there is 'good reason to believe that there is no period at which the capacity for receiving and reproducing impressions is greater than precisely during the years of childhood'.

26. The 'golden age' of childhood stretches approximately from the publication of Alice in Wonderland (1857), to The Wind in the Willows (1908).

27. The process described by Jaspers (1963), p. 348, as a 'release from the obscure bondage of the undifferentiated'.

28. Compare an incisive passage from Nietzsche (1969), pp. 57-8: 'Forgetting is no mere vis inertiae as the superficial imagine; it is rather an active and in the strictest sense a positive faculty of repression... to make room for new things, above all for the nobler functions and functionaries, for regulation, for foresight, premeditation (for our organism is an oligarchy) - that is the purpose of active forgetfulness, which is like a doorkeeper, a preserver of psychic order, repose, and etiquette: so that it will be immediately obvious how there can be no happiness, no cheerfulness, no hope, no pride, no present, without forgetfulness.'

29. Proust (1966), vol.1, pp. 58-62, is as devoted as Freud to these sensory remains. Like Bergson he sees the perceptual world as suffused with memory, condensing into fleeting sensations, 'the vast structure of recollection'. Recollections that become part of our 'body-image', 'Our legs and our arms are full of torpid memories', *ibid.*, vol.12, p. 2. See also Poulet (1977), pp. 3-4, Deleuze

(1973), pp. 39-50, who argues that such recollections are, for Proust, the accidental intermediaries through which the Narrator gains access to a world of 'pure' signs.

30. Freud provides many examples. For a general statement of this 'fundamental rule' see Freud S.E., vol. 22, pp. 10-4, and for an early example *ibid.*, vol.2, p. 56. By following the paths of 'free association' rather than 'rationally' reconstructing the patient's recollections Freud was also able to display his literary talent to great effect. We need not accept at face value his claim to find it 'strange' that his case histories 'should read like short stories', *ibid.* vol.2, p. 160.

31. Proust (1966), vol.1, p. 61, also clearly distinguishes between these two types of memory; between a predominantly visual 'intellectual memory' which 'preserves nothing of the past itself', and involuntary recollection carried in chance encounters with the world of contemporary sensations, especially of taste and smell, 'but when from a long-distant past nothing subsists, after the people are dead, after the things are broken and scattered, still, alone, more fragile, but with more vitality, more unsubstantial, more persistent, more faithful, the smell and taste of things remain poised a long time, like souls, ready to remind us, waiting and hoping for their moment, amid the ruins of all the rest.' See also Sperber (1974), pp. 115-19, and Deleuze (1972), pp. 51-64.

32. Bergson (1911), p. 102.

33. Freud S.E., vol.2, p. 7.

34. *Ibid.*, pp. 3-17.

35. Freud's major case studies provide the fundamental and unsurpassed demonstration of this contention.

36. Anzieu (1986), p. 234.

37. The argument was fully developed in the context of the 'wolf man' analysis, Freud S.E., vol.17, pp. 29-47.

38. There seems little doubt that Freud himself exaggerated the opposition to psycho-analysis. See Ellenberger (1970), pp. 783-4.

39. Analysis may therefore become 'interminable'. Freud S.E., vol. 23, pp. 216-54.

40. *Ibid.*, vol.12, pp. 97-108, 157-74.

41. See note (27) above. Sulloway (1980) it seems to me misrepresents Freud's work by viewing it exclusively within the context of nineteenth century biology.

42. Proust traces it differently, to an intuition of the

essence of things, to art. Deleuze (1972), pp. 39-50.

43. Freud S.E., vol. 14, pp. 146-58. 'We recall the fact that the motive and purpose of repression was nothing else than the avoidance of unpleasure', *ibid.*, p. 153.

44. This is the major theme of Freud's Three Essays on the Theory of Sexuality. See particularly, *ibid.*, pp. 232-33.

45. 'The symptoms constitute the sexual activity of the patient', *ibid.*: vol.7, p. 163, (emphasis added).

46. Analysed firstly in relation to dreams, *ibid.*, vol.4, pp. 279-304, 305-9. But quickly extended to jokes, vol.8, pp. 19-33, slips of the tongue and pen, vol.6, pp. 58-9, 61-2, and symptom formation, vol.5, p. 671.

47. Saussure (1959), p. 123, defines syntagmatic and associative relations as follows: 'In the syntagm a term acquires its value only because it stands in opposition to, everything that precedes or follows it, or to both... Outside discourse, on the other hand, words acquire relations of a different kind. Those that have something in common are associated in the memory, resulting in groups marked by diverse relations.'

48. Rojek (1985), pp. 18-33.

49. Anticipated, as with almost everything 'modern', by Nietzsche, himself an ideal madman. See Deleuze and Guattari (1977), pp. 20-2.

50. At the turn of the century neurasthenia was more 'popular' than schizophrenia. Ellenberger (1970), pp. 242-3, and more generally Sontag (1977).

51. Jaspers (1963), p. 309, in particular stresses the affinity between modern creativity and certain pathological states. 'Patients see into depths which do not so much belong to their illness as to themselves as individuals with their own historical truth... in psychotic reality we find an abundance of content representing fundamental problems of philosophy; nothingness, total destruction, formlessness, death. Here the extremest of human possibilities actually breaks through the ordinary boundaries of our sheltered, calm, ordered and smooth existence.'

52. The point at which Marx and Kierkegaard, in different ways, parted company from Hegel. Löwith (1964), pp. 137-61.

53. Jaspers (1963), p. 127: 'Why do you ask me - you know it already.'

54. Thus, Deleuze and Guattari (1977), p. 35: 'The schizophrenic deliberately seeks out the very limit of capitalism: he is its inherent tendency brought to

fulfilment.'

55. A patient of Minkowski's believed, each night, that he would be killed and was never consoled by the discovery that he was still alive. For him quite literally, 'each day life began anew', May, Angel and Ellenberger eds. (1958). The 'selfless', therefore, live spatially.

56. This is quite apart of course from their 'meaning' as 'signatures'. Freud, *ibid.*, 16, p. 269, 'Neurotic symptoms have a sense, like parapraxes and dreams.'

57. A reflex which reason, as self-consciousness, tends to undermine. See below ch.11.

58. Kierkegaard (1971), vol.2, pp. 161-75, The 'aesthetic' 'loses itself in the multifarious'.

59. Many of Freud's patients were markedly 'intellectual' in temperament. Sulzoway (1980), p. 57. Any simple dualism here must be avoided, reason and sensuousness do not form a 'zero-sum' relation.

60. The abstraction and necessity of reason tends 'to bring everything to a standstill', Kierkegaard (1971), vol.2, p. 179. 'I can either do this or do that, but whichever of the two I do is equally mad, ergo I do nothing at all,' *ibid.*, p. 174.

61. This is not to deny the frequent 'secondary gain from illness'. Freud (1955), vol.18, pp. 158-60.

62. Most notably by Freud (1958), vol.12, Canetti (1960), pp. 434-62, Schatzman (1973).

63. 'The logic of pure identity', Gabel (1975), p. 155, following Minkowski and Bergson, regards as an unbalanced extremity of the normal tendency to view duration spatially. In psychosis there are no counteracting tendencies so that thought becomes 'geometrism and morbid rationalism', *ibid.*, p. 79, quoting Minkowski. Jaspers (1963), p. 63, puts it succinctly: 'They have to live forever because time no longer exists'. Hardly surprising that one patient should report: 'I felt lost, abandoned to the infinities of space, which in spite of my insignificance somehow threatened me', *ibid.*, p. 81.

64. Schreber (1955), p. 74.

65. As Canetti (1962), pp. 440-1, points out Schreber's mastery of space makes him not simply the last human survivor, but the centre of the universe. This megalomania is, at the same time, the experience of utter helplessness.

66. And failing retreats into, 'the soft muffled gloom of the interior', Kretschmer (1936), p. 161.

67. 'I had the feeling that I was being pulled up to heaven and saw the whole earth under me, a picture of incomparable splendour and beauty stretched out under the blue dome.' Jaspers (1963), p. 295. And again: 'my body bears fruit... it is a world-body', *ibid.*, p. 296.

68. Minkowski, in May, Angel and Ellenberger eds. (1958) pp. 132-3.

69. The neurotic and psychotic are equally 'abstracted', logical transformations of each other rather than distinct 'conditions'.

70 Gabel (1975). The neurotic holds to the truth of his own humanness, the psychotic to the truth of an objective social order.

71. See below, ch.11.

72. Durkheim and Mauss (1969), p. 5, assume an originally undifferentiated condition: 'It would be impossible to exaggerate, in fact, the state of indistinction from which the human mind developed'. Thus, *ibid.*, p. 5: 'Animals, people, and inanimate objects were originally conceived as standing in relations of the most perfect identity to each other'.

73. Religion is defined through the sacred/profane distinction. And: 'If religion has given birth to all that is essential in society, it is because the idea of society is the soul of religion', Durkheim (1964), p. 419.

74. Durkheim and Mauss (1969), p. 11, explicitly reject the notion that the relation between the two can be reduced to a simple causal mechanism, to do so would be to reduce the act of classification to some ethereal form of pure 'thought': 'Society was not simply a model which classificatory thought followed'.

75. Bergson (1935), p. 18, remarks that in society 'only one thing is natural, the necessity of a rule'.

76. Durkheim (1964), p. 225: 'Religion ceases to be an inexplicable hallucination and takes a foothold in reality... this power exists, it is society.'

77. Durkheim (1964), p. 38. Robertson Smith (1907), p. 140, in his Burnett lectures of 1888 anticipated Durkheim to some extent, 'The distinction between what is holy and what is common is one of the most important things in ancient religion'. He did not attempt however to formulate a general theory of religion based upon such a conventional distinction.

78. Durkheim (1964), p. 229.

79. Durkheim's 'functionalism' tends to obscure this point.

Failing to observe his own dictum that society must be granted a reality sui generis he persists in attempting to 'deduce' its cause from itself. For example, *ibid.*, pp. 370-88.

80. For example in Hertz (1960), and Needham ed. (1973).

81. The primitive is not characterised by lack of distinction but by lack of differentiation among domains of distinction. Every 'aspect' of social life is 'embedded' in every other.

82. Mauss (1970), Hubert and Mauss (1964). Exchange forms a complex system. They exchange, 'courtesies, entertainments, rituals, military assistance, women, children, dances and feasts... a system of total prestation': Mauss, *ibid.*, p. 3.

83. Mauss, *ibid.* p. 12: 'In perpetual interchange of what we may call spiritual matter, comprising men and things, these elements pass and repass between class and individual, ranks, sexes and generations'.

84. Mauss (1972), pp. 76-9: 'Things affect each other only because they belong to the same class or are opposed in the same genus', *ibid.*, p. 78. And: 'Magic becomes possible only because we are dealing with classified species', *ibid.*, pp. 78-9.

85. Its analogous form in bourgeois society is money, rather than science or religion. It constitutes in other words the medium of exchange, and a mechanism for establishing equivalence among things exchanged.

86. Augé (1982), p. 91: 'one cannot find social activities that are strictly speaking outside the sacred'.

87. Though Durheimian functionalism pervades his earlier work on kinship, Lévi-Strauss (1969), pp. 478-81.

88. Brilliantly, for example in 'The Story of Asdiwal', Lévi-Strauss (1977), pp. 146-97.

89. Lévi-Strauss (1963), (1966), pp. 35-74. In spite of Lévi-Strauss's elegant approach 'symbolic' interpretations of myth and ritual, such as Bachofen's (1967) and Jung's, have remained popular. See for example Firth (1973). From either point of view it should also be borne in mind that the 'primitive' also reflects self-consciously upon his existence, see particularly Griaule (1965).

90. Lévi-Strauss (1966), pp. 75-108, (1968), pp. 67-80.

91. Particularly in relation to Propp (1968), who is 'the victim of a subjective illusion', Lévi-Strauss (1973), p. 131.

92. This is particularly the case with myth, where Lévi-Strauss offers methodological advice similar to Freud's in relation to dream interpretation. Lévi-Strauss (1968), p. 210-15. See Wilden (1972), pp. 31-62. And, like dream interpretation, 'There is no real end to mythological analysis, no hidden unity to be grasped once the breaking-down process has been completed... Myths, like rites are "in-terminable"', Lévi-Strauss (1970), pp. 5-6, cf. Freud (1964), vol.23, pp. 216-54.
93. Lévi-Strauss (1966), pp. 1-34.
94. '... but with models which are built up after it': Lévi-Strauss (1968), p. 279.
95. Lévi-Strauss (1968), p. 229.
96. Lévi-Strauss (1969), pp. 12: 'I therefore claim to show, not how men think in myths, but how myths operate in men's minds without their being aware of the fact'. Lévi-Strauss's debt to Rousseau is even greater than his debt to Durkheim, it is through mythology that man's universal nature finally makes itself felt. Though not in a 'rational' or 'self-conscious' form. In another context see Duerr (1985), particularly, pp. 64-6.
97. Lévi-Strauss (1966), p. 13.
98. Lévi-Strauss (1981), p. 639. The analysis of mythology makes it possible 'to discover certain operational modes of the human mind'.
99. Huizinga (1971), p. 25.
100. See particularly in this context Turner (1969), pp. 80-118, Douglas (1966), pp. 41-53.
101. Onians (1951) pp. 13-17, and for a psycho-analytic viewpoint Melanie Klein (1980), pp. 35-57, and Winnicott (1971), pp. 1-30.
102. Bergson (1911), p. 171, writes: 'my present exists in the consciousness that I have of my body'. Schilder (1935), following Bergson argues, that our conception of space is intimately related to our body image; to the 'immediate experience of the human body', *ibid.*, p. 11. An experience which is 'more than a perception', *ibid.*, p. 11, and has to be seen even in the simplest terms as a 'postural model... in perpetual inner self-creation and self-destruction', *ibid.*, p. 16. More generally we are 'enshrouded by various body images', *ibid.*, p. 237. The body is a privileged object in being directly felt, it does not however, constitute the foundation of a system of 'natural' signs. See also Douglas (1973), pp. 93-112, Needham (1972), pp. 138-51, and more generally Turner (1984).

103. For example, Crocker (1985), pp. 21-30' Reichel-Dolmatoff (1971), Christine Hugh-Jones (1979), pp. 235-74, Stephen Hugh-Jones (1979), pp. 151-7.

PART TWO

HAPPINESS

'The universe. which does not exist through itself.
cannot exist from out of its own nature.'

Saint Anselm

'it is God himself who loves himself in us'

William of ST.Thierry

FOUR

HIERARCHY

The bourgeois worldview is not constituted by a simple act of rejection. The cosmic body (fun), with its absolute freedom of metamorphoses, must certainly be renounced in favour of the order of relations we know separately as 'cosmos' and 'psyche', but this might be said (in some form) of any complex society. The distinctive character of the bourgeois order must be defined additionally in relation to its own past, in relation to the society it has 'overcome'. This society had in its turn also been built upon the renunciation of fun. Its techniques of repression, however, were quite different and it is largely in comparison to them that the unique rationality of capitalism becomes evident.

During the greater part of the period of the development of capitalism, the 'middle ages' was viewed unsympathetically as a prolonged but ultimately insignificant interruption in the continuity of western

history. The two great periods of 'ancient' and 'modern' culture were separated and joined by an alien intrusion belonging properly to neither. And while the 'dark ages' might have been reserved as a term descriptive of the 'barbarism' immediately consequent upon the collapse of the Roman Empire, European civilisation at any time prior to the Renaissance was seen as hardly less steeped in ignorance and superstition.¹

There was nothing of the innocence of fun in the irrationalism of such societies. In place of a primitive but 'progressive' system of magic there was a dogmatically absurd religion forced upon an unbelieving but uncritical populace, itself caught up in the greater absurdity of superstition. The two were mutually supportive. The power of the church was a brutal fact no one cared to justify. It did not touch the hearts or the minds of the masses, who tolerated its supremacy just so long as they were left in peace to take what comfort they could from flimsy and incoherent 'popular beliefs'. So that when the church was at last moved to 'Christianise' its nominal congregation, its only hope of success lay by way of the Inquisition.²

This of course is a caricature of eighteenth and some nineteenth century historical writing. It nonetheless remains the case that a coherent account of 'pre-capitalist' society had to wait upon the maturity of rational theories of capitalism itself. Thus, during the

seventeenth century the term 'féodalité' was known only to lawyers.³ And even when it became more widely used to designate a particular form of society it carried with it the pejorative connotation of an 'ancien regime' riddled with abuses.⁴ We can therefore avoid the task of reviewing the changing conception of 'feudalism'; it is a term that belongs exclusively to the period of 'high capitalism' and its aftermath.

The Principle of Feudal Social Relations

Otto Hintze, rather neatly summing up the prejudices of German historical scholarship, claimed feudalism to be 'a system brought about by the lack of rational institutional arrangements'.⁵ If society was not generated and maintained through an appeal to the power of reason vested in each individual, how was it ordered? The answer lay in the development of two particular types of 'nonrational' social relation: vassalage and lordship.

Vassalage was a relation of mutual service and respect contracted among individuals of similar social standing. Its origins have been traced to the practice among warrior knights within the Frankish kingdoms of uniting under a freely chosen military leader. The Gefolgschaft was thus a band of retainers linked through bonds of personal loyalty and subordination to a leader.⁶

In periods of endemic warfare, the mutual benefit of such relations was obvious. It was under the Carolingians, however, particularly Pepin II and Charles Martel, that such practices became organised into a system of vassalage.⁷ Here personal subordination (commendation) was directly linked to the granting of land and goods (benefice) thus ensuring that obligations of military service could be discharged. With the grant of a fief the vassal was not only enabled to meet his obligations of service and protect his own interests more readily than before, he came under the direct protection of 'immunities' granted by his lord in relation to that particular benefice.⁸

Relations of vassalage were held in high esteem. In spite of involving a 'reciprocity' of unequal obligations, they were regarded as being quite free of compulsion.⁹ In becoming 'the man of another man' the vassal, in somewhat diminished form, took on the personal qualities of greatness emanating from his lord. 'I will love what thou lovest: I will hate what thou hatest', ran an Anglo-Saxon oath of commendation.¹⁰ Indeed the law came in time to deal with disputes between fathers and sons as if the fathers, 'were the lords and the sons their men, bound to them by the rite of homage.'¹¹ Similarly, angels were sometimes represented as the 'theigns' of God. And the common attitude of prayer became that of commendatio, hands

closed tight over the chest rather than open and outstretched.¹²

The vassal was not so much the 'instrument' of his superior's will as the 'expression' of his person. He did not therefore require the 'protection' of legal 'rights' held independently from his lord. The lord held 'immediate and direct power over the vassal', constrained 'solely by the notion of what was incompatible with the dignity of a free man'. However, as the vassal's dignity was inseparable from his lord's, no further regulation was deemed necessary.¹³

By the tenth century, in many areas of Western Europe, the advantages of vassalage were much sought after. In order to exploit his fief, a vassal frequently became in his turn lord to a lesser vassal. At the same time, his lord might seek the security of a more powerful magnate than himself. Great men established ties of vassalage with many dependents, and inversely, the same person could become vassal to more than one lord.¹⁴ Overlordship and multiple vassalage greatly complicated political society so that, 'there began to be built up a vast system of personal relationships whose intersecting threads ran from one level of the social structure to another.'¹⁵ It should be remembered however that vassalage was an institutional arrangement 'peculiar to the upper classes who were characterised above all by the profession of arms and the

exercise of command'.¹⁶

The ideology of vassalage was invoked also to justify a quite different type of personal dependence: that exercised by the fief-holder over those unconditionally bound to the land within his benefice. These seigneurial relations were non-contractual, materially exploitative and unregulated by common adherence to a code of 'honour' or 'dignity'.

Seigneurial rights were more ancient than vassalage. Manorial lordship in some form was continuous in Western Europe from the late Roman Empire. The villa and latifundia were transformed, often becoming the property of the church before being parcelled out as benefices through which the ecclesiastical hierarchy could extend its control over the secular elite by creating its own system of vassalage.¹⁷ Throughout these changes, however, the lower orders remained the passive objects of rule; unfree and tied to a specific community.

The local lord enclosed the community in his own system of 'justice'. There was in principle no limitation upon the use of his power, though in practice his freedom became restricted by the gradual accretion of customary practices which came in time to bear the legitimacy of 'traditional rights'.¹⁸

The feudal 'pyramid' was in fact two superimposed structures. At its apex was a ruling group of politically free individuals organised into loose hierarchies through voluntary and mutual personal relations. Beneath them lay the mass of the populace, contained within communities unconditionally subordinated to the rule of a feudal superior. Bloch points out that the essential difference between bondman and free lay in the separate system of justice to which each might appeal: 'On the one hand, there were the true subjects of the king to whom was extended, at all times, the protection of the courts; on the other, there was the mass of the peasantry, largely abandoned to the jurisdiction of the lord of the manor.'¹⁹

Even theoretically, the feudal hierarchy was never conceived as a single, unified and coherent order; and in practice of course it is often difficult to discern even the most rudimentary principles of vassalage or lordship in operation.²⁰ The 'centrifugal' tendencies of such a 'system' were counteracted, though not always successfully, by the two major centralising institutions of feudalism: the monarchy and the church.

Kingship during the earlier period of feudalism was simply the political expression of military superiority.²¹ Success depended to a large extent on the king's ability to establish powers of lordship over demesnes greater than any of his subjects, and therefore, the possibility of

creating, through relations of vassalage, the most extensive network of military support.²² The king's position of supremacy created unique problems. If every man should be 'the man of another man', whose man was the king? To what authority did the king's command appeal? The hierarchical principle could not extend upward simply to terminate in the practical control of a mundane individual. The king must therefore possess or express extraordinary characteristics and kingship must itself be mysteriously shrouded in 'routinised charisma'.²³ During the twelfth century, when feudalism was well established throughout Western Europe, the king was conceived indeed as a persona mixta. Like the hierarchy of the church, he was touched by the divine presence; 'Spirit "leaped" into the terrestrial king at the moment of his consecration.'²⁴ He became 'another man', in nature surpassing all others; a gift 'attributed to him as an effluence of his consecration and function.'²⁵ It was specifically the ceremony of coronation, most dramatically in the case of Charlemagne on Christmass Day, 800, which thus elevated him.

'Liturgical kingship' in the later feudal period became somewhat overshadowed by legalism, without however obscuring the fundamental principle that, 'The power of the king is the power of God. This power, namely is God's by nature, and the king's by grace.'²⁶ This is not to say, of course, that the king could rule only by the explicit and continuing support of the church. Feudalism, in most cases,

was not a genuinely theocratic state.²⁷ In being consecrated, however, the king was able to justify his position as political leader and, more than that, claim an inexhaustible source of authority. Both emperor and pope claimed a divine inspiration, both acted as mediators between God and man, both realised, within the limits of possibility, a perfect nature. It was indeed just because of this theoretical requirement for purity that periodic reform movements were instigated in both church and state.²⁸

The interdependence of church and monarchy was given formal recognition by the mid-eleventh century in the functionalist theory of the 'three orders' of feudal society. 'The City of God, which is believed to be one, is divided into three. Some pray, others fight, others again work. These three co-existing orders could not suffer separation. The services rendered by one permit the world of the other two.'²⁹ These distinctions, oratores, bellatores, and agricolatores, was itself, Duby suggests, a revival and synthesis of several different classificatory divisions current in the Carolingian period.³⁰ As a self-conscious 'ideology' it appears to have originated among the more senior French bishops who, together with the monarch, advanced it as a means of 'christianising' and controlling the knightly class.

The 'horizontal' as well as the 'vertical' links

within the ruling group became, in consequence, more clearly defined. It was not just at the mystical peak of the hierarchy that a symbiosis of secular and ecclesiastical authority was established. At every level, complex interrelations based upon an exchange of spiritual services (the protection of prayer, the forgiveness of sins, the promise of salvation) for material and judicial protection (immunities, gifts of land, feudal obligation), were established.³¹ Few were willing to risk death without remission of sin. Yet everyone must hold themselves in a state of perpetual readiness; death was a commonplace, but nonetheless alarming for that.³² Even the knight, who had conquered his secular fear, was seized of a spiritual terror that could be calmed only by the intercession of a religious expert. A continuous process of cleansing and forgiveness justified the 'privileges' of the clergy. Prayers from the lips of the vocationally devout were more likely to be effective than the hasty devotions of those brought daily by the secular defence of Christendom to the unavoidable commission of sin.³³ Ultimate salvation was assured by the magnificence of gifts and endowments to church or monastery. To die within the holy confines of either made doubly certain. Many thus arranged, well in advance, to spend their last days as monks; and not surprisingly (eternity in bliss was being offered in exchange), 'no man could hope to take the frock on his deathbed unless he had something substantial to give for it.'³⁴ The lower orders, who were less exposed to the

danger of major sins, to satisfy their superstitious craving could, for the gift of labour and produce, gaze upon holy relics, and hope.³⁵

These functional relations were often the focus of fierce conflicts, more often because the protagonists believed that a hypothetical reciprocity had been evaded or disturbed than from a conviction that the ideal system was in itself unjust. Sanctity, courage, patience; social virtues were no more homogenous than any other human characteristic. Man and his attributes were distributed functionally over the entire range of social activities, and ordered hierarchically in relation to a transcendental norm.

The feudal hierarchy cannot be viewed therefore as a 'continuous variable'. Those at its apex did not simply possess more of some infinitely divisible 'good' than those at its base. It was additionally, and more significantly, an order established among separate 'essences'. The serf was a different kind of being than his lord. The universal promise of salvation did not extend to all the bond of a common human nature. The 'culture' of feudalism was similarly dispersed. There were no common 'national' languages uniting its scattered elements. Latin, often of a rudimentary sort, expressed the freedom and mobility of the elite, while dialect and strong regional variation re-enforced the localism of the lower orders. The social

world was extraordinarily varied. The market was a local affair. Money, where it was used at all, was equally limited geographically, being no more than a local means rather than a general medium of exchange.³⁶ The date, even the time of day, were matters of local usage and local dispute.³⁷ Sumptuary laws regulated the appearance of different groups in an outward show of feudalism's hylomorphic order.

The Chain of Being

The physical world in its entirety, the visible cosmos, was also constituted as a feudal hierarchy. It was indeed a more complete, unambiguous and perfect instance of such an order. The gradations of being into which the universe was organised was seen as the system of natural subordination which had been imperfectly copied in human society.

The cosmos, that is to say, was more perfectly and completely ordered than was the social world. It was composed of a concentric series of 'crystalline spheres', the fixed unmoving core of which was the earth. Each successive sphere, moving outward from the centre, was physically closer to perfection, and had impressed within it 'bodies' graded in the 'likeness' they bore their creator. The moon thus, its surface visibly scarred and

imperfect, was nonetheless carried effortlessly and recurrently in a perfectly circular path, participating to that extent in a degree of perfection denied the earth. The planets ranged beyond were so many steps towards the sublime. The 'space' containing perfect physical objects gave way to celestial regions 'containing' the purer forms of angels and the Trinity.³⁸ The entire nested structure had motion imparted to it by the 'action' of the primum mobile, the sphere of Divine Being which was the transcending terminus to the chain of being ranged beneath it.

The interconnected movements of the visible heavens were complex and somewhat baffling. Each sphere moved in the only conceivable manner appropriate to physically perfect forms, uniform, circular motion. The transparent substance of each sphere communicated by direct contact its motion to the sphere immediately 'beneath' it. By varying the number and the relative 'viscosity' of the jelly-like substance of each sphere, quite sophisticated physical descriptions became possible. Authorities, all of whom accepted this general scheme, disagreed over the number and precise qualities of each sphere. At the inception of the feudal era, few ventured to revise Bede's modest estimate of seven. His scholastic successors, however, by a process of cosmic subinfeudation, increased the number of steps in the hierarchy to fifty and more.³⁹

This picture of the physical universe was not original with feudalism. Similar hierarchical systems had been commonplace since classical times and medieval writers, particularly following John Scotus Erigena's translation of the Neoplatonic writings of Pseudo-Dionysius, borrowed freely from older sources.⁴⁰ During the feudal period, however, such schemes took on fresh moral and religious meaning. As a description of the cosmos, the chain of being was not so much the representation of a single physical structure as a 'polysemic' symbol within which the material world found its proper 'place'.⁴¹

The earth, the physical centre and therefore most distant point from the primum mobile, was man's temporary abode. Expelled from Eden by the reckless exercise of his freedom, man was condemned to exist in the midst of decay and corruption. His own physical annihilation constantly before him, he inhabited a world which, physically stationary, knew only the inner movement of generation and death. The material world was itself a reminder of the transitoriness of life, each glance heavenward, equally, an irresistible intuition of eternity. This was not just a matter of 'reading into' its physical structure 'extraneous' moral significance. Sin was physically part of the universe. The four elements composing the sublunary world, a promiscuous flux of earth, water, air and fire, were contrasted unfavourably with the simple, immutable essence of the superlunary spheres. Both separately and in

combination, the earthly elements were subject to degeneration, so that all material terrestrial reality participated in the sensuousness of continuous transformation.

The cosmos was divided hierarchically, not into regions of space, but into the localities of place.⁴² And each place constituted an indivisible unity of moral and physical qualities. There were no general 'laws of nature' unifying and linking together the various places of the cosmos, such a notion was contrary to the very idea of place. Its coherence sprang, rather, from the single unconditional act of benevolence from which it was created. The cosmos is the overflowing abundance of God's love.⁴³ Its divisions expressed the variety of possible degrees in which he could express Himself. All existence therefore shared to some extent in a divine essence, but did so unequally, falling naturally into an unbroken hierarchy, within which each being was dependent upon that immediately superior to it.⁴⁴

Man was not the least significant of God's creatures. Sharing his earthly place were species even less exalted, those lacking a rational, or even a sensitive soul; creatures and plants corrupted by man's sinfulness.⁴⁵ The sphere of the earth therefore marked a particularly significant gradation in the chain of being. Within it, everything was tainted and corrupt, all its transitory

physical forms the temporary remission of disintegrative processes. Beyond it, all material bodies were perfectly regular spheres, smooth condensations of 'quintessential' matter, carried in stately procession upon their regular course for ever. Here there was no change or decay, no undisciplined metamorphosis, only the timeless recurrence of pure movement.⁴⁶

Space was extended but limited. It was not void. Its internal differentiation was a precise separation of qualities. Space and object were defined as a mutually shared essence. The physical and moral characteristics of matter belonged together, therefore, as the bundle of properties 'natural' to some particular 'place'.

Qualitative divisions of space were made at every level and on every scale. 'Christian topographers', for example, drew maps that proclaimed a more profound truth than might have been guessed from the accidental distribution of land and sea. On the authority of Ezekial, Jerusalem was placed 'in the midst of nations', the spiritual and therefore also the geographical centre of the world.⁴⁷

Pilgrimages were thus spiritual odysseys as much as physical journeys; the one implied the other. Movement from one place to another was simultaneously a change in the moral 'qualities' of the traveller.⁴⁸ The religious

orders prior to the fourteenth century withdrew from the world, physically (by the enclosure of a wall if nothing else) and spiritually, in part at least to satisfy the logical requirements of the theory of place. They needed to construct a place uncontaminated by human wickedness. A place appropriate to a holy 'relic' which, suffusing its aura of holiness throughout their community, would act like a beacon to pilgrims.

From the cosmic design of space we move effortlessly to the human significance of place. At every point such transitions were effected. The medieval cosmos, to put it concisely, was a feudal hierarchy. It was the ideal prototype of its social order. The idea of dependence, of a nested structure of subordinate forms, of a theoretically continuous chain of being within which every being found its natural place, of a self-inflicted gulf between, on the one hand, celestial beings invested with the dignity and freedom of their own motion and, on the other, sublunary mortals clinging wretchedly in their bondage to the 'customs of the manor', were images shared by 'society' and 'nature'.

It was a structure reproduced in the visible form of the cathedral. Above all a holy place, the cathedral enclosed as it were on a minute scale, the entire creation. 'Chartres is medieval thought in visible form, with no essential element lacking', Mâle tells us.⁴⁹ Its

alignment, the obligatory symbolism of its figures in glass and stone, the position, grouping and symmetry of its parts, the arithmetical proportions realised in its structure combined to make of it a realistic 'model' of the universe as a whole.

At the mid-point in the chain of being, man, the cathedral builder, was himself the most subtle and accurate replica of the cosmic hierarchy. He 'discovers in himself an analogue of the universe.'⁵⁰ The macrocosm is reproduced in the body, the microcosm, which replicates its hierarchical structure. The head thus 'represented' the sky, the stomach the seas and the feet the earth. As a sensuous being, the human body was a 'mixed' nature composed of the same four elements as every other form of degraded corporeality. Man contained within himself, additionally, in imitation of the most fundamental of cosmic divisions, a 'fifth' essence; a rational soul which, more perfect than earthly elements, was the 'sphere' of his privileged freedom.

Man was a point within which all the forces of the cosmos were gathered. Spoiling creation he yet retained a special significance within it. He occupied a privileged position, a place, from which the entire cosmos became visible. This is not another version of the cosmology of fun. The immediate experience of the body is not in itself a revelation of cosmic design. The cosmos cannot be 'read

off' directly from the somatic engram. Nor are macrocosm and microcosm transformations of some more abstract rational 'structure' buried separately within each. The microcosm is rather a structure which informs man's rational soul analogically of the macrocosm, which cannot be known directly. The body is a 'natural symbol' of the cosmic hierarchy which exists as its essential prototype. Hence when Alan of Lille claims that 'All created things exist for us as a book, a picture, and a mirror', he implies that alone among created earthly beings man has the potential for knowledge, a capacity fulfilled if we learn how to look and read.⁵¹ And if man was a mirror of nature, nature was itself, 'a mirror in which man can contemplate the image of God'.⁵² The entire universe does not lie, as it does in the case of the psychotic or the infant, wholly within the subject. What does exist within the subject is a picture of its own place (the body) which offers a means of understanding the larger structure of which it is both a replica and a part.

Just as there is no space which is not simultaneously a place, with all the moral and physical qualities appropriate to it, so there was no time which stood apart from the drama of creation. All the divisions of time possessed real and essential qualities. Augustine had already separated - duplicating the divisions of space and society - the City of God, whose time with the movement of the heavenly bodies was eternal, from the Earthly City,

with its linear, degenerative and secular time. Yet, since the promise of salvation was held out to all, earthly time must be superimposed upon something more profound; and just as specific places might become charged with spirituality, salvation promised the possibility of sacred time.

A series of analogies linked separate systems of time. The most fundamental relation was between events in the Old and New Testaments, a correspondence which was carried forward to the present as a series of repetitions or re-enactments of an original story.⁵³ The divisions of time followed the invariant order of Creation, reproduced in the 'ages of man' and the 'ages of the world', whose final epoch, the millenium, was close at hand.⁵⁴

Secular time was equally a divisible substance whose qualities varied with place and social relation. The time of the questing knight was very different to that of the monk or peasant.⁵⁵ This is true of course of our own society, but within the feudal hierarchy it was not a matter of a variable 'consciousness' of time detached from its 'objective' order, so much as a different ordering of the world in accordance with time's inherently variable qualities. Time was not in the least 'abstract'. Its specific local characteristics could not be generalised. It struck no one as odd that 'day' and 'night' were divided into equal numbers of 'hours', so that in consequence the duration of the hour varied seasonally. Or that the bells

announcing the canonical hours were never synchronised, even within earshot.⁵⁶

There were no difficulties, therefore, over the ~~'literal' reading of Genesis.~~ The six days of Creation marked the divisions of God's time, not a fixed duration on some human scale. Succession and duration, as with spatial order, were always viewed symbolically. The intellect sought to penetrate their secrets by isolating some particular instance and combining it with others through a general process of subordination.

The hierarchical structure of nature, as of human society, is a symbolic order. It is not just that each element in the visible chain of being has a place of its own within the hierarchical scheme, each has to be understood as the physical emblem of a more essential reality that lies concealed within it. All empirical order is a mere copy of the hidden relations of Creation. Nature is best conceived as an order of 'motivated signs'. There is nothing arbitrary in the relation between signifier and signified. It is through a shared essence that a symbol comes into being and proclaims its fixed meaning. The bestiary as much as the stain glass window conformed to an involuntary iconography.⁵⁷

This is a cosmology opposed to fun. Everything is motionless, fixed and immovable. The cathedral, with its

complex inner divisions, defines an exact and unchanging order.⁵⁸ There is no possibility of metamorphoses, every form is possessed of its own inner, unique value. The observer within its midst is made aware as a result not of individual objects alone but of an entire system of meaning. Drawn to some particular object or event the intellect, the imagination and the senses, are immediately connected to another, and another formed into an ascending scale. In being drawn into an object, the human subject as it were passes straight through it and fastens on to the immaterial presence it symbolises. The intellect is, then, continually led away from the physical world, beyond and above it soars, as the cathedral walls, towards a transcending reality.

Any discernible bundle of qualities thus 'contains' a number of different meanings. Jerusalem, for example, is in the 'historical' or 'factual' sense the town in Palestine. In an 'allegorical' sense it is the Church Militant and a potent symbol of the unification of Christendom against its external enemies. 'Topologically', it refers to the Christian soul, as the 'place' most completely integrated with the moral and ethical teaching of the church. It also means the Celestial Jerusalem, the terminus of human history and every connected system of symbols. It is this final 'anagogic' form that defines, additionally, the organised structure of dependency in which the various symbolic 'levels' are held.⁵⁹

Hierarchical relations stand behind and condition the structure of appearances. Both empirical and symbolic relations point towards a transcending reality, whose necessary being is the precondition of all existence. Where the internal relations of fun can be pictured as labyrinth of horizontal lines belonging to the same 'plane' of experience, the symbolic realm must be conceived as a set of vertical lines that lead beyond themselves to an absolutely unconditioned reality.

The Symbolic Order

The fundamental reality of feudalism then was an invisible and immaterial reality in relation to which the empirical world stood as its symbol. 'The world is a book written by the hand of God in which every creature is a word charged with meaning', such that, 'in reading nature (we) read the thoughts of God.'⁴⁰ This was so much taken for granted that, during the medieval period, there was no general term for 'symbol' or 'symbolic'. The clerical designation symbolum was occasionally used in the sense of an article of faith, as in symbolum Nicea.⁴¹ And Augustine had defined the more specialised notions of signum as figura, imago and allegoria to describe the various 'correspondences' between human reason and the inner nature of things.⁴² The task of the intellect was to recognise

the similitudes obtaining between the world of appearances and the 'real' world that stood within and beyond it.

The real world being inexhaustible, its physical symbols could be endlessly replicated. The apparently endless multiplication, for example, of 'holy relics' need not shock us. What mattered was that the piece of wood, or the length of twisted metal, 'contained' the essence it symbolised, not that, physically, it was cut from the actual cross or had once, in fact, pierced Christ's hand. We are dealing here with faith rather than credulity, with a particular vision of the cosmos which 'consecrated' such remains. It is understandable, similarly, that medieval lawyers and scholars would not simply copy documents but would 'mould' them to some symbolic purpose.⁴³ Or that litigation should be contested by symbolic devices.⁴⁴

Feudalism's symbolic hierarchy only gradually became fully Christianised. In an important study, Le Goff has shown that the central relation of feudalism, vassalage, was established through a ceremony which drew many symbolic elements from the traditional institutions of kinship found among the pre-feudal Germanic tribes.⁴⁵ The entire ritual comprised three separate, related acts; homage, faith and investiture.

Homage was inaugurated in a formal declaration of the wish to become a vassal. The subordinate places his joined

hands between the hands of the superior which close over them in a 'polysemic' gesture expressive of 'instruction, defense, judgment and protection'.⁶⁶ The homage is not, however, a unilateral act of submission. It is an act of reciprocity. In clasping the vassals hands the lord already displays a much greater degree of shared dignity than his less 'feudalised' Spanish counterpart, who allowed his intending vassal only to kiss his left hand. The homage is completed indeed by an open expression of equality, the exchange of a kiss. A mutual oath is then sworn on the bible or some saintly relic and the vassal is publicly declared the lord's 'man of mouth and hand.' Le Goff emphasises this formula in relation to the significance of the body (microcosm) in medieval ritual. The investiture is completed by the lord conveying to his vassal an object representative of their new relationship and its mutual obligations. A large number of possible objects were available, most of them connected fairly obviously with the vassal's new privileges in relation to a fief. Du Cange lists no less than ninety-nine, which Le Goff classifies according to their domain of reference.⁶⁷ Most commonly their mutually supportive connection to the land was invoked (a clod of earth, branch of a tree). Alternatively the investiture might be by a bodily gesture or 'appurtenance' symbolic of their social position (by the finger, toe, hand, hair, belt, gloves etc.). More rarely, though not uncommonly if an ecclesiastical community was involved, some specific 'socio-professional' symbol

conveyed new duties and obligations (by bells, keys, books; or by sword, lance; or in more lowly cases by knife, pitchfork and sharpened pike).

These complex exchanges carefully regulated the establishment of new relationships. The two participants were quite precisely defined within the symbolic system, and through its ritual inequality is both expressed and overcome. Exchange, if it is to be genuine, must be between equals. But the essence of vassalage (and of the feudal relations modelled upon it) is inequality. Hence the necessity of elaborate symbolic manipulation, including the designation of a special place (a church or great hall) in which to perform the ceremony as a public spectacle.

Such rituals attracted, over a period, a penumbra of Christian symbolism. The religious element merged with the pagan before establishing its iconographical dominance.⁶⁸ This was less a direct 'borrowing' of ecclesiastical authority than a consequence of invoking symbolic forms (at first their own) which made transparent an ideal hierarchy of essences in relation to which the church came to have a special claim to expertise, and whose own forms then became the 'natural' idiom in which to express everything 'profound'. Subtle differences however remained. The osculum of fidelity was neither the liturgical kiss nor the kiss of peace, but just as effectively crystallised the entire structure of feudalism.⁶⁹ And as certainly as the

more explicitly religious ceremony of dubbing, it captured and expressed its 'spirit'.⁷⁰

The sustaining of reciprocal but unequal relations is the fundamental political problem of feudalism. It was dealt with in two different ways. Firstly, as in the ceremony of vassalage, inequality is denied through the creation of a purely symbolic realm within which genuine and spontaneous reciprocity can be practiced. Or secondly, as in the theory of the three orders, differences in power and wealth are 'converted' into qualitative and essential differences between ranks of men. Thus, just as the superlunary has dominion over the sublunary world, or man has dominion over other earthly species, so a nobility ought to exercise its dominion over a dependent peasantry. Inequality, that is to say, may be ignored in order that exchange can take place, or exchange is denied in order that inequality can be justified and sustained.

The symbolic order was not an 'ideal' we should strive to realise; it was already fully realised. The symbolic order was a weak imitation in physical form of the order of reality itself. This reality, hinted at in imperfect actuality, could be reconstructed more fully through the operation of its privileged 'mirror' the human mind.⁷¹ The fundamental nature of feudalism is therefore exposed most fully in examples of its 'abstract' reasoning. Hence theology, even more than law, is the real 'science'

of feudalism. In it we can find, free of historical complication, an analysis of its distinguishing social relations.

St. Anselm's is the first and most profound theological exploration of feudalism. His first work, the Monologion, written in 1076 was not, he claimed, a religious book. It was originally titled An Example of Meditating About the Rational Basis of Faith, and this accurately describes its intent. Anselm insists that in it he is putting forward no new doctrine. It consists exclusively in rational reflection and, 'nothing at all in the meditation would be argued on scriptural authority'.⁷² He wanted rather to demonstrate that by reason alone (sola ratione) we would be led to the knowledge of God we already enjoyed by the privilege of revelation and authority. The nature, far less the existence, of God is not a matter of dispute. But by 'disputing with himself', His fundamental truth can be grasped in a different and equally legitimate way. Reason of course cannot replace faith, it can follow in its path. It cannot pierce the mystery of God's transcending otherness, but in perfecting its own method it clarifies the image of God appropriate to the human intellect.⁷³

Anselm begins with the characteristic observation that 'there is something that is the best, the greatest, the highest of all existing things'.⁷⁴ A statement which,

whether taken for granted or deduced from more primitive assumptions, makes sense only in the context of a hierarchical society. Existence, and not only its accidental qualifications, is itself ordered by successive subordination and dependence. Anselm illustrates his contention by appealing to psychological rather than natural 'facts'. Everyone, he points out, seeks what they believe to be good or beneficial to themselves. In doing so they seek a multiplicity of particular things. This heterogeneity should not obscure the fact, however, that each is being sought in relation to its 'goodness' as the common measure of all attractive qualities. 'Goods' are commensurate because dispersed in its varied manifestations is something identical in relation to each. Goods can thus be ordered according to the quantity of 'goodness' each contains. Moreover, 'that through which all goods are good is itself a great good.'⁷⁵ The heterogeneity of the good leads inevitably to the notion that in addition to specific instances of beings, 'good through something other than what they are', there must also exist being which is, 'good through itself'.⁷⁶

It is 'greatness' which defines the specifically christian-feudal conception of existence. The demonstration of supreme and necessary goodness could be found in Plato. Anselm, however, identifies the Christian God with being itself, rather than with goodness.⁷⁷ Relative greatness, therefore, is another term for the

degree of being which allows some specific thing to exist. Every particular thing exists, like goodness, only by 'borrowing' from the essence of a supremely existing being: 'There is a Nature which exists through itself, which is the highest of all existing things, and through which exists whatever is.'⁷⁸

'Greatness' is a noun rather than an adjective. The world owes its existence to this essence which replicates itself, with diminishing intensity, throughout the cosmos. We cannot help comparing the value of things and finding that 'some natures are better than others', and we can avoid an infinite regress of such comparatives only by coming to rest in one 'so pre-eminent that no other nature is superior to it.'⁷⁹ It is the 'fact' of hierarchy which prompts Anselm to look behind it to a general 'medium' of evaluation, and upwards to a being who is the inexhaustible source of all its distributed substance.

The sense in which dependent being is subordinated to greater being is likened by Anselm to a craftsman fashioning an artifact, and in an even more telling analogy, to the social honour gained by association with a superior person. The subordinate is created through dependence, it owes its existence, and not just its form, to a superior. In the first, instance the universe owes its existence to God, who created it ex nihilo. This does not mean, Anselm points out, that He created it from

nothing, as if nothing were some non-material substance upon which He worked, but rather that he made something from a thing which, before he worked upon it, was nothing. He explicitly likens the process to the forming of a social relation between two men, in which, 'the first man, who was formerly regarded as nothing, is now esteemed as truly something because of the making of the second man'.⁸⁰

The same feudal imagery is at the root of Anselm's justly celebrated ontological argument.⁸¹ The greatness of God is here expressed as a being 'than which none greater can be thought', from which Anselm claims to deduce the logical and actual necessity. The force of his argument once again rests with its social assumptions. Degrees of 'greatness' is an undisputed 'fact' of nature within the feudal world. In the ontological argument, Anselm exploits the equally 'obvious' assumption that materially observable degrees of being exist primarily as symbols of non-material essences contained within them. The created world is the plenitude of God's 'thought' and, as part of this order, man possesses his own image of Creation in the form of a rational intellect. It is given to man, that is to say, to exist in more than one way and herein lies his own particular 'greatness'. To exist in actuality and in the mind is 'greater' than to exist in either alone. And as God is 'than which none greater can be thought', the implication of his existence in actuality (as well as in thought) is irresistible.

To argue from necessary concept to necessary being is not the special discovery of Anselm. It is the common feature of feudal-christian thought. The empirical world is a symbol; human experience, likewise, makes accessible only a small portion of reality. Each object and event discloses a portion of itself to the human gaze which, gifted with its own inner image of god's plenitude, can 'understand' the necessary connection between these symbols and their essential being in relation to which they are a kind of covering. Human understanding is however imperfect, limited both by man's place in the scale of being and by avoidable human foolishness. In order to understand it is essential first to believe. The Proslogion was first titled, Faith Seeking Understanding just to emphasise this dependence: 'I believe in order to understand... that I shall not understand unless I believe.'² Human freedom, particularly pride, obscures the symbolic relations of which the being of man is part; relations which the intellect can recover only when man places himself unconditionally and helplessly before creation. Only in faith can the intellect pierce the symbolic veil of empirical reality and rest in ultimate, incorruptible and universal truth.

More specialised theological problems connected with the notion of 'supreme greatness' were taken up by Anselm in his Cur Deus Homo, but once again his argument is best

understood as a daring essay in social theory. Unlike his earlier philosophical works it was occasioned by a specific controversy. The Doctrine of Redemption had received a vigorous new challenge from Judaism. How could Redemption be grasped rationally? How could God be saved from the indignity of contact with the world of evil? How could we accept the idea tht He existed as a man, existed that is as something less than Himself?

This was only a more urgent form of the contradiction faced by every medieval theologian. Why did God exist in imperfect forms?⁸³ By definition, created being is 'less great' 'than which none greater can be thought', so how could God be responsible for all its limiting particularities?

Anselm had already tackled the more general point. To exist in more than one way is 'greater' than to exist in one way only, even where one of these ways is in itself perfect. The more specific problem was viewed as a logical implication of man's disobedience. Sin had frustrated the purpose of creation, and must therefore be redeemed. Anselm views Redemption in the light of vassalage. Services must be offered if the subordinate being is to enjoy the security and comfort of the superior's protection. But man's indebtedness to God is unlimited and could be redeemed only by an offer of services greater in value than the whole of creation. Since only God is

greater than creation, only He can redeem man. The payment, to be effective, must nonetheless originate with man. Hence the necessity of God becoming a man. The Incarnation is, from this point of view, the supreme ritual of investiture: a token of the means whereby man can fulfil his obligations towards God.

In clarifying the central relations of feudalism, Anselm makes them absolute. The symbolic hierarchy, terminating in the necessity of Supreme Being, is an abstraction drawn out of the experience of feudal relations themselves. It is the example of personal dependence in the social order which furnishes the central image of relative 'greatness'. The order of man and of nature is fixed because both are emanations from a hierarchy of essences of which they are the symbols. The physical world is thus a part, a small part, of the cosmos which, by synecdoche rather than metaphor, it represents.

Notes to Chapter Four

1. As for example in Lea (1888), vol.1, pp. 5-6, 212, 218, 401; and generally Thorndike (1923).
2. Lea (1888), vol.1.
3. Bloch (1965), vol.1, p. xvii, Brunner, in Cheyette ed. (1968), pp. 32-61.
4. Ganshoff (1952), p. xv.
5. Hintze, in Cheyette ed. (1968), p. 24.
6. Mitteis (1975), p. 11. Poggi (1978), pp. 17-21, Ganshoff (1952), pp. 5-6. In early German kingship 'the king belongs to the people without the people 'belonging' to the king': Mitteis, (1975), p. 31.
7. Ganshoff (1952), p. 16, Myers (1982), p. 150.
8. Ganshoff (1952), p. 96, defines the fief as 'a tenement granted freely by a lord to his vassal in order to procure the latter the maintenance which was his due and to provide him with the means of furnishing his land with the services required by his contract of vassalage'. The fief referred originally to movable property, particularly cattle, Bloch (1965), vol.1, p. 165. Vassals could also be maintained by making them members of the household, a process which became progressively less important. Frequently vassalage would be instigated 'from below', by a free gift of land to the lord who subsequently granted it back to his vassal as a benefice. This was the method through which the church brought itself under the protection of powerful patrons. Ibid., pp. 166-75.
9. Ibid., p. 228.
10. Ibid., p. 232. From another point of view of course he was 'absorbed' into the personality of his superior.
11. Quoted in Bloch, (1965), vol.1, p. 233.
12. Ibid., p. 233.
13. Fourquin (1976).
14. Myers (1982), p. 156.
15. Bloch (1965), vol.1, p. 148. This was of course an ideal. Painter (1961), p. 7, argues that, 'as a political system pure feudalism was little removed from anarchy', its ruling warrior class was 'turbulent, savage, and utterly undisciplined'.

16. Bloch (1965), vol.1, p. 147.

17. Fourquin (1976), pp. 35-8. For examples see Coulton (1927), vol.2, pp. 35-6, Knowles and Obolensky (1972), pp. 32-56. The priest, indeed, 'could be regarded as a feudal dependent, and his office as a gift or a reward (beneficium), *ibid.*, p. 53.

18. Bloch (1965), vol.1, p. 251.

19. *Ibid.*, p. 272.

20. Weber (1978), vol.1, p. 257, remarks that 'the ideal extent of feudal authority has never been effectively carried out in practice or remained effective on a permanent basis'. Even Bloch (1965), vol.1, p. 173, admits that it 'was never a perfect system'.

21. Mitteis (1975), p. 11-13. Myers (1982), p. 160: 'In practice, a king in the feudal period either had to lead his armies himself, or personally see to it that they were well commanded. It is no accident that many of the most successful feudal monarchs, regardless of the century or country, were experts in contemporary military tactics and strategy'.

22. Petit-Dutaillis (1936), p. 17. Myers (1982), p. 156: 'The royal demesne was the aggregate of territories in which the king exercised on his own behalf the privilege of baron, or independent lord, and of justice; this last was the most important for it offered him an opportunity for constant intervention, and endowed him with a reality of power'.

23. Weber (1978), vol.1, pp. 246-9, vol.2, pp. 1121-23, 1141-2. Ullman (1961), pp. 117-27. Mitteis (1975), p. 71: 'It was a medieval commonplace that each must recognise obligation to some higher authority; every form of human society was viewed as overshadowed by transcendental mysteries. Therefore the function of the state was also conceived in religious terms; its ruler was anointed by the Church'.

24. Kantorowicz (1957), p. 44: 'Not only the bishop, but also the king appeared as a persona mixta'.

25. *Ibid.*, p. 44.

26. *Ibid.*, p. 48, quoting an anonymous Norman tract. See also Ullman (1961), p. 121: 'Power came "from above" and was transmitted downwards through an act of concession'.

27. Ullman (1961), argues that the original theocratic element was gradually overtaken by legalism.

28. Knowles and Obolensky (1972), Southern (1970), p. 38.

102-27. The Gregorian reforms, Southern claims, created a 'machinery of government as effective as any government could be before the late nineteenth century', *ibid.*, p. 121.

29. Adalberon (d. 1030), Poème au roi Robert, quoted in Fourquin (1976), p. 77.

30. Duby (1977), pp. 90-1. The major distinctions were: a) Monks, clergy, laity - three steps towards perfection on the basis of sexual purity - virgines, continenti, conjugati. b) Free and unfree. c) Oratores - aid to sovereign through prayer - bellatores - aid through arms. d) The 'powerful' and the 'poor'. Duby (1980) makes clear the intimate connection between the revival of the 'three orders' view of society and the development of a new ideology of knighthood.

31. These relations were always personal, Southern (1970), p. 110, quotes the Archbishop of Vienne in 1119, 'Wherever I went there was almost no one of note who was not my nephew, or cousin, or neighbour, or vassal'.

32. Coulton (1923), pp. 67-77, Boase (1972), pp. 19-30. Emerson (1981) explores the eschatological imagery. But compare Ariès (1983), pp. 97-9, who suggests the image of the second coming was as significant as that of the last judgment.

33. Time spent in prayer and penance was time lost to military training and service. The church sometimes imposed 'unrealistic' penances (such as the forty days for each person killed in the battle of Hastings), to encourage the knight to discharge them through grants of land and other endowments.

34. Coulton (1923), vol.1, p. 93, Ariès (1983), p. 183.

35. Southern (1970), pp. 29-31, Brooke and Brooke (1984), pp. 15-37.

36. Le Goff (1980), Landes (1983), p. 60-6.

37. Hilton (1975), p. 47, Murray (1978), pp. 50-60.

38. For an authoritative summary see Wallac's 'Appendix' to Aquinas (1963), vol.10. This was a hierarchy of virtue as well as position. Even as unconventional a thinker as Roger Bacon did not hesitate to argue from one to the other: 'But it is not natural that a nobler body is contained by a less noble body, and the orb of Mars is less noble than the Sun's orb; it cannot therefore contain the Sun's orb': quoted in Duhem (1985), p. 147.

39. Bede's spheres were ; earth, air, ether, Olympian fire, the stellar sphere, heaven of the angels, heaven of the Trinity. Gurevich (1985), p. 71.

40. Complications arose particularly in relation to the movement of the planets. Their perfection demanded they circle the cosmic centre in a regular manner, yet, from the centre their orbits appeared eccentric. Borrowing heavily from Arabic sources the 'feudalisation' of the cosmos consisted in introducing additional intermediary 'spheres' appropriately 'geared' to achieve the required result. Taton ed. (1963), Gurevich (1985), pp. 71-2, Nebelsick (1985), pp. 121-6. The 'standard' later medieval text was Sacrobosco, see Thorndike (1949).

41. Lovejoy (1960), pp. 61-4, Yates (1982), pp. 78-9, Haren (1985), pp. 72-81, Klibansky (1982), Marenbon (1983), pp. 43-80.

42. Le Goff (1964), p. 405, Nature was a, 'great reservoir of symbols'. Not only was the material world saturated with symbols, it was materially 'dense'. God's beneficence being unlimited all that could exist, did exist. Lovejoy (1960), pp. 52, 68-77. There were no 'gaps' in creation, 'nature does not make (animal) kinds separate without making something intermediate between them', Albertus Magnus, quoted, *ibid.*, p. 79.

43. Duhem (1985), pp. 139-268, Koyré, pp. 1-38.

44. Lovejoy (1960), pp. 68-77. 'There were no empty places, no gaps; nothing was superfluous or unnecessary', quoted in Gurevich (1985), p. 69.

45. Gilson (1936), p. 129.

46. Higher beings, by implication, could be trusted always to choose 'correctly'. On the possibility of man being thus created see Mackie (1982), pp. 162-66.

47. Nebelsick (1985), p. 92.

48. Gurevich (1985), p. 73.

49. Particularly evident in the knightly quest. And further justifying the seclusion of the monastery as a place set apart.

50. Mâle (1958), p. 390.

51. Gurevich (1985), p. 56.

52. Quoted *ibid.*, p. 61.

53. *Ibid.*, p. 59. Gurevich however fails to distinguish between identification and analogy: 'In the universe man saw the same forces at work as he was aware of in himself. No clear boundaries separated man from the world': *ibid.*, p. 56. It could be countered, as in the case of Lévy-Bruhl, that it is only because a clear distinction between

the two has been drawn that a metaphorical relation can be established between them.

54. Mâle (1958), p. 133: 'God who sees all things under the aspect of eternity willed that the Old and New Testaments should form a complete and harmonious whole; the Old is but the adumbration of the New.'

55. For a detailed examination of a Hexameral text see Steneck (1976), and Stock (1972)

56. Le Goff. (1980), p. 23-35. Special difficulties over usury which could be viewed as 'selling' time which, ultimately, belonged to God, Gurevich (1985), p. 141.

57. Ibid, p. 125.

58. Le Goff (1964), p. 406: 'Lapidaries, floraires, bestiaires ou sont catelogués et explique ces symboles accupent une place de choise dans la bibliothèque ideale du Moyen Age'. Though Mâle (1958), pp. 48-50, criticises the 'mania' for symbolic interpretation and prefers to see in the overabundance of decorative detail the freedom of the sculptor, 'looking at the world with the wondering eye of the child', ibid, p. 51. Yet even Villard de Honnecourt's sketches, widely admired today for their realistic detail, are conceived as part of a purely symbolic order, see Lassus (1968), particularly pp. 63-4, Bowie (1959).

59. Knowles and Obolensky (1972), p. 91: 'the hierarchical arrangement of these decorations combined to produce a symbolic image of the cosmos'.

60. Mâle (1958), p. 139.

61. Ibid. p. 29.

62. Le Goff (1980), p. 238.

63. Distinctions more commonly expressed in the typology outlined above.

64. Southern (1970), p. 92: 'Documents were therefore drawn up in which the theories of the present were represented as the facts of the past'. Also Gurevich (1985), pp. 177-8.

65. Ibid. (1985), p. 175.

66. Le Goff (1980), pp. 230-68. See also Duby (1977), (1980).

67. Le Goff. (1980), p. 241.

68. Ibid., pp. 245-6.

69. Ibid. pp. 282-6.

70. Ibid., pp. 242-3. Perella (1969), pp. 12-13, 15-20.
71. Duby (1977), pp. 175-80.
72. This view was expressed with particular force by Saint Anselm, but was common to the later Scholastic tradition. See particularly Evans (1978), pp. 13-38. Gilson (1950), pp. 229-47.
73. Anselm (1974), vol.1, p. 5. The later orthodoxy of Aquinas did not subordinate human reason quite so rigorously to an act of faith. See Gilson (1924), pp. 17-33.
74. Though, as Male points out, 'all medieval art was didactic', and the distinction between intellect and sentiment was far from clear.
75. Anselm (1974), vol.1, p. 5.
76. Ibid, p. 6.
77. Ibid., p. 6.
78. Gilson (1936), p. 55: 'He is perfect because He is' was the foundation of Christian philosophy, as opposed to the Platonic formula, 'He is because He is perfect'. The perfection of the Christian God, 'is that perfection which is proper to being as being'.
79. Anselm (1974), vol.1, p. 7.
80. Ibid., p. 9.
81. Ibid., p. 17.
82. The ontological argument has, after a long period of neglect, again found favour with some philosophers. See Hartshorne (1962), Plantinga (1974), Mackie (1982). Anselm's contemporaries, it seems, were more impressed by his systematic derivation of God's attributes than by the ontological 'proof' itself. See Eadmer (1962), p. 29.
83. Anselm (1974), vol.1, p. 93.
84. Gilson (1950), p. 68: 'all save God might possibly not exist', and this 'radical contingency stamps the world with a character of metaphysical novelty of immense significance'. For the challenge of Judaism see Evans (1980), pp. 34-41.

FIVE

RELEASE

The social hierarchy of feudalism was just one imperfect symbol of the real distribution of divinely ordered essences; an enclosed and completed cosmic structure. Creation was a 'downward' movement in which everything which existed potentially came actually to occupy its specific place in the universe.¹ 'Mirroring' God's nature, man's soul (though not his body, which remained rooted in its earthly place) aspired to the reverse movement ascending the ladder of being to unite with its Creator.² It is the very fixity of material things which allows human subjectivity, - in overcoming the body, which is the resisting medium to its own symbolic actuality - to rise above itself. Transcendence is the real goal of life constrained by feudal relations.

The fixity of the empirical world is its greatest illusion; each frozen essence in fact is just another step towards an ultimate release. Within the framework of

feudal-christian categories such a possibility was entertained as something more than a distant vision of salvation. The mystical fervour of the Platonic Tradition was resisted by many, but even the supreme rationalist, Thomas Aquinas, recognised its inspiring appeal and responded to it. 'In the hierarchy of being men cannot surpass the angels, who by nature are of a higher order' - he reasonably points out - but immediately adds, 'Yet man can pass beyond them in his knowing, as when he understands there is a being above them who can make him blessed and when quite possessed will give him complete bliss'.³ It is this intellectual ascent which is man's true end and only source of authentic happiness. It is the 'perfection of the soul on the part of the mind which transcends the organs of the body.'⁴ In the Angelic Doctor's view, however, corporeality cannot simply be ignored as any such act of transcendence requires bodily perfection, 'so as not to encumber the mind's ascent'.⁵

The 'proofs' of God's existence favoured by Aquinas, therefore, took the form of just such an intellectual 'ascent' towards a point of conceptual dissolution. In the five 'ways to God' rational arguments released the mind's inherent tendency to reach beyond what was immediately present to it.⁶ Each proof is a different path which the intellect can trace back to its source. The most direct route was the inverse of that sequence of 'movements' through which observable things came to be as they are.

However 'fixed' empirical reality appears it is in fact the outcome of a movement from 'potency' to 'act'. And as a thing can only make this transition by the agency of something already actual, the mind can fasten upon this agency as its 'cause'. The agency, as an actuality, must have itself made the transition from potency. The mind is irresistibly drawn 'backwards' from act to potency to agency to antecedent act and so on. This sequence can terminate only in an 'unmoved mover'; a being which exists as pure actuality.'

The greater privilege afforded the intellect by Aquinas compared to earlier scholastic writers is more apparent than real. He has not really left the world of Anselm's Monologion. The only reason the intellect could surpass what was given to the senses lay in the mind's form as a 'mirror' of creation. Though expressing himself dissatisfied with Anselm's ontological proof, Aquinas's 'cosmological' proofs of God's existence share the same assumptions. Gilson puts it clearly: 'Our thought would never suffice to infer Him, unless the reality with which we are linked, constituted in its hierarchic and analogical structure, a sort of ladder leading us up to God.'^a

The image of a ladder, or a tree, as a 'figure' linking the created world, human reason and the hierarchy of essences, was commonplace amongst scholastic writers. It was favoured not only by the orthodox but by such

diverse figures as Ramon Llull and Bernard Silvestris.⁹ Indeed, this 'spiritualisation of the world went far beyond the Church and the strictly religious sphere.'¹⁰ Even expressed in very general terms, however, the rationalist's way to God tended to exclusiveness. A certain kind of dialectical facility, and a rigorous training in the trivium and quadrivium was its precondition.¹¹ Yet the promise of salvation was general, possibly universal, and however the final 'release' from the constraint of actuality was conceived its possibility could not be made dependent upon a 'correct' argument alone. The authoritative Summae of Albert the Great, Aquinas and Bonaventure were part of, and responses to, the enormous impact of Aristotelian philosophy during the late twelfth and throughout the thirteenth centuries.¹² Within the church however, and outside it, the telos of human happiness was integrated with the immediate experience of feudal relations in a variety of other ways.

Love

New monastic institutions, reform movements and experiments, beginning with Cluny in 909 and culminating with the foundation of the Franciscan and Dominican Orders in the early thirteenth century, were intent above all upon the discovery of happiness. The longing for transcendence was the fundamental spiritual value pursued in a prodigious

variety of practical, organisational and liturgical innovations.¹³ And, as with most radical departures, such movements appealed directly to the source of inspiration claimed by the corrupted institutions they sought to transform. Each fresh wave of monastic renewal conceived itself as more thoroughly imbued than the last with the original genius of St. Benedict's Rule.¹⁴ Cluny's exceptional freedom from local jurisdiction was secured specifically to ensure that its monks might, '(serve) God without interference, according to the rule of St. Benedict'.¹⁵ A claim to independence emulated by all its successors.

'This little rule for beginners', had in fact been framed in a spirit of generosity and compromise. It made provision for a sheltered way of life in a self-contained and self-sufficient community whose members adhered to a common life prescribed in a specific order of the day varied according to the season.¹⁶ Periods of liturgical prayer, spiritual reading and manual work regulated the outward forms of the collective life in such a way that each might aspire inwardly to, 'that perfect love of God which casts out all fear'.¹⁷ It appealed directly to those with serious rather than fanatical spiritual ambitions. Its deliberate avoidance of rigour, its reliance on the wisdom of abbatial guidance, its discretion, all conspired to allow, if it did not encourage, the growth of physical ease and moral indiscipline.

Cluny, in re-establishing the Rule, like many of the foundations that were to follow, exaggerated its precision and altered the balance of its practical guidance. It sought new standards of magnificence and splendour in its observance of the daily offices. All the monk's activities should be carried out in a spirit of worship, so at Cluny everything was subordinated to the demands of an exhausting liturgical cycle. In this it followed but soon surpassed a general trend.¹⁸ Its extraordinary success was made visible in the richness of its ornamentation, in the continuous enlargements and refinement of its buildings, in the conspicuous display of its furnishings and decoration. The very sumptuousness of the setting seemed to demand continuous devotion. Hugh's great basilica, its proportion and elevation controlled by a precise harmonics, echoed to a continuous round of chanting and song, and sustained more completely than any of its rivals the aura of sanctity.¹⁹

As a result, the day (and most of the night) became clogged with ritual. Anselm indeed deliberately chose Bec in preference to Cluny so that he might be allowed sufficient time for study and reading.²⁰ Manual labour, not surprisingly, figured even less prominently in the daily round.²¹

The devotion of the monk remained a service to the community; he existed for others. But at Cluny, earlier

and more clearly than elsewhere, the monk's way of life took on a purely personal value. To be utterly consumed by worship, his entire being taken up and ordered according to the relentless liturgical timetable, was a certain means of overcoming the resistance of pride or worldly interests to the acceptance of God's love. The privilege of the monastery was nothing less than a more intimate experience than could possibly be the case for those beyond its sanctuary of God's transcending reality.

The monastic ideal sanctified obedience. Strict subordination under a rule, whatever its content, was the preliminary act of renunciation essential to a proper deepening of religious experience. It was disobedience therefore that was the prime target of the reform movements. Beginning in North Italy and spreading rapidly throughout Europe more ascetic and more authoritarian versions of the Rule were progressively embraced, less as an instrument of communal organisation than as a proven technique of self annihilation.²² Thus, a century after its foundation, Cluny itself became an object of reforming zeal. Its very success became a handicap to the realisation of its deeper purpose. Its openness, particularly its willingness to accept new adult members, allowed its rapid expansion.²³ New members brought with them grants of land encumbered by feudal obligations, and the habit of accepting gifts in advance so that landowners might end their days in the monastery drew Cluny into the same

worldly network as the unreformed Benedictines.²⁴

The foundation of Cîteaux at the end of the eleventh century provided a somewhat different model of monastic reform. Making a more decisive break with Benedictine tradition the new order of Cistercians established houses in 'wild' and hitherto marginal or even uninhabited places. Grants of land were only accepted indeed if they were of an uncultivated and inhospitable nature.²⁵ This physical isolation was part of the simplicity and modesty espoused by their order. The rigour of their discipline, rather than the arduousness of their adopted rule, attracted many and quickly established their ascendancy among the reformed orders. The internal organisation of each house was not simply placed in the hands of an appointed abbot. A complex organisational structure of chapters and visitations ensured the centralised control of every aspect of communal life and maintained a uniformity of practice that was unmatched by any other social organisation (ecclesiastical or secular) of the period.²⁶

The success of the Cistercians, as measured by their growth in numbers at least, was phenomenal.²⁷ And once again brought its own difficulties. To support themselves in poverty the Cistercians had to clear large areas of land which, even then, were of little use other than for grazing sheep. Large tracts of such 'worthless' land were developed into granges, worked by lay brethren (conversi).

They became in other words the most 'progressive' and innovative of agriculturists. It was difficult to sustain a genuinely primitive vocation in the face of growing wealth from the sheep trade. Their reluctance to use their riches in conspicuous liturgical display led them inadvertently to 'invest' in further land improvement that subsequently increased their wealth to embarrassing levels.²⁸

Economic security encouraged a growing emphasis on study and learning. Cistercian leaders in the century following the foundation of Cîteaux produced the finest psychological works of the feudal period. Where the developing scholastic logic of the schools confronted the task of integrating Aristotelian naturalism with religious orthodoxy, the Cistercian psychology sought a more perfect synthesis of Christian and Platonic traditions. 'Reason' for St. Bernard, or William of St. Thierry could never move itself beyond the purely intellectual sphere. Logic and dialectic might 'prove' God's existence but in doing so would not bring Him any closer. Intellectual understanding is insufficient, 'there is nothing human in its operation'.²⁹ The real task is not to determine an abstract agreement between faith and reason, but to unite the human and divine soul in caritas.

Love more certainly than knowledge lifts man upward in the scale of being. Knowledge is more properly viewed as

one aspect of the relation termed love. Knowledge is founded upon a 'connaturalness' of subject and object. In knowing something our mind shapes itself to the object it apprehends. Now as 'the soul's sense is love' our love of God, in 'contemplating' its proper object transforms man's inner nature and lifts him towards perfection. The 'affections' conform the soul to the objects of its love.³⁰ We must therefore learn to love God. Such a love cannot originate in the human heart. The ascending ladder of being stops infinitely short of God's self-sufficient nature. Man's human self-improvement cannot by itself reach Him, and more than unaided reason can fully expose the inner necessity of faith. Authentic caritas, which is really the human form of faith, must originate with God; 'you have given me desire for yourself', remarks William in a formulation reminiscent of Anselm's Cur Deus Homo.³¹ For no discernible 'reason', God in his infinite goodness has provided man with a means by which He might be approached. Love, when it is unconditionally offered to its proper object, bridges the abyss of transcendence. The problem of love is to arouse its passion in such a way as to avoid consuming itself upon anything less than God. Since, 'it is God himself who loves himself in us',³² the human subject need only learn to abandon itself to this inner movement to be saved.

The Cistercian's stricter ascetecism as a prelude to personal ecstasy was far more demanding than external

observance. In its initial stage the monk had to learn to put away, 'all stirrings after worldly honours and delights and pleasures, and everything else that can and often does, arouse in me the lust of the flesh, or of the eyes, or that stirs up in me a wrong ambition'.³³ It is less the resisting flesh however, so much as the more subtle and deceptive spiritual obstacle of pride that traps many into superficial obedience. It is useless to love God only for ourselves. Yet in loving God for Himself, we must also love ourselves. Caritas links the two and transforms us inwardly.³⁴ Its proper development requires the constant vigilance of a, 'vehement and well-ordered will'.³⁵ It is the practice of authentic self-denial, in which the 'soul' is emptied of every secular tendency, that allows the spontaneous growth of spiritual love. God expands within the soul and lifts the truly devoted 'beyond themselves'.

Love's ascending movement is rarely consummated. The terrifying experience of infinite love is not simple enjoyment (which distracts the soul into its own particularities), but a willed helplessness in the face of God's agape. As 'everyone possesses you just insofar as he loves you', the path of spiritual love becomes a torment of frustration and disappointment.³⁶ The least inclination to a genuinely spiritual life reveals the recalcitrance of a will holding back from the extremity of a genuinely unconditional acceptance of love's transcending reality. Its telos is known and accepted intellectually. The

knowledge that 'only those who love you truly are truly and uniquely and singularly happy, and that they are perfectly happy, who love you truly and perfectly',³⁷ did not make the unreserved acceptance of God's 'wounding affection' any easier. Even amongst the sincerely devoted, progress in spiritual love was painfully slow and uncertain: 'You do indeed send me at times as it were mouthfuls of consolation', admits William, but cannot restrain the impertinent reproach, 'but what is that for hunger such as mine?'³⁸

The Cistercian path back to God, in principle open to all sincerely professing the faith, in practice became just as exclusive as the way of reason. Bernard of Clairvaux, its most illustrious exponent, makes clear in his Steps in Humility that rigorous subordination to the Rule is only a preparation for the arduous spiritual exercise the devoted voluntarily take upon themselves.³⁹ 'Contempt of your own excellence', is Bernard's paradoxical commandment and he never tires of invoking it against disguised and perverted forms of pride.⁴⁰ Time and again he exposes the dialectical subtlety of self-abandonment. In willing the destruction of the will those advanced in spiritual love could find their pride taking root again in acts of self-mortification. Ascetic zeal is as dangerous as secular distraction to the pursuit of humility. Learning and good works could similarly trap the unwary and offer a hiding place to the hard pressed ego.⁴¹

To gain knowledge of God was to see him 'face to face', a possibility that demanded an absolute surrender in the face of his overwhelming reality.⁴² Resignation, paradoxically, was the only effective means of spiritual advancement. And resignation, to be sincere, could not become a 'rational' means of such advancement but must itself flow spontaneously from inner faith.

The Cistercian retreat from the world and their subsequent economic and administrative innovations might give the impression of an order that had in fact succeeded in extricating itself from feudal relations. This however would be far from the truth. Their doctrine of caritas was a profound realisation and purification of feudalism's central principle. Humility as a form of love was, like honour, an essence shared between superior and subordinate; an essence redistributed ritually to create a new person as 'the man of another man'. The monk in seeking to become 'a man of God' plunged into the absolute limit of feudal inequality and reciprocity.⁴³ He had nothing to 'offer' God but obedience, and as God's being was infinite, obedience was all that was required. And his only duty, consequently, was to accept his Lord's protection.⁴⁴

It is in this context also that the Franciscan profession of poverty should be viewed. To be entirely dependent on alms was a form of ascetic trial which

'tested' the faith of the believer. More than that, it was an open avowal of worthlessness. There is no sense here of a sentimental identification with 'the poor', or any desire for the performance of 'good works'. It was just because feudal society contained within its hierarchy degraded and worthless elements that the Franciscan could adopt poverty as a religious vocation.⁴⁵ Their experiment however, for a time unsettling to ecclesiastical authorities, was rapidly 'regularised' into a mendicant order.

The wholehearted devotion to typical monastic values, humility, surrender to the terrifying ordeal of God's love, transfigured the monk from being a spiritual functionary into a religious virtuoso on his own behalf. It was a potentially subversive individualism more than counteracted, however, by the peculiarly negative form in which it expressed itself. The monk sought an ultimate release. An ascent which, dispensing with the measured intellectual path of the cosmological argument, mounted beyond the ladder of existence to the direct apprehension of its first cause.

Valour

The questing knight is no less a spiritual figure than the monk. Allotted his fixed place in creation, he nonetheless sought, in realising his God-given nature, to

transcend its immediately given boundaries. His aim, just as the monk's, was the happiness that came in the moment of release from the order to which he had voluntarily submitted himself. His quest was for justice, honour and, above all, death.

The knight's route to eternity remained in spite of a vigorous 'Christianising' movement throughout the twelfth century something very different to the asceticism of the Rule.⁴⁶ He did not seek the liberation of his soul through the disciplined neglect of his body so much as, in 'testing' its physical powers he allowed himself to become a secular instrument of God's will. The knight's body expresses, as a direct and natural symbol, a perfection as pure in its own way as the monk's soul. He is not merely powerful and active; he is beautiful. Perceval, brought up in the 'wild' because his mother was afraid of losing him to some adventure, instantly recognised the physical superiority of the first knights he happened to see. His hyperbole, 'they are more beautiful, I think, than God and all his angels,' is in a sense quite justified.⁴⁷ Their physical being, incorporating and expressing the divine commandment of justice is more beautiful than the intellectual idea, or the purely inner and soulful likeness, of God. Cligés, the most secular of Chrétien de Troy's heroic characters is possessed of a physical perfection quite beyond the range of accidental variation, 'In him is nothing that can be mended'.⁴⁸ In addition to

stature, strength, proportion, there is a positively 'feminine' refinement: 'his hair seemed like fine gold, and his face a fresh-blown rose'.⁴⁹ The principle of plenitude, the cosmic fullness of being, has been poured into him; 'In framing him Nature was so lavish that she put everything into him at once, and gave whatever she could'.⁵⁰ A fullness that could not be due simply to nature, but rather was a token of a purpose that lay beyond it.

The true knight was 'fair' of feature; or, if false and corrupted, then 'coarse'. The moral distinction implicit in different physiognomies was more subtle and ambiguous here than among the holy orders. The monk should be emaciated, his whole body turned inward upon itself, cast down and worthless; or, if corrupted, fat, sleek and complacent.⁵¹ Among the chivalrous elite, some slight physical blemish becomes an incontrovertible symbol of moral imperfection.

Physical appearance, in other words, is not an isolated or accidental quality. It is part of a tightly knit complex of values; Cligés, for example, is described as, 'a brave knight, so handsome, so noble, and so loyal'.⁵² A list that might be extended but could just as well be condensed to a single term: a 'true' knight cannot be anything other than handsome, brave, loyal and noble. These are the essentials of knighthood, as humility is the

essence of the religious vocation.

That is not to say that all such characteristics spring spontaneously from the knight's being. He must, like the monk, undergo a rigorous training. His body must be developed and tested, its passions trained and controlled. He must learn the etiquette of the court as well as the conventions of the battleground. He must become as adept in the formalities of love, as in the techniques of combat. Ramon Llull, among his many works, produced around 1280 a small book on chivalry in which the range of knightly characteristics is precisely documented. The knight is chosen as one among a thousand, 'the most suitable, the most courageous, the most strong to sustain exertion, the most able to serve man'.⁵³ Intrinsic qualities which fit him, when they are properly developed, to the specific task of maintaining the secular order. His bearing and character therefore must be commanding, so that, 'by love he restore charity and instruction, and by fear he restore virtue and justice.'⁵⁴

It is these special qualities of character that justifies his position of privilege, 'so very high and so very noble in the order of chivalry... that it behooves also that the common people labour in the lands in order to bring forth fruit and goods whereof the knight and his beasts have their living'.⁵⁵ The functionalist view of society is clearly articulated by Llull; as the clerics,

'incline the people to devotion and a good life, in like manner the knights, by nobility of spirit and force of arms, maintain the order of chivalry'.⁵⁴

The 'order of chivalry' is as rigorous in its own fashion as St Benedict's rule. The youth who would become a knight must learn the arts of warfare and courtly behaviour, how, 'to carve at table, to serve and dub a knight'.⁵⁵ Hence the necessity of Llull's treatise which raises the training for knighthood to the same level of systematic preparation as that offered in the schools or monasteries. Personal association with and devotion to a 'master' remains the definitive 'path' to knighthood, but additionally it is necessary that, 'the science be written and the art be shown and read in such manner as other sciences are read'.⁵⁶

The knight is no more sustained by pleasure than is the monk. He is not ascetic, but his sensuousness, controlled and directed, is only a means to the accomplishment of a purpose beyond himself. The knight's 'natural' physical superiority expressed itself therefore in the virtues of the soul, in justice, wisdom, charity, loyalty, truth, humility and hope. ⁵⁷ Llull in fact 'deduces' these qualities of knighthood as an thirteenth century theologian might discourse upon the 'names' of God. They are part of his knightly nature, and his nature is part of an inescapable order realised through his actions.

We are once again within the orbit of the ontological proof.

Llull was lending intellectual weight to an ideological movement that was at its strongest in Northern and Western France from the mid-twelfth century. It was encouraged by ruling princes and kings as a means of developing, as a specific style of life, a defensive 'solidarity' among their vassals, thus making the ruling class more resistant to the subversive influences of the towns.⁴⁰ The association between knighthood and the clerical orders had already been made, with compelling eloquence, in Bernard of Clairvaux's fierce support of the Second Crusade. 'Surely', he claimed, 'it is an intrepid knight, protected on every side, who clothes his body with the armour of iron and his soul with the armour of faith'.⁴¹ The Cistercian leader could not however restrain his ascetic temper and leant his spiritual authority also to the foundation of the Knights of the Temple; a self-conscious and unsuccessful attempt to combine nobility and valour with monastic discipline, which Llull ignored in preference to Chrétien's more appealing image of the solitary questing knight.

The knight organised but did not live wholly within a community. His essential nature was revealed only when he ventured beyond his castle walls into the wild. He ought, immediately prior to the ceremony of dubbing, spend at

least one night in fasting and prayer during which he was not allowed to sit or lie down. This imitation of the monk's nocturnal vigil drew attention to the sacramental character of the quest, and begins a physical and moral process of 'testing'.⁴² The following morning he would hear a special sermon and celebrate a special mass distinguishing him from the rest of the faithful. Then he received his arms in an elaborate ceremony of benediction modelled on the bishop's consecration of the king's sword. Lull dwells on all the appurtenances of knighthood whose symbolic value are revealed by the ceremony. The sword, for example, is in the shape of a cross to show that, 'Our Lord God vanquished in the cross the death of the human lineage'. The spear signifies truth which is, 'a right and even thing'. The hauberk, being strong and closed on all sides, is, 'a castle and fortress against vices and faults', his spurs are diligence and swiftness'.⁴³

Thus equipped, the knight 'sets out without mission or office; he seeks adventure, that is, perilous encounters by which he can prove his mettle'.⁴⁴ In the forest he confronts nature in the wild, not so much to subdue as to test himself against it. But in 'saving' the innocent victims of chaos he imposes a temporary and localised order. Divine justice exudes from his every action, protecting him and those he takes into his care. His survival depends upon conformity with the prearranged harmony of courtly ethics. His only assistance comes in the

form of an occasional hermit. The knight redeems by direct contact, as it were, portions of nature man's freedom has spoiled.⁴⁵ He becomes God's distant sensing device, bringing into divine contemplation (and thus ordering), disordered parts of the world. Through him God can familiarise himself with sin, with the consequences of human wickedness, a process which itself, within the sphere of the knight's action, redeems the corrupted world. The knight's courage is not only the physical bravery of meeting and conquering the fear of his own death, but the deeper valour of allowing himself to become the meeting point of absolute good and evil. The knight does not follow the path of innocence, of retreat from wickedness. He must carry the divine creative spirit into the wild, risking his own soul in continually renewed adventure.

As an instrument rather than a vessel of God's love the knight's quest is never ending.⁴⁶ It becomes the very core of his being; 'trial through adventure', Auerbach insists, 'is the real meaning of the knight's ideal existence'.⁴⁷ A series of encounters which has no outward political or historical sense of direction and achieves no particular secular ambition. It is rather an inward drama through which the knightly virtues are gradually perfected. The knight's individual identity (the particular arrangement of his virtues), is not only retained but, through adventure, is enhanced. Unlike the monk who, to be ravished by God's love must become nothing, the knight, in

acting. retains all his particularity.

This dangerous individuality, so much at odds with the ideal order the knight represented, must be mastered. The knight, that is to say, must run the risk of love as well as face the danger of battle.⁶⁸ Erotic love can wreck the quest. As part of the wildness of unredeemed nature the knight must confront and conquer its disorderly challenge; 'Love is a thing that copies Nature', and is therefore apt to destroy the social hierarchy.⁶⁹ And just as he must embark upon adventures which cannot, even in principle, be brought to a conclusive denouement so he must love the unattainable. Courtly love plays with eroticism as the joust and tournament play with death. And it is no less in the game of love that the knight, 'learned to control his violence, to reduce it to order'.⁷⁰ His particularity must be disciplined and confined, his love alights upon his lord's wife and becomes slavish devotion. It is all the more intense for remaining unfulfilled. The helplessness of the knight in the face of his overwhelming love charges it with mystical power.⁷¹ Even the greatest knight, as the most zealous ascetic, may fail the test. Tristan and Lancelot were both close to perfection yet did not succeed in finally mastering themselves. True valour, as exclusive and demanding as genuine humility, offered no easier path to the sublime.

The knight's death is both the culmination of the

quest and the readjustment of the secular world to the disturbing shock of his individuality. His unruly passion, if it is eroticised beyond the spiritual affectus of service, loyalty and feudal subordination, must ultimately be extinguished. His death preserves his perfection; 'The death he inflicts is to the benefit of Christ; the death he receives is to his own benefit', declares St. Bernard with typical vigour.⁷² A view echoed in Llull's conviction that no act can, 'contribute to chivalry more than death'.⁷³

Cervantes, 'looking back on a tradition of romantic literature which had become anachronistic, began by parodying its empty mannerisms. But Don Quixote, as a true knight (his honour is more to him than reality itself), triumphs over his creator.⁷⁴ His passion, which is the knightly devotion to chivalric order, creates its own world in opposition to any mundane experience that might deny it. Yet there is more than a little of the Quixotic in his noble predecessors, the imitation is comic only because the world has ceased to believe in the transcending value of the quest. The knight, as the monk, had conquered death and lived uncaring of his own comfort because comfort was to accept the empirical world as the true reality. To go beyond this reality, to realise through a fixed but partial symbolic order the essential inner nature of being was his quest.

The privileged orders, s it were, confirmed the

ultimate values of feudalism only by going beyond the everyday world's copy of its perfect harmony. The fundamental justification of the social order was not so much that God had willed any particular, mundane relationships (He had not since man, fallen from grace, used his freedom on his own behalf), but that, imperfect as it was, it could not help but be constructed 'in the image and likeness' of divine order. Its gradations provided a stairway to the greater reality it sought to express. Converted into subjective 'steps' or projected into the world as virtuous 'deeds', the monk and the knight were carried beyond the social world. On the one hand, 'contemplation' and on the other 'action' transcended the constraints of time and place to reach the realm of pure being; the 'love' and 'valour' which was identified as happiness.

Sensuousness

What of the much greater number of unfree peasants absorbed without prior conceptualisation into the feudal hierarchy; the sublunary species, degraded, uncivilised and incapable of the refinement that existed as an aspect of the lord's benevolence? Can we find amongst them anything approaching a cosmology, a coherent view of their own world of experience? Nineteenth century historians and sociologists assumed not. Frazer had no hesitation in

including the European peasantry of his own day, let alone of the feudal period, in the same category of undeveloped culture as the primitive. 'Superstition' was the dull undertow of history from which only an educated elite had ever succeeded in shaking itself free.

In trying to describe the 'comportment' of the monk and the knight, however, a different way of 'reading' the symbolic value of experience is being invoked. A cosmology does not exist exclusively, even among the educated, as a theory or set of theories about the structure of the universe. Including such abstract reasoning, it refers much more generally to the organising principles implicit in everyday life. The European peasantry, existing in a condition of involuntary submission within the feudal hierarchy, developed an inarticulate cosmology profoundly at odds with either the Aristotelian Scholastic, or the Platonic monastic, versions of orthodox Christianity. Mikhail Bakhtin's important work in Rabelais has uncovered this neglected cosmology.⁷⁵ No longer immediately comprehensible, Bakhtin succeeds in demonstrating that Rabelais's imagery, his comic playfulness, his use of language, makes sense as the culmination of, 'a thousand year development of popular culture.'⁷⁶ A development which, as much as Christianity or Hellenism, adapted itself to the reality of feudalism. The fiction of Rabelais illuminates, as if from the inside, a world of popular festive forms: ritual spectacles created from comic verbal

composition and uncouth forms of speech in which were preserved something of the powerful syncretism of the carnival.

Every feudal ceremony: liturgical, civil, legal, initiations, oaths, everything solemnised by public rite and sacrament, had its comic counterpart. Parodies of prayers and psalms, uncrowning ceremonies, mock treatises (many themselves learned works), made outrageous fun of orthodox and authoritative opinion. All these counter-festivities, 'built a second world and a second life outside officialdom.'⁷⁷ A world neither religious nor magical which existing on, 'the borderline between art and life' is a, 'region of liberating ambiguity... which in reality is life itself, but shaped according to a certain pattern of play'.⁷⁸ This festive life, the Carnival Tradition, which is the people's 'second life', is subject to no regulation other than, 'the laws of its own freedom'.⁷⁹ And as in the case of the child's playworld, 'while Carnival lasts, there is no other life outside it'.⁸⁰

Carnival appears, from the outside, to have a certain inner logic, a meaning contained in its 'turnabout' and 'inside-out' gestural language. It seems to be a world constructed by simple inversion, a direct turning upon its head of the official feudal hierarchy. Ceremonies of uncrowning, processions in which the clown takes the place

of the bishop or king, feasts in which gluttony and indecency replace courtly etiquette, mock sermons in which the speaker imitates the sounds of an ass.⁸¹

Such reversals, however, were only the prelude to a more radical negation of officialdom. The established order was not merely parodied; its very existence was denied. There was a general suspension 'of all hierarchical rank, privileges, norms and prohibitions'. The Carnival was existence 'hostile to all that was immortalised and 'completed'.⁸²

Inversion is the Carnival's own special symbol which only later shrinks to express a secular political ideal. In the feudal period its meaning is unrestrained by any practical desire for a more perfect social order, or any covert appeal to a subversive concept of social justice.⁸³ The Carnival is complete in itself and need seek nothing 'beyond' its own sensuous fullness. A more profound reversal of conventional relations lay in its negation of the process of symbolic expression as such. Once established, Bakhtin insists, it is a world closed in upon itself: an exhaustive reality which criticises the more profoundly by its indifference to, than its caricaturing of, the official world.

The Carnival, in its inexhaustible aspect, can be represented to us who remain outside it (those within have

no need of representations), as grotesque realism. This is not intended by Bakhtin to denote a particular 'aesthetic' standpoint but rather to evoke the recollection of a 'primordial' mode of experience. 'The cosmic, social and bodily elements are given here as an indivisible whole'.⁸⁴ It is a 'grandiose and exaggerated' somatic process; a collective, cosmic body existing in a continuous state of flux. It is the 'body of the people', fecund and degenerate, playing host to the popular culture of the 'primary process'. The entire world of human experience is rendered into bodily forms. Every somatic function is exposed and celebrated, every internal organ torn from its place of official concealment. Its 'brimming-over abundance' is continually emphasised in feasting, polymorphously, to excess.

Grotesque realism has an immediately 'degrading' significance. All that is 'high, spiritual, ideal, abstract' is given fresh existence as part of the sensuous cycle of death and rebirth. 'Laughter degrades and materialises', it is a 'perverse' movement of sensuousness, in opposition to all forms of asceticism and its aetherial creatures, mystical love or theological abstraction.⁸⁵ It literally 'brings down to earth' all human pretensions to spiritual transcendence. It realises in its unrestrained sensuousness a quite different release from the petrified structure of the feudal hierarchy.

These bodily degradations arouse laughter, and it is as part of the history of laughter that Bakhtin views the popular culture of feudal society. Within the official world, 'that which is important and essential cannot be comical'.⁸⁶ And it was the developing 'seriousness' of officialdom, what might be called the feudal 'state', that forced laughter into its own, unofficial sphere. It was just because of this enforced separation and exclusiveness that laughter became, 'marked by exceptional radicalism, freedom and restlessness'.⁸⁷ Subsequently, during a brief hiatus in the transformation of official society, it once again became generally available, and it was in that period that Rabelais (and Cervantes, and Shakespeare), were able to exploit its protean imagery. Their works are filled with carnival gaiety that mocks the 'tone of icy petrified seriousness' proper to 'serious' writing.

If the Carnival was not simply an 'irrational' form of social protest originating among the lower orders, neither was it a cunningly devised 'safety-valve' through which, from time to time, the accumulated frustrations of the downtrodden could be harmlessly released.⁸⁸ They were genuinely 'popular' forms in which the privileged also participated. The more significant towns devoted three months of each year to such ceremonials, feasts, theatrical shows and public spectacles. They involved all the people and temporarily made them one. The 'feast of fools' was held at least once (more commonly three or four times!) a

year in most places. During this festival, 'grotesque degradations of various church rituals and symbols' were sanctioned. A justification of these rites was published by the Paris School of Theology in 1444, defending such practices, 'so that foolishness, which is our second nature and seems to be inherent in man, might freely spend itself at least once a year'.⁸⁹ Easter laughter (risus paschalis) and Christmas laughter similarly drew into their festive excess clerics, schoolmasters, lawyers and artisans. The theologian and the philosopher were equally impatient to celebrate the feast days so that they might be temporarily released from, 'the oppression of such gloomy categories as the "eternal", "absolute", "unchangeable"'.⁹⁰

The system of grotesque bodily images ensured 'the victory of laughter over fear'.⁹¹ Everything abstract and spiritual found itself somatically duplicated. The soul descended to the 'material bodily lower stratum'. The carnival body, unlike the monk's (skeletal) or the knight's (athletic) body was dominated by the belly, bowel and genitals. Neither a vessel nor an instrument, it dissolved into the unbounded metamorphoses of digestion, elimination and procreation. Through its somatic functions, the body continually over-reached its apparent boundary and devoured the earth. It died and was reborn. It remained perpetually unfinished, incomplete. The carnival face is reduced to a huge gaping mouth, 'the wide open bodily abyss', through which the world passes. It is a common,

collective body, 'a point of transition in a life eternally renewed'.⁹² Through it, hierarchy is transformed and denied. The carnival body, which, 'can fill the entire universe', engulfs the cosmos in 'sublunary' sensuousness, overwhelming God's fixed and abstract order with man's own generative powers.

The Carnival, then, does not oppose one ideology with another, one unofficial picture of the cosmos to the authoritative tradition of theological and philosophical reflection. It 'reduces' intellect to substance. In Bakhtin's wonderfully penetrating analysis Carnival is revealed as the continuation of the 'primary process', the persistence of fun in the midst of the cosmology of happiness.

Yet it cannot be the fun of the primary process; not quite. The paradisaical innocence of primordial experience can never be repeated. Fun cannot be planned; it is simply 'given'. The Carnival, however 'absorbing' to its participants, could not remain wholly unconscious of its relation to the official world of fixed and stable categories. Indeed, the Carnival can be viewed as a species of the comic only because it is the recollection of fun rather than the primary process itself. Laughter, as Freud clearly demonstrates, is a particular kind of nostalgia.⁹³ It is not fun, but fun's incommensurability with anything 'serious' that rouses laughter. Thus, the

Carnival is a huge joke at the expense of the official medieval worldview. And like any joke it can only partially succeed; in arousing laughter it lifts a veil upon the vanished world, only to let it fall again.

Just as in childhood play is gradually subverted by its dependence upon the adult world, so the Carnival cannot altogether forget its relation (albeit it one of negation) to orthodox cosmology. A process of rationalisation corrupts its liberated forms by assigning to them a purpose. In Switzerland, as early as the fourteenth century, the Carnival had acquired a much more restricted politico-religious significance.⁷⁴ And by the sixteenth century, quite generally it seems, it had become a focus of, rather than a release from, a whole range of social conflicts. At Romans, for example, Mardi Gras had become a 'secular' event with 'a twin purpose; pure and simple enjoyment, first of all, but social, political, municipal protest as well'.⁷⁵ Mock battles could and did become genuinely violent. As subversive street theatre it gained a completely new value, but, more importantly, in making 'enjoyment' its purpose, the Carnival ceased to profess the wholly absorbing ontological givenness that Bakhtin claims to be its original genius.

The body, transformed into intellect, or love, or valour could grasp, beyond its particular and definite order, the transcending reality of the cosmic hierarchy.

The asceticism of disciplined thought, humility or valour allowed the soul, in its longing for the ultimate release, to rise above all material symbols and discover happiness. The ways to God, however, were unending quests. Reason opened into the abyss of the cosmological argument, love struggled to escape from self-absorption, the chivalrous knight was tested to destruction. The telos of human existence, the reality which gave form to experience, was reached only in death. The Carnival's immediate and undemanding recollection of the playworld offered a different kind of release from the chain of being. It slid downwards, liberating the human into pure sensuousness. Human reality, however, could no more be wholly materialised than it could be infinitely spiritualised; it moved between the two, stretched into an order that remained distressingly incomplete and insurmountable.

A passionate longing for the infinite thus expressed itself differently among the different orders of feudal society.⁹⁶ These relations, of course, are for the most part imaginary. More often than not the knight was barbaric, the monk corrupt and the carnival a tawdry display of bad manners. Ideals of loyalty and friendship could scarcely conceal the exploitation and brutality of everyday life.⁹⁷ It is ideology we are dealing with, not history. It is above all bourgeois ideology that informs, by oblique comparison, the subject matter of so many discussions of 'feudalism'. The symbolic hierarchy, is a

'model' of order which bourgeois culture has discarded.

The more 'ideally' it is described the more absurd and contradictory it appears. In its insistence that the empirical world is no more than a 'figura' of reality, and in setting for itself goals which, in its own terms, were unattainable,⁹⁸ the present day commentator, by assigning them to the 'past', rids his contemporary culture of uncomfortable 'beliefs'.

Notes to Chapter Five

1. Lovejoy (1960), p. 69.
2. Ibid., p. 83: 'The one God was the goal of the "way up" of that ascending process'. See also Leclercq (1979), p. 51, Gilson (1924), p. 272.
3. Aquinas (1967), vol.10, p. 119.
4. Ibid., p. 105.
5. Ibid., p. 109. Note the implied criticism here of over zealous asceticism, a critical issue throughout the thirteenth century. Lambert (1961).
6. Gilson (1924), pp. 46-75, argues that the five 'ways to God' are really five versions of a single fundamental argument, and notes of this proof from the First Mover that it: 'displays its full significance only on the assumption of an hierarchically ordered universe', ibid., p. 58.
7. Aquinas (1911), vol.1, pp. 24-5, (1955), vol.1, p. 86-96.
8. Gilson (1924), p. 272. Gilson again brings out the feudal imagery central to Aquinas's argument: 'Precisely because every operation is the realisation of an essence and because every essence is a certain quantity of being and perfection, the universe presents itself to us as a society of superior and inferior beings in which the very definition of each essence places each directly into its proper rank within the degrees of this hierarchy'.
9. On Llull see particularly The Book of the Gentile, in Llull (1985), vol.1, Johnston (1987), pp. 158-9, and Yates (1982), pp. 9-77. On Silvestris see Dronke ed. (1978), Stock (1972), Curtius (1953), pp. 110-11.
10. Auerbach (1961), p. 20. He continues: 'It incorporated the wild, crude power of the heroic legends, turned the feudal syustem into a symbolic hierarchy, and transformed God into the supreme feudal overlord'. And as Curtius (1953), p. 52, points out, 'The Middle Aghes subjected profane authors to allegorical interpretation exactly as it did the Bible'.
11. The trivium (grammar, rhetoric, dialectic), was preparatory to the quadrivium (arithmetic, geometry, music, astronomy), together forming the seven liberal arts. Steenberghen (1966), p. 59.

12. Steenberghen (1966), Gilson (1955), pp. 277-94.
13. Knowles (1949), Lawrence (1984), Leclercq (1978), pp. 65-86, Cowdrey (1970), Knowles and Obolensky (1972), Lawrence (1984)
14. Benedict, ed. McCann (1960)
15. (Hunt (1967), p. 30.
16. Benedict (1960), p. 163. Though well regulated, the spirit of Benedictine monasticism was far from severe: 'we hope to ordain nothing that is harsh or burdensome', *ibid.*, p. 13. See particularly Butler (1919), pp. 35-45.
17. Hunt (1967), p. 31.
18. Its only serious rival was St. Denis, see Klibansky (1979). Its Abbot, Suger, like the Cluniacs conceived decorative magnificence to be spiritually uplifting. 'Thus, when - out of my delight in the beauty of the house of God - the loveliness of the many-coloured gems has called me away from external cares, and worthy meditation has induced me to reflect... then it seems to me I see myself dwelling, as it were, in some strange region of the universe which neither exists entirely in the slime of the earth nor entirely in the purity of Heaven; and that, by the grace of God, I can be transported from this inferior to that higher world in an anagogical manner': *ibid.*, pp. 63-65. A standard defence of opulence, see also Idung of Prüfening (1977), p. 42.
19. Hunt (1967), p. 111, remarks that, 'such building was, in a sense, a concrete expression of a certain theology'.
20. Southern (1966) notes additionally the importance of Lanfranc in making Bec the more attractive to Anselm.
21. Though manual labour had already been confined, by tradition, to domestic tasks, Knowles (1949), p. 466.
22. Southern (1970), pp. 220-70., Knowles (1949), pp. 191-226. Halinger, in Hunt ed. (1971), p. 45, in fact detects at Cluny 'the first traces of individualistic affective devotion'. A tendency that became increasingly evident in all the reform movements. Thus Knowles and Obolensky (1972), p. 194: 'The monk, from being primarily an intercessor for society and a discharger of liturgical services, had become an individual seeking the fulness of evangelical perfection'.
23. Cluny pioneered adult monastic recruitment, see Leclercq (1979), pp. 9-10, Cowdrey (1970), pp. 67-75, Hunt (1967), pp. 68-88. Peter the Venerable complained of indiscriminate recruitment: 'Yokels, children, old men and idiots have been taken in such numbers that they are now near to forming a majority', quoted in Hunt (1967), p. 87.

24. Butler (1919), p. 195. Hunt (1967), p. 43, notes that: 'the gradual accumulation of lands drew Cluny into a network of economic relationships which modified that overall independence of the monastery in secular matters which the founders had hoped to secure'.
25. Knowles (1949), p. 216. The fact that we now find their abandoned English sites 'picturesque' is a measure of changing aesthetic attitudes towards 'nature'.
26. Cowdrey (1970).
27. Knowles (1969), p. 93.
28. Donkin (1978), pp. 21-9, Knowles (1969), p. 24, Duby (1977), p. 4.
29. William of St. Thierry (1971), pp. 107-8: 'For although reason sends us to you, O God, it cannot of itself attain to you'. See generally, Vandenbroucke (1972), pp. 25-50, Leclercq (1978), pp. 65-86.
30. William of St. Thierry (1971), p. 106. 'For the soul's sense is love', and when love 'reaches out' it is 'transmuted into the object loved'. It does not become the 'same nature' as the object, 'but by its "affections" it is conformed to what it loves.' Cf. Déchanet (1972), p. 52.
31. William of St. Thierry (1971), p. 37. And as Bernard of Clairvaux (1940), p. 71, remarks: 'Just as faith leads to full knowledge, so desire leads to perfect love'.
32. William of St. Thierry (1971), p. 37. Ascent requires progress in the 'animal', the 'rational', and the 'spiritual' aspects of being. Perfection of the first is reached, 'when the habitual exercise of virtue becomes a pleasure': Ibid., (1971a), p. 27.
33. It draws on the traditions of both eros (seeking perfection), and agape (humility in the face of God's transcending love). Nygren (1953), pp. 609-58.
34. William of St. Thierry (1971), pp. 172-3: 'The steps that I set up for myself are three; first a great will is needed, then an enlightened will, and thirdly a will upon which love has laid its hand'.
35. Ibid., p. 56. 'My ardent longing wearies and grows shattered in the quest and from your heights I fall back to my depths', ibid., p. 145.
36. Ibid., p. 56.
37. Ibid., p. 104.
38. Modelled on Saint Benedict's Rule, Bernard (1940)

distinguishes twelve steps in humility, each defined by its opposition to a particular temptation. 'Curiosity ('the beginning of all sin'), Frivolity, Foolish Mirth, Boastfulness, Singularity ('zealous for himself, indifferent to the community'), Conceit, Audacity, Excusing Sin, Hypocritical Confession ('they condone their guilt by confessing it, they conceal it by revealing it'), Defiance, Freedom to Sin, Habitual Sinning'.

39. Ibid., p. 149. William's approach is more direct. There are two basic temptations, two 'weaknesses congealed in nature... the yearning of the Flesh and blasphemy of the Spirit': William of St. Thierry (1979), p. 36.

40. See for example Gilbert of Hoyland (1978), vol.1, pp. 27,135; Aelred of Rievaulx (1981), pp. 82-3.

41. See generally, Leclercq (1978), Hallier (1969), Bell (1984).

42. In this sense it was also a form of serfdom. 'It is for others to serve God, ot is for you to cling to him': William of St. Thierry (1971a), p. 14.

43. Obedience is man's principal labour Bernard of Clairvaux (1971), vol.2, p. xiv. Those seeking God 'must turn their eyes to the earth rather than up to heaven', ibid., p.17. Bernard is again invoking Benedict's Rule (1960), p. 7: 'That by the labour of obedience thou mayest return to him from whom thou hast strayed by disobedience'. In this connection it is worth noting the significance of the kiss in Cistercian spirituality. Their favourite text was The Song of Songs, which they expounded as an ontology of love in the sense of agape. See, for example, Gilbert of Hoyland (1978), (1979), Bernard of Clairvaux (1971), (1976), (1979), (1980), William of St. Thierry (1970). Dronke (1984), pp. 209-34, notes the secular significance of the text.

44. The friars should rejoice 'when they find themselves among mean and dispossessed persons, amongst the poor and weak and infirm and the lepers and those that beg in the street': quoted by Lambert (1961), p. 39. It is not so much poverty as worthlessness whjich is embraced, hence the Franciscan 'love of nature' is an identification with a degraded rather than an innocent category. See Little (1978).

45. Duby (1980), pp. 296-306, (1977), pp. 175-80.

46. Chrétien de Troyes (1982), p. 5.

47. Chrétien de Troyes (1966), p. 123.

48. Ibid., p. 75.

49. Ibid., p. 75.

50. William is to be taken literally: 'The more perfect charity becomes in us, the more necessary it becomes that the flesh be lessened until it (charity) be perfected there, where there is no yearning for anything but God'. William of St. Thierry (1979), p. 11.
51. Chrétien de Troyes (1966), p. 123.
52. Llull, in Herlihy (1970), p. 310.
53. Ibid., p. 310.
54. Ibid., p. 312.
55. Ibid., p. 312.
56. Ibid., p. 312.
57. Ibid., p. 312.
58. Ibid., p. 313, Duby (1980), p. 299.
59. Duby (1977), pp. 80, 181.
60. Bernard of Clairvaux, in Herlihy (1970), p. 290.
61. Duby (1980), p. 306: 'The forest... was the dominion of the wild, the untamed, the weird dangers that had to be faced alone'.
62. Llull, in Herlihy (1970), pp. 329-30.
63. Auerbach (1968), p. 133, Artin (1974).
64. Auerbach (1968), pp. 134-5.
65. The distinction is drawn from Weber (1964), pp. 325-6, (1965), pp. 166-83.
66. Auerbach (1968), p. 135, Artin (1974), p. 28.
67. Auerbach (1968), p. 140, 'Only two themes are considered worthy of a knight: feats of arms, and love'.
68. Andreas Capellanus (1959), Herlihy (1970), p. 44.
69. Duby (1980), p. 302.
70. Dronke (1968), p. 7. The ennobling power of courtly love 'lies in the cost to oneself, its beauty and value lie in the lover's giving all he has, in his enduring pain and sacrifice for love's sake, in looking constantly to a more-than-human love... without distraction, without calculation of success, even if necessary without hope of gaining his desire on earth'. See also Dronke (1986), p. 13.

71. Bernard of Clairvaux, in Herlihy (1970), p. 292.
72. Llull in Herlihy (1970), p. 318.
73. Schutz (1976), vol.2, pp. 135-58.
74. Sociologists have been slow to exploit the works of literary critics. The works of Bakhtin, Curtius and Auerbach are rich in valuable insights into the cultural categories of feudalism.
75. Bakhtin (1968).
76. Ibid., p. 6.
77. Ibid., p. 7.
78. Ibid., p. 7.
79. Ibid., p. 7.
80. For a detailed description see Ladurie (1981), pp. 190-91.
81. Bakhtin (1968), p. 10.
82. Millenarian and utopian social movements in the late middle ages existed independently of the carnival tradition. See Cohn (1970), Lambert (1979).
83. Bakhtin (1968), p. 19.
84. Ibid., p. 67. The 'grotesque body' is not regulated, as in the 'primary process', by a constancy principle; it is characterised above all by excess of appetite.
85. Ibid., p. 67.
86. Ibid., p. 71.
87. Davis (1975), pp. 97-100, for a discussion of these views in the context of a somewhat later period.
88. Bakhtin (1968), p. 88.
89. Ibid., p. 83.
90. Ibid., p. 90.
91. Ibid., p. 318.
92. Freud (1960), vol. 8, pp. 168-70.
93. Ladurie (1981), p. 289.
94. Ibid., p. 193.

95. Bernard of Clairvaux (1940), p. 225, remarks that, 'Only the highest and lowest fly without hindrance... In the former perfect love, in the latter consummate wickedness casteth out fear.

96. Huizinga (1965), pp. 9-29. Even as an ideal knighthood was only gradually 'spiritualised', a development notable in the works of Chrétien de Troyes, see Bednar (1974), p. 149.

97. Auerbach (1984), Dronke (1974), p. 38.

SIX

NATURE

The images of the mirror and the ladder characterise the symbolic reality of happiness and serve to distinguish it from the primordial givenness of fun. The cosmic body contains all possibilities within itself; cosmos and psyche are one and the same process of metamorphosis. The world of happiness, however, is divided between macrocosm and microcosm. And once divided it can be endlessly subdivided into an order of qualities. The world of inner experience (psyche) and the order of the universe (cosmos) are no longer identical. Neither are they 'empirical' categories describing different 'segments' of the world as it can be directly experienced. In their simultaneous dependence upon God's unconditional and unlimited beneficence they are the separate 'mirrors' of divine being. As such they are related analogically, so that man's unique privilege is, by virtue of qualities

inherent in his soul, to have the potential for knowledge both of the world and of divine things.

Such a view would seem to allow to nature no more than a superficial coherence. The various orders of the empirical world are related directly to the invisible essence which informs them rather than to each other. The longing for happiness, which is central to the bourgeois reconstruction of feudalism, gave to nature an insubstantial reality. It lacked the inner necessity of its own purely physical laws.

Nature existed, for the most part, as an intermediary between divine hierarchy (cosmos) and inner release (psyche). The questions it posed demanded interpretive rather than explanatory answers. The revival of the quadrivium (geometry, arithmetic, astronomy, music) as part of the liberal arts curriculum in thirteenth century Paris was defended, therefore, on the grounds of its utility as a preparation for the reception of revealed truth which was the subject of more advanced study, the trivium (rhetoric, dialectic, theology), and not for the light it might cast upon the natural world.¹ Within a universe of analogies, these 'mathematical arts' were essential intellectual tools, supremely 'useful' in a sense quite different to that espoused by earlier and later periods. Since the time of Boethius, the most practical of such arts was held, to be music.² It was, like arithmetic which it resembled in dealing with discontinuous

quantities, a system of pure relations. Deatched from the constraints of corporeality, musical harmonies were expressive of the deeper order of creation. And as this was an order which penetrated (imperfectly) the human form, music, like reflective thought and love, had therapeutic and 'elevating' powers. Every description of the mundane, physical world was bound up with the moral and aesthetic qualities of its local 'harmonic, order.'³

The meaning rather than the actuality of nature was the essential issue. The maintenance of ancient learning was, with some exceptions, the principal source of 'observation'.⁴ Compilations, abstracts with occasional glosses, and encyclopaedic collections of traditonal authorities were the basic materials of study, in theology and philosophy as much as in 'natural history'. Isidore of Seville's Etymologies, Pliny's Natural History, and increasingly the works of Aristotle were reproduced, rather than discussed, as intellectual models. But such collections did not in themselves constitute 'knowledge' of the natural world. Rather, they formed the materials with which the mind could synchronises its own inner harmonies, 'losing' itself in contemplative 'participation' in the world.

Nature, an aporetic entity, was nonetheless formed from its own set of secondary, physical relations. Physical things were bound together by a network of causes

which, formally analogous to the essential structure of the cosmos, could also be grasped separately and superficially as a material phenomenon. Beginning in the twelfth century, scholars influenced by Arabic commentaries on Greek philosophical and scientific works, as well as those speculating within the Platonic and Pythagorean tradition, approached nature in a new light.⁵ This constitutes a 'Renaissance' only in the most general sense of being a rebirth of scholarship and intellectual self-confidence; it did not anticipate in its values and precepts the Italian Renaissance, far less the Scientific Revolution.⁶ It was a development that lay wholly within the cosmology of happiness; its discoveries aroused rather than satisfied the longing for the 'real' knowledge that would come only from surpassing the sensible realm to claim the gifts of reason and love.

Historians, responding to the same dissolution of certainties we have noted in 'modern' treatments of the irrational, were not slow to invert an earlier orthodoxy. The medieval world, from being stigmatised as a confusion of symbols, steeped in ignorance and prejudice, was suddenly rediscovered as the intellectual source of all that was valuable in classical bourgeois thought.⁷ Medieval humanism and naturalism were, in consequence, thrown into a new prominence. More recent and detailed scholarly attention has revealed, however, the extent to which nature remained only a small part of the medieval

cosmos embedded in the larger structure of the feudal hierarchy.

Form

Nature may be only part of the cosmos, yet its existence betrays a material form distinct from, but replicative of the order of, other intelligible essences. Matter, properly speaking, could not exist other than formed into the coherence of nature. It is both a part and an emblem of the whole.

The *Cosmographia* of Bernard Silvestris offers a particularly vivid account of nature's original formation.⁸ Inspired by the *Timaeus* and the works of Erigena, the *Cosmographia* is 'a landmark of twelfth century humanism', which presents the process of creation through the interaction of a number of 'theophanies' or figures representing elemental cosmic powers.

Silva (also called Hyle), 'still a formless chaotic mass', holding 'the first beginning of things in their ancient state of confusion',¹⁰ approaches God complaining of the failure of Noys ('the consummate and profound reason of God'¹¹), to shape her in 'the image of a nobler form'.¹² Silva represents, that is to say, the chaotic substance from which all matter will be drawn. It is , 'intractable,

a formless chaos, a hostile coalescence, the motley appearance of being, a mass discordant with itself'.¹³ It contains, 'the original natures of things diffused through her vast womb'.¹⁴ As 'pure' substance, Silva is without extension, or location, or coherence born of inner necessity. As created being, however Silva is possessed of an unquenchable longing to 'return' to God; thus, 'yearning to emerge from her ancient confusion, she demands the shaping influence of number and bonds of harmony'.¹⁵ Creation is the materialisation of the order potential in its limitless turbulence: 'The elements come before you, demanding forms, qualities, and functions appropriate to their causal roles, and seek those stations to which they are almost spontaneously borne, drawn by a common sympathy.'¹⁶

Silva's demand is timely, coinciding with the divine impulse to order: 'I will produce a form for Silva'.¹⁷ Not an arbitrary arrangement but the realisation of a uniquely necessary order. Noys 'effected a balance of properties among her indisciplined and recalcitrant materials, joined them with means, and so bound them together in arithmetical proportion.'¹⁸

Hyle, 'once given definition by visible images of the ideal',¹⁹ abandons her ceaseless transformations. Under the continuing guidance of Endeuchia (the cosmic soul which exists 'by a sort of emanation), the elements are

separated and located in fixed relation to each other. Thus the 'totality of created life unfolds in ordered progression from the nurturing womb of Silva'.²⁰ Nature is the product of this second creation; it was 'from the intellectual universe the sensible universe was born', fashioned into a 'continuum, a chain in which nothing is out of order or broken off'.²¹ The cosmos extends itself spatially in an unbroken chain of causality. The plenitude of intelligible essences, Noys, fashions itself into a hierarchy, thus bringing into existence the physical manifestation of Nature. It is a hierarchy of 'real' powers and influences. The more perfect, quintessential, matter is placed 'above' degenerate forms whose cycles of generation and corruption it controls. Everything that can exist finds its appropriate place in the cosmos, including all future and past events: 'For that sequence of events which ages to come and the measure of time will wholly unfold has a prior existence in the stars'.²²

The substance of Nature, however, retains something of its original intractability; its 'wild and perverse quality cannot be perfectly refined away or transformed'.²³ It is only the continuous action of Endelechia that counteracts the tendency of created matter to return to a condition of incoherent sensuousness. The very form of Nature is the outcome of opposing tendencies; of the longing for 'perfect' form on the one hand, and the undertow of original substance, on the other. These tendencies are the

two fundamental images that have previously been isolated as fun. If Nature fully satisfied its longing for perfection it would become identical with Noys and its materiality would be 'volatilised' back into the thought of God. Equally, if it were to completely give way to the tug of Hyle, it would lose its material form in the chaos of pure sensuousness. Nature, like man (her microcosm), seeks release from the feudal order imposed upon her by the act of creation. Unable, however, to rediscover the absolute freedom of reason, or the infinite transformative power of the primary process, she fills out the cosmos with a fixed structure stretched taut between the two.

The creation of a cosmos turns the primordial experience of fun into an unattainable idea. Happiness is the concept or memory of fun; the unreachable telos of nature, and therefore of man. Empirical existence is an imperfect compromise, tending simultaneously to both the pure abstraction of reason (Noys) and the absolute concreteness of sensuousness (Silva). If either (and therefore both) extremity were actually attainable the cosmos would collapse upon itself and resume the untroubled playfulness of the cosmic body.

Silvestris, as if anticipating Freud (or rather Bachelard), psychoanalyses Nature and discovers its reality is the outcome of a process of 'inhibition' upon the primary process.²⁴ Nature is, first of all, a wish. It is

filled with the desire to transcend itself; the spontaneous inner movement which is the source also of the microcosmic order. Noys determines 'to complete the success and glory of my creation with man'.²⁵ A being marked by, 'the distinctive attribute of dignity'.²⁶ In man is concentrated the opposing tendencies of the cosmos: 'His body will issue from the depths of chaos and his spirit from the powers above'.²⁷ His nature is therefore Nature itself, the unique link between substance and intellect.

Alan of Lille, whose Plaint of Nature is the direct successor to the Cosmographia, expresses the same idea with particular clarity: man's nature was formed, 'according to the exemplar and likeness of the structure of the universe so that in him, as in a mirror of the universe itself, Nature's lineaments might be there to see... so in man there is found to be continued hostility between sensuousness and reason'.²⁸

The link between megacosmos, as Silvestris terms the superlunary universe, and microcosmos is more than analogical: 'The whole appearance of things in the subordinate universe conforms to the heavens... and it is shaped to whatever image the motion of the heavens imparts'.²⁹ The unity of nature is sustained in a double aspect, as intelligible spirit and as matter formed and shaped by Noys. The stars are quintessential but still natural beings, endowed with the capacity directly to

apprehend God's will, which they execute by means of nature's own necessity.³⁰ Physical forces, expressive of the divine idea of nature, flow inwards from the more exalted spheres of creation. As the central focus of celestial forces, the sublunary world becomes a much more significant place than was allowed within the traditional Christian cosmography.

Nature, however, was not to be understood exclusively in terms of such forces. The intelligibility of nature remained a form of divine reason operating through secondary causes. The 'humanism' of the twelfth and thirteenth centuries was, in this respect, strictly limited in its ambitions. It was less radical, for example, than the Arabic science which, in part, served as its inspiration. The heterodox astrology of al-Kindi, for example, was founded upon a belief in the direct power of the heavens upon the 'radiation of occult influences from the stars'.³¹ The binding forces of nature, that is to say, were held to be inherent in the substance of the universe itself. But for Silvestris, as much as for Anselm of William of St. Thierry, substance was not even material before it had received the imprint of divine wisdom. Nature's necessity remained for him the order of perfectly chosen symbols.

An apparently more 'naturalistic' account of the origins and structure of the universe was advanced by

Robert Grosseteste, Bishop of Lincoln. He identified the formative power by which 'first matter' was created with the physical reality of light:³² 'For light of its very nature diffuses itself in every direction in such a way that a point of light will produce instantaneously a sphere of light of any size whatsoever, unless some opaque object stands in the way'.³³ This is just the principle of self-generation required to account for the physical cosmos. The infinite expansion of lux acts upon the absolute simplicity of 'first matter', 'drawing it out along with itself into a mass the size of the material universe'.³⁴ In the very act of creation nature as it were oversteps itself, the pure actuality of the firmament contains nothing but 'first matter' and pure form. It is incapable of the internal differentiation of motion and cannot therefore affect our senses. This marks the boundary of the physical universe, its outermost, infinitely expanded limit.

Not all matter is expanded to the limit of its potentiality. Lux internally reflected as lumen is focused back upon the centre of creation. On its return journey it gathers matter into concentric spheres of uniform 'density'. The matter within these spheres still contains the potentiality for movement, but constrained by the absolutely expanded limit of the firmament all motion within them returns to itself upon an endlessly circular path. Matter confined to the central 'sublunary' region,

'is more corporeal and multiplied', and, being compressed and mixed, one element with another, beneath the lowest point of perfection, its movement is rectilinear. Heavy objects tend even more to take up a central position, while lighter ones seek a separate and more elevated position.³⁶

The hierarchy of nature, still ordered by qualitative differences, is here united, formally and physically, through the action of light, which is the unique connection or influence between heaven and earth, and the explanation of all earthly phenomena is found in its presence and action.³⁷ It is the absolute simplicity of light as a form-giving power that encourages a 'geometrical' approach to nature. Point, line, angle, proportion; the grammar of light is reducible to a few essential relations. The generality of such relations can be rediscovered over and over again at any point in the natural hierarchy of creation. And just as the physical universe expanded from a point, so we can rediscover its fullness in the merest speck of dust. The smallest particle, 'is a complete and inexhaustible treasury of all the primary mathematical constituents from which the whole universe is constructed'.³⁸

This view of light as a formative principle was certainly influential in the development of a sophisticated science of optics. But it was not, for Grosseteste, a matter of physical theory alone. Lux existed in ways quite

different to the physicality of light. His views are rather the culmination of a medieval tradition of the 'metaphysics of light', rather than the beginning of a modern science of optics.³⁹ Physical light is a symbol of spiritual light; the formal as well as the efficient cause of nature. Actuality was drawn out, held together and formed into a natural hierarchy by the integument of a divine light.

It was only one of light's qualities to act as a force, and even in this respect was never the bearer of a purely mechanical power. The influences and sympathies conducted from the centre of the universe to its circumference and back again were laden with purpose and meaning. In identifying a 'natural mechanism' for the expression of the divine will, Grosseteste, rather than establishing a domain of independent necessity, sought to implicate God more intimately in the operation of creation. It was therefore the identity of formal and efficient causality in light that placed the science of astrology on a sound basis. The relation between the heavens and the sublunary world is primarily, but not exclusively, analogical. Certainly it is not, as Arabic and Jewish writers had assumed, a matter of inherent necessity.⁴⁰ John of Salisbury, among others, objected to naturalistic astrological hypotheses: 'For they impose on things a certain fatal necessity under the guise of humility and reverence to God, fearing lest his intent

should perchance alter, if the outcome of things were not made necessary'.⁴¹

It was just because astrology was not a 'natural science' but part of the interpretive schema of the medieval worldview that it became so well developed. It thus played a central role in medical theory and practice. The microcosm of bodily humours were 'mixed' in much the same way of the earthly elements, and both were subject to an internal harmonics controlled by the distribution of the heavenly bodies.⁴² The balance of humours within individuals depended, therefore, on the state of the heavens at their birth, and no general diagnostic or therapeutic axioms could be applied without careful adaptation to the cosmic situation of the patient.⁴³ Health depends upon maintaining the original harmony between microcosm and macrocosm. Man falls ill because in exercising his inner freedom he offends against nature. Nature by itself would never suffer such irregularities. Albertus Magnus, the most learned naturalist of the thirteenth century points out that, 'there is in man a double spring of action, namely, nature and the will; and nature for its part is ruled by the stars, while the will is free'.⁴⁴

Albertus, who was also one of the most respected and authoritative of theologians,⁴⁵ held that such control could only be exercised by the descent of a real power

through the hierarchy of being. Light and other celestial 'virtues' impressed upon the sublunary world the pattern of divine things. Nature strove to conform to this pattern, just as man strove to return to God. The modelling forces of the cosmos could be enhanced and 'focused' by careful manipulation. At an appropriate time, a particular planetary conjunction, a particular house in the ascendant, an astronomical 'seal' or 'signature' could be traced on the smooth surface of a stone, or gem, or piece of metal. We are assured that, 'Marvels are worked by such images'⁴⁶; a force flowing into them is gathered and concentrated by the image. This 'natural magic' is not unlike William of St. Thierry's theory of love; the image is a part of corrupted nature so formed as to be receptive to the transforming power of superior celestial virtues. Nature, as well as man, could be redeemed if it were made ready to accept God's love. If ordered, its elements distinguished and formed into separate spheres, there would be no obstacle to the penetration of the most sublime cosmic forces. As it is, the materiality of nature only accidentally exists in a receptive mode, and divine illumination appears as an unpredictable 'marvel' of nature rather than as its inherent tendency.

The 'formative powers' of the heavens nonetheless operate continuously and to some effect. In The Book of Minerals Albertus describes the 'mineralising power' through which stones are formed.⁴⁷ Earth and water, when

confined together in an appropriate place are condensed into stone by the action of celestial virtues. It is the earth giving birth to itself, a relatively simple process because stones, like metals, are homeomeric substances, that is to say perfectly simple, uniform, and identical in 'occult' or inner qualities as in external accidents. And, being internally undifferentiated, stones and metals are less demanding of specific conditions of place or astral disposition.

Albertus thus admits the possibility of alchemical transmutation. Though an art practised by pagan philosophers, it exists also in a legitimate form: 'For whatever the elemental and celestial powers produce in natural vessels they also produce in artificial vessels, provided the artificial are formed just like the natural'.⁴⁸ The generation of metals can therefore be stimulated, albeit with difficulty, in the workshop. The practical difficulties, however, are immense. All metals are formed from stable mixtures of two fundamental substances: sulphur and quicksilver. Each resulting 'specific substance' is a metal with its own peculiar qualities, including 'affinities' with particular celestial virtues. Metals act as conductors, so to speak, of celestial virtues. Hence their importance as medicines, or as ligatures to be worn as protective devices. In association with favourable astrological circumstances, 'the elemental and celestial powers of the material',

captured in the process of its formation, are released, 'healing' affected organs in its vicinity.⁴⁹

Alchemist and doctor alike 'purify' the unhealthy mixtures of corrupted nature. In manufacturing and transmuting metals the alchemist is acting as a physician to the natural world, separating its elements and bringing them together in permitted combinations. The alchemist seeks an elixir which is a medicine that cleanses the womb of nature. Gold, as the purest of metals, is the form in which the metallic principle 'ought' to exist. There is nothing illicit in the artificial arrangements of sublimation, calcination, and distillation because 'nature itself performs the work, and not art, except as the instrument, aiding and hastening the process'.⁵⁰

Celestial virtues are contained also in particular plants and animals. The herbal and bestiary, therefore, as well as the lapidary, formed the corpus of popular scientific knowledge in medieval society.⁵¹ For many later commentators they have been interesting as examples of credulity and observational inaccuracy. From them it appears that medieval writers had no real interest in the natural world. Their purpose, however, was classificatory rather than naturalistic description. What mattered was the isolation of significant or salient 'features' of an animal or plant; in other words, their distinguishing features, not as members of a species so much as items in a

symbolic register. A particular animal is of interest not in terms of its 'horizontal' relations with other similar species, but with reference to the 'vertical' relations with the higher powers that shape it. If the blood of a camel, for example, 'be put into the skin of the beast called Stellio, which is like a lizard, having on his back spots like stars, and then set on any man's head, it shall seem that he is a giant, and that his head is in heaven'.⁵² The relation between camel and stellio, or both with man, is not interpreted then as part of a natural 'ecology' but as part of a system of cosmic symbolism.

If the created sublunary world could be disassembled and recombined in terms of essential proportions only, and each nature confined to its uniquely appropriate place within the overall design of the cosmos, then 'matter', in becoming perfectly formed, would cease to exist. It is its imperfections which give to the material world all its characteristic 'substance'. But nature, as much as man, constantly strives to go beyond itself; to realise its ideal form as order and thus escape the perpetual inner movement of generation and decay. It strives for a pure ideality, to conform itself perfectly to the macrocosm, and to allow itself to be shaped by divine celestial powers. Nature, no longer free to revel in the freedom of first matter, also longs for happiness. But it is a longing that cannot be satisfied; nature is fixed in its imperfections, stranded in a material realm between formless substance

(primary process) and insubstantial form (reason).

Flux

Nature, as the unfortunate realm of material existence is in a state of perpetual movement. It continually strives to overcome the violence inherent in its disorderly appearance, to actualise its form against the tendency of matter to revert to the carnival of pure substance. All movement is a quest to actualise the paradise of appropriately ordered places.

Substance and place are defined in terms of each other. The actuality of any object implies a particular spatial relation to the cosmic order as a whole. Space and time, in other words, can never be abstracted from the material, sublunary world and treated as 'empty' extension.⁵³ If everything were 'in its right place' there would be no motion, no generation or corruption, no 'material' life whatever. All forms of movement, as transitions from potency to act, are either 'violent' and disorderly, as when a heavy object is lifted clear of the ground, or 'natural', as when the same object is released and falls.⁵⁴ The latter movement is inherent in the order of nature itself. Thus, similarly, fire tends by its essence to rise above the air and assume its 'correct' position directly beneath the sphere of the moon; or air

released underwater will rise 'naturally' to the surface. The 'lightness' of air is an inherent quality and as such defines a specific place as well as particular 'physical characteristics' of a substance. The two are only conceptually distinct for us because, no longer living in a feudal society, we cannot immediately apprehend the world as a figurative order. Forced or 'violent' motion, on the other hand, is not an inherent tendency but requires the continuous application of a force external to the moving object.

As change of place implies the alteration of substance and the transformation of substance implies change of place, all 'movement' is simultaneously an 'intension' or 'remission' of sensible qualities. 'Mechanics', the science of physical change, deals with far more than simple physical systems or the 'laws of motion'. Changes in colour, and especially in temperature, were often regarded as paradigmatic of the 'physical transitions to be treated by a mechanics of qualities...'

The special case of 'local' motion, nonetheless raised some of the most intriguing and difficult problems. The development of kinematic ideas throughout the medieval period demonstrates a more precise, but no less feudal, conception of a natural order.

All 'mixed bodies' (containing some combination of the

four sublunary elements), could be moved from one place to another as a consequence of a motive force exceeding the resisting or restraining force offered by the inherent heaviness of the object and the plenum through which it moved.⁵⁶ This covered such obvious everyday cases as the turning of a waterwheel or windmill. An external force, the flow of water or air, was the motive force responsible for the rotation of the wheel, which continued just so long as this motive force was effective. This was no different in principle for sentient actions, where the motive force took the form of an intention or purpose within the soul of the acting creature, and its material reality offered its resistance to the immediate realisation of this conatus.⁵⁷

The interesting and more difficult cases involved projectiles. A ball could be thrown, or an arrow fired from a bow, resulting in an appreciable motion that was apparently independent of the initial, external, propelling force. Though creating obvious difficulties, the most popular accounts of such cases utilised the plenum as an intermediary motive force. In the most common instance, the air displaced by the forward movement of the projectile re-formed immediately behind it (thus preventing the formation of a vacuum), and by its agitation conveyed a continuing thrust to the moving object.⁵⁸ Rather obscurely, the initial violent force is gradually absorbed by the resisting medium, resulting, as the natural downward motion of the heavy body asserts itself, in a typical

decaying trajectory.

During the 'first feudal age' that is to say, local motion, including violent projectile motion, was held to depend upon the continuous application of an external force. Local social action, similarly, required the continuous application of a superior power. The activities of the manor depended entirely upon the presence, actual or symbolic, of its feudal superior.⁵⁹

During the later medieval period, however, in the new 'secular' and urban atmosphere of the schools that were developing somewhat apart from the traditional centres of feudal culture, a rather different analysis was proposed. These innovations, particularly those associated with Merton College and the University of Paris during the first half of the fourteenth century, so impressed Pierre Duhem that he effectively dated the scientific revolution from them.⁶⁰ Important as they were, however, they fit more easily the context of an 'advanced' feudal than an 'early' capitalist culture. The greater attention paid by these authors to secondary causes and the mathematical analysis of local motion did not yet take precedence over the transcendental goal of all knowledge.

The Oxford 'calculators', Thomas Bradwardine, William Heytesbury, Richard Swineshead and John Dumbleton, developed a new quantitative approach to the analysis of

local motion.⁴¹ This arose, nonetheless, from a traditional scholastic distinction between the intensity of a quality (for example, temperature or speed), and the quantity or magnitude of the same quality (correspondingly, heat or distance). There seemed an obvious and important distinction between the 'heat' in a given quantity of water at a particular temperature and that in a double or treble quantity at the same temperature. Similarly, 'speed' could be simplified to a measure of the 'instantaneous velocity' of a body at a given moment and should be distinguished from the 'magnitude' of the velocity sustained over a given period.⁴² The idea of 'speed', in its simplest form, was therefore a completely abstract notion and could only be defined as a potentiality; as the distance that would be traversed in a given duration at a given intensity. The technical significance of the notion of 'instantaneous velocity' was in allowing a much clearer description of accelerated motion. By geometric methods, simple cases of uniform acceleration, that is of a uniformly changing instantaneous velocity, could be resolved into equivalent statements of non-accelerated motion.⁴³ Time, space and velocity, in all this, remain qualitatively distinct and possessed of their own inherent qualities. Mathematical manipulation has no implication here for physical theory. There is no suggestion of a real interchangeability of such terms.⁴⁴

After 1530 the Merton analysis was taken up and

elaborated in Paris by, among others, Nicole Oresme. He aimed at a qualitative and symbolic 'geometry of qualities' at the most general level. The intensity and magnitude of any quality could be represented graphically, and the resulting figures used to suggest the distinctive characteristics of the phenomena under study.⁶⁵ Tempting as it might be to suppose, his method in fact did not amount to an anticipation of co-ordinate geometry or the technique of covariance. It was the dimensions of a single quality that were 'mapped' in relation to each other. And the resulting figures were not read as abstractions from physical dimensions but interpreted symbolically as the 'configurational' essence of the phenomenon itself. Thus, 'not any quality can be imagined by any figure'.⁶⁶ Colour or sound, for example, could be represented figuratively and Oresme claims that the aesthetic appeal of either depends not upon simple arithmetical harmonies (such as pitch) but on the simplicity and purity of their overall configuration.⁶⁷

Some 'astrological' and 'magical' effects, not attributable to the defect of the interior sense organs, could similarly be accounted for on the basis of configurational 'sympathies'.⁶⁸ Hence the medicinal properties of particular gems and plants,⁶⁹ and the 'fitting accord' between the 'configuration of qualities' in magnetised metals which accounted for their mutual attraction. Such a configurational conformity which, in a

more complex fashion, accounted also for the mutual attractiveness of human friendship.⁷⁰ Likewise, discordant configurations are held to account for the phenomena of repulsion, enmity, or the 'fact' that 'hot goat's blood fractures the diamond'.⁷¹ And, in a more general sense Oresme claims that, 'change in this harmony or diformity can be one of the causes why heavenly bodies emit below more benign, and at other times less benign, influences'.⁷²

Oresme's 'méthod' is simply a refinement of the analogical model. The 'harmonies' within the macrocosm shape and form the material microcosm as their image. The most significant of the causes of physical change in the sublunary world is discovered in the form of things. It was in fact scholasticism's inability to conceptualise natural relations in abstract fashion, rather than its excessively 'metaphysical' disdain of observation or experimentation, that acted as a brake upon its 'scientific' development.⁷³ The description of any part of the world had to be made in terms of some quality inherent in an object. The world was a plenitude of such objects. The 'dimensions' of existence were themselves the qualities of nature. Space and time could not be treated as the separate and 'empty' containers of the physical world; they were an ordered part of its content. Nature could not therefore appear universal, manifesting at best a series of localised uniformities 'accidentally' generated by the

interaction of such qualities.

The continued discussion of problems of projectile motion, culminating in Jean Buridan's sophisticated impetus theory, is, once again, a development within the general feudal picture of the world rather than a 'breakthrough' into fundamentally new dynamical concepts.⁷⁴ Buridan raised a number of empirical objections to the traditional Aristotelian treatment of projectile motion. That, for example, a lance pointed at both ends does not fly more slowly than one blunted, and offering greater resistance to the 'push' of the ambient air, at its trailing end. And on a barge, immediately after hauling has ceased, everyone feels the air resisting rather than assisting the continuing forward motion. 'Therefore', he concludes, 'it seems to me that it ought to be said that the motor in moving a moving body impresses in it a certain impetus (impetus) or a certain motive force (vis motiva) of the moving body'.⁷⁵ An external force, on contact, is taken up and becomes an inherent quality of the moving object. The ambient air, or other medium, gradually overcomes this impetus. There is, additionally, a positive connection between the quantity of matter and the effective force required to impart an impetus to it. Once impressed, impetus does not decay except by the action of an opposing force. Heavenly bodies moving in a 'pure' medium offering no resistance, thus, maintain for ever their perfect circular orbits with undiminished velocity. And a freely

falling body accelerates, not from some occult 'attraction' it feels for its proper place in the universe, but from the continuous addition to its impetus of the constantly acting force of its own weight (gravity).⁷⁴

Projectiles depend for their motion upon an 'impressed force'; that is, upon a power 'borrowed' from some exterior and superior being.. Motion is not itself a condition or state of being; it remains a transition within a partially ordered hierarchy. Local motion as impetus was no more independent of the cosmic hierarchy than it had been in the traditional Aristotelian conception of natural and violent motion. Its origin and its telos transcend the empirical domain. Each local motion is the outcome of an impressed force which is itself the consequence of a 'higher' force or an act of intelligence. All motion is ultimately traceable to God.

In the context of the more highly developed 'second feudal age', the projectile is conceptualised as a vassal rather than as a serf. Nature is composed of relations of mutual obligation which constrain the projectile to act 'as if' continually directed and controlled by an extraneous power. It is self-propelled only because nature has been sufficiently well formed, in that domain, to guarantee a 'correct' outcome. It can be trusted because it has absorbed into its very being not a blindly acting force but the transcendental telos of the cosmic hierarchy. Buridan

considers particular examples only. He does not propose an image of nature as the outcome of undirected forces impressed upon helpless objects. Each motion can be referred upwards, towards a directing intelligence, so that nature's flux is merely a further development of that ideal form which already exists in the mind of God. It is a continuous sorting and resorting of recalcitrant matter. The dramatis personae have changed, from the theophanic Silva and Noys, to the apparently more realistic 'gravity' and 'impetus', without however altering the figurative status of nature.

That 'nature' had come into greater prominence by the fourteenth century is hardly to be doubted. The implicit model of vasallage, rather than of serfdom, is expressive of a genuine social development. The connection between these different aspects of social relations can be pursued in yet another metaphor. The money economy, which played only a minor part in the organisation of social life in the earlier phase of feudalism, came to play, especially in the developing urban areas, an increasingly significant role.⁷⁷ This was commented upon by scholastic writers themselves, notably by Oresme, in a short treatise De Moneta written about 1355.⁷⁸

Oresme begins by pointing out the rational origin of money; as 'exchange and transport of commodities gave rise to many inconveniences, men were subtle enough to devise

the use of money to be the instrument for exchanging the natural riches which of themselves minister to human needs'.⁷⁹ Money, which cannot be directly consumed, materially, aesthetically or psychically, is 'artificial riches'. It does contain, nonetheless, a worth of its own, otherwise it would be useless in facilitating exchange. The fact that money could be exchanged for commodities demonstrated the existence within it of some inherently valuable quality. Precious metals are thus ideally suited to minting since they contain a high value within a conveniently small weight. Oresme supposes indeed that coins originated as a means of overcoming the inconvenience of weighing out specific quantities of precious metals each time a transaction took place. The prince's head, a symbol of truthfulness, replaces the laborious process; stamped upon each coin it differentiates and guarantees its value.

Money, to be effective, must be 'genuine'; it must possess an almost 'physical' power. Its inherent value must precisely match that of the commodity for which it is exchanged. But as the value of a commodity depended upon its intrinsic qualities, each was, by definition, incommensurable with another. Money was used therefore to sustain the fiction of equivalence between two inherently dissimilar objects. Like the symbols of vassalage money presumed and therefore created a relationship of equality.⁸⁰

It was inconceivable on this basis that money could become a general 'medium' of exchange. Its use was limited and controlled by the 'transcendental' needs to which it was put. It operated only as an intermediary between the arousal of a need and its eventual satisfaction. The 'reality' to which money responded did not reside in the commodity itself, but in the 'spiritual' realm which lay beyond it. Money departed from and returned to the telos of a guiding intelligence. It could not of itself generate a 'system' of exchange because each act of exchange was circumscribed by some specific social relation itself bound to its own place within the feudal hierarchy. As the efficient cause of exchange money must, so to speak, draw breath and renew itself after each expenditure of energy. It cannot spontaneously regenerate itself as the 'multiplication of species' typical of the superior forms of being such as light, or loyalty.

Within the social world, that is to say, money was a kind of 'impetus', and commodities were the imperfectly formed 'material nature' strung out between the primordial chaos of carnival and the realisation of society's inner rational values. Money was the immediate, efficient cause of the movement of commodities from one place to another. It imparted to the commodity a directed tendency, sufficiently powerful to overcome the resisting gravity (inherent value) which rooted it to the spot. In doing so it 'spends' itself and becomes exhausted; only to be renewed

by the inextinguishable need regenerating itself within a directing soul.

Money is the impetus of commodities; impetus is the money of nature. They are the means by which things change place, and in doing so actualise their inner qualities. As intermediaries, money and impetus can be construed as both cause and effect of the flux of the temporal world. Money effects a redistribution of material things in accordance with the tendency of an implicit order.⁸¹ Money, in the social sphere, is no more a solvent of the feudal hierarchy than is impetus of the traditional conception of nature. Both man and nature, degraded and corrupted but capable of redemption, are unstable. The superficially hectic activity of both betray a continuing effort to receive more completely the forming spirit whose presence counteracts the tempting slide into chaos. Both seek the ultimate release into pure, non-material being.

Nature and man are united in their longing for happiness. Their common exigency is the want of God; a longing to discover the permanence of being, as opposed to the transitoriness of existence. To perfect themselves they need only resign themselves, unconditionally and absolutely, to the supremacy of a Rule. But both nature and man are confined within the limbo of the material world because of their inability or unwillingness to be obedient. Both therefore suffer the deceptive flux of experience, the

impermanence of material forms into which they can never
pour their true being, the subordination and dependency of
low status within the hylomorphic order of the cosmos.

THE MIRROR OF GOD

Feudalism is an invention of bourgeois society. It is the product of a particular kind of historical consciousness, a way of describing the past which cleanses bourgeois society itself of relations it deems anachronistic. It cannot be described, however, as another form of the 'irrational'. It is not another instance of fun. What is attributed to feudalism (and thus rejected by capitalism) is a particular species of reason. The categories of medieval culture are constructed with meticulous regard to the law of non-contradiction, but its unity and coherence depends entirely upon an order of symbols: an order which reveals itself at every turn as a hierarchy of being.

The cosmology of happiness must therefore be reconstructed through a double relation. It is, first of all, an historical phenomenon. This presents us now, as it did not for the originators of the notion of 'feudalism', with certain ambiguities. The 'core' of feudalism can be seen in terms of the slow unfolding of a reality whose

fullness we have ourselves come to occupy (the urban values of the second feudal age, the twelfth century renaissance, the growth of the state). But it can also be seen as a system of relations irreconcilably opposed to those of bourgeois rationalism (hierarchy, personal dependence, the symbolic interpretation of nature).⁸² This ambiguity is itself merely a sign that contemporary scholars no longer share the larger world of assumptions and values common to the historical sciences during the period of high capitalism.

The cosmology of happiness, secondly, can be examined as an internal relation. Internal that is but not self-sufficient. Where the cosmology of fun (mistakenly) believes itself to be an absolutely exhaustive reality; the world of happiness is sustained by the continuous application of the force it exercises upon a primordial, unformed reality. In some respects, feudalism hardly mastered the restless and subversive spirit of fun. Nature, in which man includes himself, is in a permanent state of flux. The intoxication of the carnival is never far off; certainly it is too close to the surface of life to have been forgotten. Fun has therefore to be controlled, a necessity met by transforming it into a self-conscious goal. This immediately opens an enormous 'gap' between the world of experience and the 'ideality' of pure being⁸³, a gap which feudal culture devotes itself to attempting to cross. Fun made absolute remains aloof. The object of

unquenchable longing its presence transcends and at the same time organises the world devoted to its helpless pursuit.

A series of separations accompany this transformation. The empirical world becomes a small segment of a larger cosmos. Every object and event are tokens of the meaning that summons their existence. Substance and form, the sensible and intelligible, body and soul, are held on the point of inner dissolution. These relations fall into a unique hierarchical order which both defines existence and provides the means of salvation from it. Happiness is the summation of this order, the self-transcending movement which is the telos of all human and natural 'motion. The infinite regress of the 'ways to God' turns earthly activities into a rational tool for the attainment of an ultimate release from striving and change.⁸⁴ The mind seeks to raise itself to the apprehension of its own prototype.

The ultimate tendency of happiness is repose, tranquility and rest; to dwell in the fixity of its own essence.⁸⁵ It seeks to overcome ceaseless metamorphoses and in doing so establishes the degraded world of nature as its symbol.

The cosmic body, confined within the sublunary world of imperfect being, therefore, cannot fill the universe.

The order of the world cannot be immediately sensed or felt, but it can be known analogically through the development of proper self-knowledge. Man, as the image and likeness of his creator, is the mirror of the cosmic order. His mind, limited and weak as it is, nonetheless participates directly in a hierarchy charged with the divine presence.

Occupying a strategic position within the great chain of being, man is also the focus of universal secondary causes; a point through which 'higher' forces act upon objects in the lower world. He thus comes to know, through reflection on his own experience, as well as by the revelation of his inner being, the order of things.

Unlike the cosmology of fun, whose irresponsibility in this regard constitutes its central social meaning, the cosmology of happiness grudgingly recognises the necessity of labour. It is however kept in its 'place'. The recurrence of material needs, a blemish upon human nature, is dignified only to the extent that it remains 'embedded' in social relations which derive their authority from a 'higher' sphere. The direct satisfaction of material needs can never be the basis of social activities within a cosmology of happiness.⁸⁴

We view the cosmology of happiness now from a somewhat different position. It was its closeness to the bourgeois

world that excited the historicising imagination of an older generation of scholars. Now it seems an oddly remote world.⁸⁷ The primitive or the lunatic are more disturbing and more subversive; the repressed becomes more dangerous than the simply ignored. We find it harder to accept the inner meaning of symbols than we do the arbitrariness of signs.

In allowing the domain of the symbolic to fall into neglect, the bourgeois world has apparently succeeded, much more completely than might have been expected, in ridding itself of its undischarged longings for redemption. Yet we would understand nothing of feudalism had such longings fallen completely into abeyance. In using them to furnish a psychological portrait of an age we have 'transcended', we allow them at least a vicarious satisfaction.

Notes to Chapter Six

1. Kibre (1984). The more adventurous proposed philosophy as a similarly advanced and synthetic study, see, for example Hugh of St. Victor (1961), p. 51: 'Philosophy is the discipline which investigates comprehensively the ideas of all things, human and divine'. Though, even for radicals, the aim of the arts was 'to restore within us the divine likeness', *ibid.*, p. 61. See also Rashdall (1895), vol.1, pp. 33-6.
2. Masi (1983), pp. 13-14. There thus developed within feudal societies as a tradition that held, on the basis of analogy, that 'mathematics was the link between God and the world', *ibid.*, p. 32.
3. The Chartres has been aptly described as 'frozen music': quoted in Masi (1983), p. 33.
4. The commentaries of Albertus Magnus on Aristotle's natural history are notable exceptions. See, Weisheipl ed. (1980), Wilms (1933), pp. 20-43.
5. Haskins (1924), (1927), remains the fundamental statement of such a view. For a recent defence see Steifel (1985).
6. Another twelfth century propagandist of the arts, John of Salisbury (1962), p. 9, makes clear the context of such a renaissance. In spite of the 'burden of his earthly nature and the sluggishness of his physical body, man may still rise to higher things. Borne aloft, so to speak, on wings of reason and speech, he is thus ennobled by this felicitous shortcut, to outstrip all other beings and to attain the crown of true happiness'. See also Southern (1970), p. 42.
7. Southern (1986), p. 23.
8. Curtius (1953) dates its composition to between 1145 and 1153. An excellent English translation is available, Wetherbee (1973), and a comprehensive analytical and historical study by Stock (1972).
9. Wetherbee (1973), p. 2. Curtius (1953), p. 111, describes it as 'a link in the "golden chain" which connects late Paganism with the Renaissance of the twelfth century'.
10. Wetherbee (1973), p. 67.
11. *Ibid.*, p. 69. Noys 'carries the exemplary image of all that is to be generated', Dronke (1978), p. 29.

12. Wetherbee (1973), p. 67.
13. Ibid., p. 67.
14. Ibid. p. 68.
15. Ibid., p. 67. 'Her capaciousness, confined by no boundaries or limitations... And since it was liable to assume any shape, it was not specifically stamped with the seal of a single form of its own', *ibid.*, p. 71. The order of nature is latent with Silva, but is brought into existence only by a divine act of unconditional benevolence. Alan of Lille (1980), pp. 144-5, deeply influenced by the Cosmographia, similarly tempers his 'paganism' or 'humanism' with a strictly orthodox view of creation: 'He constructed the marvellous form of the kingdom of the world by the command of His deciding will alone, not by the operative aid of any external factor, not by the help of any pre-existing matter, not at the inissitent urgings of any need'.
16. Wetherbee (1973), p. 68.
17. Ibid., p. 70.
18. Ibid., p. 71.
19. Ibid., p. 72.
20. Ibid., p. 75.
21. Ibid., p. 89.
22. Ibid., p. 76. Stock (1976), pp. 28-9, on the astrological implications.
23. Wetherbee (1973), p. 69. As Dronke (1978), p. 30, remarks: 'material existence is intrinsically imperfect because it is material'.
24. Bachelard (1964).
25. Wetherbee (1973), p. 94.
26. Ibid., p. 96.
27. Ibid. p. 97.
28. Alan of Lille (1980), pp. 118-19. 'For the movement of reason, springing from a heavenly origin, escaping the destruction of things on earth, in its process of thought turns back again to the heavens. On the other hand, the movements of sensuality, going planet-like in opposition to the fixed sky of reason, with twisted course slip to the destruction of earthly things': *ibid.*, p. 119. Though we cannot know the fullness of of being reason itself participates in its mystery. 'Our chain of reason extends

too far when it dares to lift our discourse to the ineffable secrets of the godhead, although our mind grows faint in sighs for a knowledge of this matter. The image of this perfectly organised state shines forth in man. Wisdom, that gives orders, rests in the citadel of his head and the other powers, like demi-goddesses, obey her as if she were a goddess': *ibid.*, p. 121.

29. Wetherbee (1973), p. 96.

30. Thorndike (1923), vol.2, pp. 104-5.

31. Thorndike (1923), vol.1, p. 640. On the 'radical Aristotelianism' of the Arab commentators see, Booth (1985), pp. 95-152. Haskins (1924), pp. 3-19, 113-29.

32. Grosseteste, Riedl ed. (1942), p. 10: 'The first corporeal form which some call corporeity is in my opinion light'. For a brief overview of Grosseteste see Callus (1955), pp. 1-69.

33. Grosseteste (1942), p. 10.

34. *Ibid.*, p. 11. This is not only a physical process. Light, as 'radiance', is also the word of God: 'The Word is eternal, spiritual light, physical creation is corporeal light or form', McEvoy (1982), p. 59. See also Crombie (1953), p. 109.

35. Grosseteste (1942), p. 13.

36. *Ibid.* p. 15. The distribution of matter is governed by this 'taxiarchic law of subordination', McEvoy (1982), p. 98, which is 'A final westernisation of the Neoplatonic hierarchy': *ibid.*, p. 106.

37. McEvoy (1982), p. 182.

38. Quoted in Southern (1986), p. 216.

39. His apparently 'scientific' analysis of colour, for example, contrasts with his insistence that comets are sublunary phenomena because 'change' in the heavens is inconceivable, Southern (1986), p. 148-9. For the view of Grosseteste as a pioneer of science see, Sharp (1930), and particularly Crombie (1953), and in Callus (1955), pp. 98-120.

40. Grosseteste would not have gone so far as for example Moses Maimonides in claiming that 'everything is licit in which any natural cause appears', quoted in Thorndike (1924), vol.2, p. 209. One of the most important of the early translators of Arab scientific texts, Michael Scot, was careful to distinguish between mathesis (knowledge) and matesis (divination), and between mathematics (legitimate method) and matematica (forbidden to Christians). Genuine knowledge could not be exclusively naturalistic. See

Thorndike (1924), vol.2, p. 316.

41. Quoted in Thorndike (1924), vol.2, p. 165.

42. Klibansky, Panofsky and Saxl (1964), pp. 67-123, 127-33.

43. Talbot (1967), p. 127, Kealey (1981), pp. 2-5.

44. Quoted in Thorndike (1924), vol.2, p. 584.

45. Surpassed only by his pupil, Thomas Aquinas.

46. Quoted in Thorndike (1924), vol.2, p. 588. Booth (1983), p. 166, points out the centrality of the metaphysics of light in the work of Albertus. He presents 'a total account of light as forming things, and meeting the quality which it has already put in them, giving them a continuing radiance, and thereby activating the medium and the sight; light standing for intelligibility, and intelligibility being brought about by an immaterial passage to and from the object whose origin is also in the same intelligibility': *ibid.*, p. 169.

47. Wyckoff ed. (1967)

48. *Ibid.*, p. 178.

49. *Ibid.*, p. 63, 192: 'For (the stars) above, by their substance and light, position, motion, and configuration pour down into things below all the noble powers they possess.' See also Talbot (1967), p. 127.

50. Wyckoff ed. (1967), p. 192, Kibre (1984), p. 191.

51. See for example Albertus Magnus, Best and Brightman ed. (1973), Weisheipl ed. (1980), Arber (1953), White (1954), Bianciotto (1980).

52. Best and Brightman eds. (1973), pp. 53-4. And a typical example from White (1954), pp. 132-3: 'The Pelican is excessively devoted to its children. But when these have been born and begin to grow up, they flap their parents in the face with their wings, and the parents, striking back, kill them. Three days afterward the mother pierces her breast, opens her side, and lays herself across the young, pouring out her blood over the dead bodies. This brings them to life again. In the same way, Our Lord Jesus Christ, who is the originator and maker of all created things, begets us and calls us into being out of nothing. We, on the contrary, strike him in the face.'

53. Grant (1981), pp. 5-8, Koyré (1978), pp. 4-8, Duhem (1985), pp. 139-43.

54. Clagett (1959), p. 65, 'Heaviness' is defined as 'the force with which a heavy body moves towards the centre of

the world... the force is inherent in the body and is not extrinsic. It acts so long as the heavy thing is away from the centre of the world.' Albertus Magnus, giving a nonkinematic example, observes that things 'kept a long time away from the place where they were produced, are destroyed, and no longer rightly deserve their specific name', Wyckoff (1967), p. 65.

55. Clagett (1968), pp. 17-18, 45, 237, 299.

56. Hence the traditional argument against the possibility of a real vacuum; resistance reduced to nothing a body would move from one place to another instantaneously, which is absurd. Koyré (1978), pp. 7-8.

57. Koyré (1978), p. 9.

58. Ibid., p. 7, Butterfield (1968), p. 6.

59. Social order that is required the continuous application of force' a force guided by the intelligence of a superior being. Nature is here an idealised version of the feudal social relation. Nature 'behaves itself' more perfectly than does society. In the natural world therefore force is unnecessary and tends to remove things from their 'proper' place. Within nature, 'all motion implies a cosmic disorder': Koyré (1978), p. 5.

60. Duhem (1985), foreward by Stanley Jaki and preface by Roger Ariew.

61. Clagett (1959), Wallace (1981), pp. 37-40, Moody (1975), pp. 189-201, Grant (1974).

62. Clagett (1959), p. xxv.

63. The so-called Merton or mean speed theorem, Grant (1974), pp. 237-52.

64. Thus, Moody (1975), p. 197: 'What is perhaps most striking about the work of the Oxford calculators is their complete indifference to the empirical interpretations of which their highly developed kinematic analysis were susceptible'. See also Clagett (1959), p. 218.

65. Grant (1974), p. 247.

66. Clagett (1968), p. 17.

67. Ibid. p. 38-9. For the Pythagorean tradition in arithmetic see Masi (1983).

68. Clagett (1968), p. 41.

69. Ibid., p. 237.

70. Ibid., p. 245.

71. Ibid., p. 245.
72. Ibid., p. 299.
73. The orthodox view is expressed, for example, by Moody (1975), p. 201: 'The medieval interest in physics was dialectical and abstract, rather than experimental'.
74. Grant (1974), pp. 275-84, Clagett (1959), pp. 509-35, Wallace (1981), pp. 50-7.
75. Clagett (1959), p. 534.
76. Similar arguments were put forwards by Francesco Bonamico, see Koyré (1978), pp. 17-18.
77. Murray (1978), pp. 25-58. 'Money, rather than being a solvent of medieval society as it might at first appear, was a prerequisite for its most characteristic achievements - such as cathedrals, pilgrimages, and crusades': *ibid.*, p. 59.
78. Oresme, ed. Johnson (1956).
79. *Ibid.* p. 4. A coin can operate as a symbol only because it has an inherent value. It is not here a conventional sign and need not have the radical implications which, for example, Sohn-Rethel claims on its behalf. There is a typically feudal use of money, just as there is a typically feudal 'science' and a typically feudal 'state'.
80. The political implications of 'adulteration' were therefore highly significant. 'To take or augment profit by adulteration of the coinage is fraudulent, tyrannical and unjust, and moreover it cannot be persisted in without the kingdom being, in many other respects also, changed to a tyranny', *ibid.*, p. 47.
81. Murray (1978), pp. 27, 60.
82. The first approach ('historical') runs the risk of failing to distinguish feudalism as a 'type' of society and thus allows back into bourgeois society those very elements of discarded culture we wish to regard as 'other'. The second approach ('sociological') in positing 'feudalism' and 'capitalism' as mutually exclusive categories runs the risk of being unable to account for the 'transition' between them. As this is not an historical work the second approach has seemed preferable.
83. Fun is therefore a temporary condition. Sooner or later it must hit upon self-negation as one of its possibilities. Something completely bewildering in childhood.
84. A typical form of Wertrationalität, see Weber (1978).

p. 99.

85. The medieval cosmos, claims Lewis (1964), p. 99, 'presents us with an object in which the mind can rest, overwhelming in its greatness but satisfying in its harmony'.

86. Exchange in other words is by no means direct and unmediated. Its medium however is not money and the 'rationality' of material needs so much as the personal relations of the hierarchic order.

87. Thus the apologetic tone with which Lewis begins his popular exposition.

PART THREE

PLEASURE

'The only rational passion is self-love'

Jean-Jacques Rousseau

'We are certainly not to relinquish the evidence of experiment for the sake of dreams and vain fictions of our own devising; nor are we to recede from the analogy of Nature, which is wont to be simple, and always consonant to itself.'

Sir Isaac Newton

SEVEN

HARMONY

The problem of the 'transition' from feudalism to capitalism has excited considerable scholarly attention, both as part of a general reassessment of the writings of 'classical' sociologists, and, more recently among economic and social historians, as a perspective that breaks free of confining disciplinary boundaries.¹ It has figured much less prominently within the conventional history of art and culture (including the history of science), whose distinctions, fixed by Burckhardt, assign a positive value to this intermediary zone as 'Humanism' and the 'Renaissance'.²

The transformation of both cosmos and psyche implied in the categorisation of 'capitalism' and 'feudalism' is not a straightforward historical issue. Both terms belong to the cultural world of capitalism. Hence the effort to define in a more precise way the boundary between the two.

and to specify the historical process connecting them, was bound to become an ultimately solipsistic exercise.³ The real history of such a transformation remains unreachable. Attempts to write such histories, however, reveal the bourgeois worldview at its most vulnerable. Through them we can observe the formation of the bourgeois world's central values and indispensable metaphors. The symbolic realm of happiness is thrust back into the incoherence of the past, the anarchism of fun is finally suppressed, and reason takes its place at the centre of world history.

The foundation myth of capitalist society thus involves two rather different 'transitions': the movement from happiness to pleasure, which can readily be conceived as the 'subjective' aspect of the transition from feudalism to capitalism, and the movement from fun to pleasure, which has a much more diffuse range of historical reference as the domestication of the primary process. The order of symbols, on the one hand, and the multiplicity of systems of signs, on the other, gave way to the mechanistic relations of cause and effect. They gave way, however, from within an already constituted bourgeois society. The cosmologies constructed by 'mirroring' (symbols/happiness), and 'somatically' (signs/fun) are the creations of and belong still, if negatively, to the world mapped out by bourgeois reason.

It was in a conception of reason self-consciously

purged of happiness and fun that, 'man became a spiritual individual', a being, 'not afraid of singularity'.⁴ At the origin of the bourgeois world, 'self-realisation and self-enjoyment of the personality became a goal'.⁵ It was only much later that pleasure became somewhat detached from reason and it was possible to imagine the development of the latter as a process dependent upon the repression of the former.⁶ In fact it depended on the repression of fun and through this the establishment of pleasure as a legitimate value for, and organising principle of, personal and social life. It describes, in other words, a different kind of ideal society, one founded upon non-hierarchical relations.

Utopia

The movement from Happiness to Pleasure is first of all the discovery of Utopia; the replacement of the transcending telos of human action by a secular vision of perfection.

Utopianism, of course, is endemic to western society.⁷ A society continually stretched between the promise of salvation and the degraded spectacle of everyday life is prodigal of secular, as well as purely religious, forms of the ideal. The Renaissance stands out nonetheless as the period of 'classical' utopias and the period during which

utopian thought comes closest to realising its systematic ambitions. The classicism of the Renaissance was a fairly self-conscious attempt to reach back beyond the fixed symbolism of the orthodox religious worldview and recover a more potent image of human perfectability. Direct borrowing from classical culture was, however, slight and constituted no more than a point of departure from which utopian visions, architectural, literary and artistic, could take flight.⁹

Informing the varied expressions of secular longing was a rejection of hierarchy as the necessary condition of all existence.⁹ At the outset of the Renaissance, anticipating in a thorough and comprehensive fashion its fundamental social logic, stands Nicholas Cusanus, whose On Learned Ignorance, aiming to make no original theological advance, in fact radically transformed the medieval Platonic tradition.

Cusanus begins with the absolute unknowability of God. The simple maximum, as he terms Him, cannot be reached by any reflective science. All knowledge is founded, he claims, upon comparison. Where there is 'comparatively little distance' separating the 'object of enquiry' from the 'object regarded as certain', it is a relatively simple matter to make correct judgments leading to valid knowledge.¹¹ But God is infinitely remote from living man; this is the real meaning of his divine perfection. No

hierarchical sequence can ever terminate in authentic transcendence. However extended and exalted, it must always cling to earthly knowledge and material forms. Thus, 'the infinite as infinite is unknown... since it is beyond all comparison'.¹² Although human knowledge and human will is endlessly self-expanding, it cannot become identical with the simple maximum, which remains indivisible and without any distinction whatever. 'The Good cannot be reached by any series of inferences that begins with an empirically given', he points out briefly, undermining the entire scholastic tradition of the 'ways to God'.¹³ All valid knowledge must begin with the recognition of this radical ignorance. The entire edifice of hierarchical logic is consequently subverted. In direct opposition to the scholastic principle of 'relative greatness' Cusanus calmly asserts that, 'from the self-evident fact that there is no gradation from infinite to finite, it is clear that the simple maximum is not to be found where we meet degrees of more and less'.¹⁴ If we begin with the created world we must remain enclosed within it. The cosmology of Happiness had viewed reality as a hierarchy of emanations from a transcendental order just to avoid this logical problem. It was God who, in creating the world, passed into the forms of things and thus offered a miraculous 'way up' for man. The decisive transformation effected by Cusanus lies in his beginning from the created world, and therefore having to deny the possibility of arriving at God by a process of abstraction, confining himself within its

limits.

The created universe itself constitutes a maximum, but a 'restricted maximum' which, while existing in a form which maximised its own inner potentialities, could not be other than limited in an absolute sense. The original dependence of the universe upon God was not called into question, what could no longer be supported was the view of existence as a gradation of His absolute and necessary being. The empirical world, formed by God, existed in itself, and persisted on the basis of its own inner laws. God was removed to an infinitely distant point, and could be found once again only by discovering the minimum which lay as incommensurably 'beneath' all possible comparison as the maximum lay 'above' it. 'God's being which is unity', he tells us in a typical passage, 'is not abstracted by the mind from things, nor is it united to or immersed in things; it is therefore, beyond anyone to understand how the plurality of things is a development of the unity which is God'.¹⁵

This leads Cusanus to many apparently paradoxical expressions of the nature of creation. The cosmos is limitless but bounded, a place in which, 'the centre and circumference are identical'.¹⁶ Not only are we condemned to utter ignorance of God, all our relative judgments of created being are threatened by our inability to 'fix' the end points to the chain of being. All judgments of 'place'

are similarly suspect in a universe without centre or circumference. Any arbitrarily chosen point might, equally, serve as its centre. In some sense God undoubtedly is the centre of creation, but in a more restricted physical sense, 'the earth is not the true centre of the world', and 'the circumference of the world is not the sphere of the fixed stars'.¹⁷ And what applies to the earth is true of all other places: 'in the heavens there are no fixed, immovable places'.¹⁸

The entire feudal cosmic structure is dissolved and reformed into a multitude of self-centred points. Man, roused from his lowly position of centrality, inhabits a world as dignified as any other celestial object; possessing its own light and heat and as free to move as any other. The categorical distinction between superlunary and sublunary has been shattered, and with it the possibility of a qualitative physics of place.

The full implication of this radical break with the symbolic-hierarchical conception of the cosmos was not immediately evident. For the most part, 'Renaissance Cosmography' was a mixture of what now appear to be incompatible elements; some belonging still to the scholastic religious tradition, while others, often ill articulated and confused, belonged to a world not yet properly formed. What did become clear at once was a new

philosophical independence. Natural reason was no longer harnessed to the task of clarifying and elaborating revealed truths. As an instrument for the exploration of nature it reflected the dignity and power of man as a privileged being, conscious of his own actions and master of his own instincts.¹⁹

Man's knowledge of the world was no longer contemplative. His mind was not a mirror so much as an active and expanding principle of mastery. The 'image and likeness' of God was manifest actively in his creative powers, rather than passively in his form. And as the mind could no longer be guided by an abandonment of the will, its restless self-expansion found enjoyment in its own existence. Of divine beatitude, that Happiness promised but vainly sought within the heart of the old society, Lorenzo Valla rhetorically asks, 'who can call it anything better than pleasure?'.²⁰ It is pleasure and not virtue that is to be 'sought on account of itself'.²¹ Valla, a 'Christian Epicurean', doubted, in the absence of an authoritative order of symbolic valuation, the wisdom of men's actions, but he was confident of their motives: 'men act for the sake of pleasure'.²² Reason aspires to coincide with the amplitude of our experience of the world, but cannot go beyond it. Reason thus becomes a form of pleasure, an intelligent appreciation of the world of created things.²³ Pleasure receives a fresh value as 'the conserving principle of life'.²⁴ Human aims must be

realisable, and realised, within the constraints of a secular world no longer camouflaged as degraded matter. God is not renounced, but the passion that had sought its release in the Happiness of seeing him 'face to face' spent itself in the erection of secular utopian visions.²⁵

Throughout the Renaissance, which acts as a sort of cultural buffer between the cold rationality of capitalism and the symbolic order of feudalism, utopian excitement continually renewed itself in all the human 'arts'. Petrarch's revival of classicism in letters not only inaugurates a collective search for 'civic virtues' which did not reach its zenith until the eighteenth century, but also it has as its prelude the first of those solitary walks which became characteristic of bourgeois self-reflection. The ascent of Mont Ventoux, a strenuous and unusual journey prototypical of the wilful detachment from social life of Montaigne, or Rousseau, or Kierkegaard, is a new moment of personal inwardness as well as a new evaluation of 'nature' as a beautiful object. The ego, just as celestial points in the 'restricted maximum', crystallises into an independent unity and discovers itself in isolation.²⁵

The artist, no less than the philosopher, confronts the challenge of comprehending and representing the natural world without the aid of symbolic interpretation. If the cosmos is no longer an order of fixed, dependent relations,

how is it to be conceived? How is it constructed? What guarantees its coherence and persistence?

The 'artist's' answer was as clear as the 'philosopher's', and considerably in advance of the 'scientist's'.²⁶ The theory of harmony, taken from Greek sources rather than from Boethius, and developed outside of any direct religious preoccupation, provided the fundamental starting point.²⁷

The first and most striking application of secular harmonics was in architecture. Compared particularly to the Gothic cathedral's crushing realisation of divine superiority over the human frame, the Renaissance church was scaled to the intimate proportionality of the human body. Panofsky highlights the difference succinctly: 'medieval architecture preaches Christian humility; classical and Renaissance proclaims the dignity of man'.²⁸ And in painting it meant that, 'the painter is no longer to work "from the ideal image in his soul"... but from the optical image in his eye'.²⁹ The space thus defined was continuous and infinite. Exact geometrical perspective and proportionality was developed from the notion of a visual image produced by straight lines projected on to a two dimensional plane. Classical attempts at perspective drawing had constructed the visual field as a virtual sphere, centred on the eye and composed of straight lines of varying angle but equal, finite length. In Brunelleschi

and Alberti's new theory the lines of sight were infinitely extended and the picture produced by introducing an orthogonal plane of projection artificially cutting them off.³⁰ The single 'vanishing point' of the projection plane mirrored the unique position of both the artist and the subsequent spectator of his work whose individual view of the scene it recreates. Even the largest frescoes could thus become an intimate communication

Now the artist, 'strives to represent only the things that can be seen'.³¹ And by adopting the visual perspective of a single privileged observer creates upon the surface of the canvas an infinitely receding space as if framed by 'an open window through which I view whatever is to be depicted there'.³² Perspective painting is therefore much more than a purely technical innovation; it 'opened not merely a new phase in the practice and theory of the visual arts but a new age in which reality came to be viewed and understood in mathematical terms'.³³ The Renaissance canvas is filled with objects detached from each other, not simply physically but metaphysically. They form a unity only by virtue of the subjective reconstruction of the spectator whose position is the focal point of all the formal harmonic relations exploited by the artist.

The use of individuated perspective and proportional drawing implies a separation of space from place. The

'objective' world is decomposed into a series of superimposed visual fields, the space of any one of which is identical with any other. Space, that is to say, is abstracted from any particular observation and is represented as the undifferentiated medium of any possible arrangement of objects. An object, indeed, is defined by its location in space, by its separation from and relation to other objects. Space itself lends nothing to representation because it is the 'container' and not the substance of objects. And all the physical qualities of an object can be rendered by the conventions of drawing just because they are independent of 'place'. The nature of things depends upon the proportions of its own parts, its interior harmonic arrangement, and not upon an invariant and all encompassing structural order. The cosmos is therefore a structure of relations that can be described only from the point of view of a single privileged human observer.

The revival of Pythagorean conceptions of order provided a secular model of such an indwelling order.³⁴ It was a vision of the cosmos as an artistic work; the product of an artificer. The fundamental proportionality of nature could be rediscovered in the human body. Vitruvian figures, popular throughout the Renaissance, have therefore a quite different significance to the medieval 'microcosmic' theory of the body. Now, rather than belonging to different orders of being related

analogically, body and cosmos are harmonised because they are both 'natural'.³⁵ What is at issue here is not a piecemeal criticism of the scholastic tradition, or its religious assumptions, but a systematically different conception of the cosmos, a difference which makes itself felt in every particular.

It is from this perspective, the humanistic rejection of hierarchy and the revival of Pythagoreanism, that Copernicus's astronomical innovations are best understood. In the atmosphere of North Italian humanism, indeed, much of De revolutionibus could appear conservative.³⁶ The universe is held by Copernicus to be a physically finite sphere, the most perfect shape'.³⁷ And within it, 'the motion of the heavenly bodies is uniform, circular, perpetual, or compound of circular motions'.³⁸ Many of the traditional scholastic conceptions were retained, or modified only implicitly. His radical Pythagoreanism was moderated, more than was general among artists, by a Christian Platonism. In the Narratio Prima for example, in which Rheticus first reports his master's discoveries, a conventional 'metaphysics' justifies observational astronomy. The outermost cosmic sphere, thus, 'was studded by God for our sake with a large number of twinkling stars, in order that by comparison with them surely fixed in place, we might observe the positions and motions of the enclosed spheres and planets'.³⁹

The technical advances claimed by the Copernican system were twofold. Firstly, a much more accurate determination of the phenomena of 'trepidation'.⁴⁰ That is to say, the very slight, long term 'third movement' of the earth in relation to the backdrop of 'fixed' stars, more precise knowledge of which was essential to a rational reform of the calendar. Secondly, and more significantly, it proposed a considerable simplification in the geometrical constructions required to 'save the phenomena'. It reduced, in other words, the apparent motion of celestial bodies to an ordered and interconnected system of relations.⁴¹ The real fault of Ptolemaic astronomy was not its prejudice in favour of uniform circular motion (a Pythagorean principle shared by Copernicus), but its incoherence as a unity: 'It is as though an artist was to gather hands, feet, head and other members for his image from divers models, each part excellently drawn, but not related to a single body, and since they in no way match each other, the result would be monster rather than man'.⁴²

When Copernicus claims, therefore, that 'there is no one centre of all the celestial circles or spheres', he is being much less daring, in terms of cosmological speculation, than Cusanus. But, more significantly, when he argues that, 'the centre of the earth is not the centre of the universe, but only of gravity and of the lunar sphere',⁴³ unlike Cusanus, his conclusion is not simply a

philosophical assumption, and is consistent with the most complete and precise mathematical analysis of astronomical data. There were arguments which were bound, sooner or later, to carry weight amongst those who could comprehend them.⁴⁴

The technical demonstration of the earth's movement was far in advance of any other astronomical work of the period, but its technical superiority alone does not fully account for the Copernican achievement. It is as part of a general cultural movement that the meaning of his work becomes clear. It is as the most sophisticated demonstration of man's inherent dignity that De revolutionibus, without ever being widely read, remained a vital work and aroused controversy for well over a century. In spite of the odd mixture of prescient mathematisation and scholastic archaism ⁴⁵ it marked a decisive shift, by no means confined to 'advanced' and 'radical' cultural movements, in the relation of man to his cosmos.⁴⁶

Rather than participating, by virtue of being its natural symbol, in the plenitude of creation, man becomes a real part of nature, proportioned and harmonised according to simple mathematical relations replicated throughout the universe. Man could understand the universe by observing the order of which he was part, rather than by interpreting himself as its symbol. The cosmos took on a

purely objective aspect, first and foremost as an object of beauty. It was not sufficient to 'save the phenomena' by arbitrary geometrical manipulation, the diagram of the world had to express the 'real' harmonic relations sustained at the heart of nature.

Copernicanism, therefore, was not surprisingly embraced by the movement of humanism long before it became a 'scientific' model of the universe. Cast adrift in virtually boundless, if not infinite, space, remote from God, man's perfectability lay in his own hands. The longing for happiness, outliving its 'natural' medium of religious symbolism, enjoyed a period of intensification in innumerable utopian visions. This entire movement was supported by institutions that lay outside of the traditional feudal hierarchy. North Italy had never been a genuinely feudal society, and from the late medieval period flourished as a distinctively urban, secular culture. Northern humanism similarly grew up outside traditional scholastic institutions.

This entire movement spread throughout Northern and Western Europe with the growth of the book trade: the first internationally successful enterprise organised along capitalist lines.⁴⁷ The most renowned writers of the age worked, from time to time at least, as publisher's copy-editors. Erasmus, Bude and Rabelias were all employed at different times by Sebastian Gryphus in Lyon.⁴⁸ The spread

of the book was phenomenal. In 1470 there was just one press in Spain, at Seville; by 1500 there were thirty, many in towns with no previous tradition of intellectual activity. And in Germany towards the end of the sixteenth century, at a time when universities had suffered a marked decline, books were the principle commodity at fairs.⁴⁹

The printer and bookseller was the most 'progressive' figure of the age. The first to establish, through the direct application of capital to the process of production, an ideal world of commodities. Highly sophisticated techniques of manufacture were allied to a refined division of labour supplying a large and growing market for these luxury goods. Through them 'ideas' appeared on the marketplace; freed from all restraint and authority, they anticipated rather than realised the inner freedom they were to claim as the core of the bourgeois worldview.

In Northern Italy, scholasticism, and especially the Aristotelian tradition of natural philosophy, far from being an obstacle to the innovation was itself the vehicle for a new secular vision of man and nature. Randall goes so far as to claim that the 'critical Aristotelianism of Padua' led directly to Galileo's revolutionary science.⁵⁰ This was certainly not the only, or even the major, source of Galileo's inspiration. The commercially successful North Italian cities of Padua, Bologna and Pavia nurtured a humanist version of Aristotelianism that was important in

its own right and serves as an indicator of the growth of a secular civic culture.

Influenced particularly by Averroës, a number of writers tackled the traditionally difficult problem of a 'naturalistic' theory of the soul. Medieval authorities held the human soul to be indivisible and immortal; separate in function, that is to say, from the bodily parts with which it was 'associated'. Yet, if the soul were genuinely immortal, it could not participate in any way in organic life; and if it were 'personalised' in particular individuals, it must be corruptible. The solution proposed by St. Thomas had been to hold that the soul was quite separate from the body and participated in organic life by virtue of a 'miraculous' dispensation. The Paduans, however, insisted upon a more rigorously naturalistic approach. Pompanozzi argued that, 'a natural bodily function can behold rational truth'.⁵¹ Man's nature is thus 'a mean between mortal and immortal'.⁵² The human duality comprised both a functioning organism and a power of thought and will which, because it was not differentiated and specific to a particular organ, could in some sense be called immortal. The intellect is this mean which is neither 'totally free from the body or totally immersed in it'.⁵³ The intellect requires material conditions but is not reducible to such conditions; the soul grasps the universal.

The loss of the traditional doctrine of immortality and, therefore, the withdrawal of immediate divine supervision of individual human actions, makes way for a genuine moral philosophy. Just as God's retreat from the physical cosmos opened up a space into which human reason at once expanded, so a new secular individualism was at once invaded by imperative social norms. Both sought conformity to 'nature' rather than God; to an inherent harmony rather than a transcending spirit. Human action, therefore, ought to be guided by the 'natural' tendencies of human nature.

The idea of the immortality of the soul is transformed into a reflective image of the structure of nature. In Zabarella can be found a genuinely naturalistic psychology, in which the soul becomes identified with wholly organic functions. The soul is the 'principle of the animate body'.⁵⁴ It must therefore, like the body, be extended and divisible. It becomes an 'active intellect' which 'illuminates' sense images, disclosing their rational structure. Man's special nature is his ability to look inward and, by discovering the harmonic pattern within his own mind and temper, find the key to unlock the secrets of the universe. In other words, humanity becomes, the central object of curiosity and study, out of methodological necessity rather than for reasons merely of self-glorification.

The 'empiricism' of these writers was founded upon fundamental human certainties rather than upon the direct observational science of nature which, to a limited extent, it encouraged. It was a de-symbolising of the medieval cosmos and, along with 'the sober recognition of its finite conditons', it retained the 'lingering odour of immortality', which Randall ascribes to all forms of humanism.⁵⁵

The individuation and secularisation of Happiness (Pleasure) was the 'inwardness' of the scientific revolution. Begun but never consummated in Northern Italy it preceded the development of the classical scientific worldview. In Telesio and Patrizzi we can see the fullest possible development of Aristotelian naturalism. Telesio redefined the Aristotelian potentia as a natural force and the efficient cause of all change. The physics of 'place' was thrown over in favour of an account of motion as the outcome of purely mechanical 'forces'. The artists's extension of space as a medium, qualitatively identical with itself, turned out also to be precondition of a new mechanics. Space itself is conceived as devoid of all qualities and powers, and cannot be the cause of any physical change; 'therefore place (locus) must be made the container for all beings whatsoever', and, 'remains perpetually the same'.⁵⁶

Patrizzi, drawing directly upon Cusanus, also

recognised the significance of the formal emptiness of space. Space 'is the accident of no earthly things',⁵⁷ and must be conceptualised as a 'hypostatic extension subsisting by itself and inhering in nothing else'.⁵⁸ Geometry, therefore, as the analysis of space, is the most fundamental of the sciences.

In this tradition force replaces form as the fundamental organising principle of matter. Nature can then be seen as a system of mechanical forces expressive of deep harmonic relations which reappear in all its aspects. There is no need any longer for an analogical discourse; man is not like nature, man is nature. Man's own dignity therefore implied the rehabilitation of fallen nature as a whole; its discovery as an object of beauty.

Arcadia

A second transition is possible. While 'primitive' societies cannot 'leap' into capitalism other than by the external force of colonisation, a direct intellectual transition from Fun to Pleasure is suggestive of a real possibility⁵⁹: an Arcadian fantasy, springing to life as a development within the Platonic Tradition, in contrast to the Utopian movements which were for the most part an aspect of progressive Aristotelianism.

The refounding of the Platonic Academy by Marsilio Ficino, under the patronage of Cosimo Medici, reached back beyond the Christianised medieval conception of form as a divine emanation to the apocryphal sources of a more recondite wisdom. Works attributed to Pythagoras, Orpheus, Zoroaster and Hermes Trismegistus figure in his writings alongside those of 'official' neoPlatonism.⁴⁰ Ficino indeed was as devoted a Pythagorean as Alberti, and at times seemed to have sought to revive a mystical religious cult in its name. It is a mysticism, however, that completely rejects the ascetic discipline of self-annihilation. Pleasure is the core of Ficino's spirituality. First and foremost, man's superiority and dignity is exemplified in the delight of the senses, particularly in his instinctive love of music. As both 'the human spirit' and the 'material medium' for the transmission of music is constituted by 'air', harmonic sounds can exercise 'a peculiar power' over the human soul.⁴¹ Both are 'a living kind of air', and it is the inner harmonic movement of music (its playfulness) that makes it more effective as a spiritual nostrum than any painting or building.

Music was of course long recognised as a therapy for the soul and played an important part in medical astrology throughout the feudal period. Ficino's theory of 'astral music', however, goes much further. Music becomes a means of 'elevating' the soul of the healthy rather than restoring the bodily functions of the ill. Its

psychological effects are universal. Music 'captures' planetary and astral influences. Celestial movements, conforming to deep harmonic patterns, is (as Copernicus and Kepler also believed), the ideal 'form' of music. These, 'celestial figures act by their movement irradiating the soul with harmonic rays and motions', penetrate everything and 'constantly effect the spirit secretly, just as music does openly, in the most powerful way'.⁶² The spiritual elevation Ficino sought in special theurgic practices is an expansion of the ego; an identification of the subjective microcosm of man with the macrocosm in such a way that man realises his divine nature without loss of his temporal existence. The soul is led through the enjoyment of Orphic music 'to the deep and silent memory of the harmony which it previously enjoyed'.⁶³

This sustained inner relation to divine harmony is even more marked in Ficino's celebrated student, Pico della Mirandola, whose Oration proclaims with a new confidence the status of man as a privileged creature. It is his separateness from nature that marks man's decisive advantage over any other created being. Man had been allowed the privilege of an unlimited freedom, 'the Creator gave him the germs of every sort of life'.⁶⁴ Man, 'possesses all possibilities within himself',⁶⁵ but unlike the child unconscious of a world other than his own subjectivity, man through the inexhaustibly self-expanding forms of knowledge and love, relates this inner infinity to

an outer world of determinate being. Pico does not regard this as a tragic self-alienation but rather as an ideal of pleasure; the recognition of the infinite self in the world, rather than the longing for the infinite beyond any practical selfhood.

The preservation of inner freedom, therefore, becomes a moral imperative. And it is to preserve human autonomy that Pico attacks traditional astrological practices. He is not opposed to Ficino's recondite Pythagoreanism, which is an advanced psychological technique of self discovery, so much as the routine ascription of personal fate to 'occult causes'. If man is governed by stellar influences, rather than being merely conditioned by natural forces, his inner freedom is hopelessly compromised.

Ficino's philosophy is centred upon a revival of Eros; an aspiring upward and insatiable desire that is now, however, 'a human passion and not a divine goal'.⁴⁷ It does not terminate in a moment of ecstatic release, but maintains a continuous reciprocal relation with its dialectical image. Man's implication in corporeality is not a punishment for his original sin but the unique configuration that allowed the inner plenitude of human nature to express itself. Ficino and Pico indeed, by reaching back to pre-Christian spiritual sources, avoided the entire narrative of human history as penance. Nature was to be the secular ideal of beauty: 'nothing in the

world is misshapen or to be despised'.⁶⁸

The individual soul is infinite; how otherwise could it conceive itself? Its insatiable desire can never be satisfied and it remains conscious of a sense of loss, 'wistfully reminiscient of another world... thin and disembodied and ever trembling on the verge of the Christian mystery'.⁶⁹ But it holds back, suddenly suspicious of religious salvation, and remains bound up in an arcadian nostalgia for the departed world of fun.

Neither Ficino nor Pico were Kierkegaard, any more than Zabarella or Telesio were Newton; yet an anticipation of bourgeois psychology underlies their revival of Platonism as the intuition of natural science colours the latter's progressive Aristotelianism. What is equally significant is the general splitting of the hierarchical and integrated cosmology of the feudal period into the separate domains of subject and object.⁷⁰ This division, which is of course only a tendency in the Renaissance, is not a distinction between, on the one hand, an ordered and coherent view of the world as a system of interrelated forces (objective nature), and a disordered chaos of sentiments (subjective humanity), on the other. The Florentines were just as precise and coherent about their psychology as the Paduans were about their natural science. Both subject and object were ordered by immanent harmonic relations which tended in time to be viewed as relations

sustained by mechanical 'forces'.

Florence and Padua epitomise these tendencies. Neither were complete. The movement towards empiricism fell short of systematic observation, and as Lucien Febvre reminds us, it remained extraordinarily difficult throughout the sixteenth century to be anything other than Christian.⁷¹ The most radical became unorthodox Christians, and even the Florentines shared with the departed world of Happiness its metaphysical quest for being. In both cases it was less a secular apprehension of existence than a growing inward sense of selfhood. And the world beyond the self, only in consequence of its capacity to satisfy its desires, became likewise dignified.

More generally, if Cusanus expressed with particular clarity and coherence the intellectual transformation of Happiness into Pleasure, anticipating the central structural features of the new cosmology, then Giordano Bruno spanned the emotional gulf between Fun and Pleasure, bringing the phase of the 'transition' to a close.

Bruno, the most extravagant individualist of the Renaissance, began his adult life, like Rabelais and Luther, as a monk. It is hard to imagine anyone less suited to a cloistered existence. He soon took up a life of itinerant and reckless disputation. Travelling widely throughout Europe he challenged every Aristotelian

orthodoxy in the very places where conventional truth was most powerful. He quickly gained the immense and scandalous reputation that we might suppose he most desired.⁷²

He not only eagerly embraced Copernicanism, and intuitively grasped its most radical implications, he ventured far beyond Cusanus in redrawing the cosmographical map. He followed the Florentine Platonists, back beyond Christian and Greek sources of rationalism to the 'original' wisdom of the Egyptians, and in particular to the mythical figure of Hermes Trismegistus.⁷³ Where Ficino in translating the Corpus Hermeticum had done so in the belief that it would provide a key to the understanding of his beloved Plato, Bruno took the Hermetic writings as a self-sufficient view of the world and found in them the kind of conceptual language he craved. It was a Renaissance of a rather different sort. It was less the humanisation of the cosmos through a relocation and revaluation of man within its physical structure, than a diffuse but powerful spiritual eruption of man throughout the entire universe. It was very similar in fact to the ecstatic dispersal of human subjectivity that is so characteristic of the cosmology of Fun. Locked within the historical and conventional constraints of mere fun, however, such a vision remained a mute cosmology. The continuous repression of fun throughout the development of both feudal and capitalist societies has created a

powerful prejudice against the idea that any primordial, 'unreflective' experience could express a sophisticated and coherent view of the world. The psychiatric and anthropological evidence noted in an earlier chapter challenges such a view; Bruno's writings, and the revival of the Hermetic Tradition to which they were central, is a yet more eloquent denial.

For Bruno, even more markedly than for Ficino, the cosmos is a living organism. Its coherence resides in the single spiritual entity which animates its endlessly diverse appearances. The points of light we discern in the night sky are (as they are for children of five), living creatures endowed with life and movement.⁷⁵ This is not an obscure 'anagogic' mode of thought. The universe is alive with souls, it is 'a world crowded with souls, with masses of souls, of souls which join together - which irradiate each other'.⁷⁶ The peculiar quality of individual humanity, the subjective structures of desire, will, love, power, are replicated throughout the cosmos. And replicated in an endless variety of forms. Bruno pushes the new conception of space to an extreme. Infinity, and therefore divinity, is a predicate of matter as well as of absolute being. The infinite becomes an 'empirical' category, so that the actual physical cosmos need not be a limited 'copy' of the limitless divine idea, but an endless extension within which an inconceivable plurality of worlds jostle together. The fact of infinity unifies and

integrates the cosmos in a new way. It is not a fixed 'totality' so much as a 'structure' which can be thought of as a musical harmony, an endless series of internal chords sustaining one another. Each being a 'resonance' within an infinitely extendable harmonic order.⁷⁷

The human being is the real centre of such resonances, a node or concentration of celestial vibrations. The Hermetic writings provided Bruno with an initial clue. Nature, as the Paduans had guessed, was a system of forces inherent in matter, but these forces should be understood on the basis of a 'psychic' model, as emotional rather than mechanical 'tensions'.

The Asclepius had described the manner in which cosmic powers could be drawn into the statues of the Egyptian Gods, filling them with life. These texts were believed to be Egyptian in origin and to have been composed by a contemporary of Moses. In them is expressed astrological and magical conceptions, and a vision of human knowledge as a self-expanding participation of man in the cosmos. Knowledge, a practical, rather than a contemplative or analytic art, was identical to summoning and controlling the cosmic forces of which man was the natural focus.

In fact the Asclepius and other Hermetic texts were written no earlier than the second century A.D., but for

the Renaissance Hermes was not only a real person but for many the fount of wisdom from which both Greek philosophy and Christianity had been corrupted. As Frances Yates notes, 'this huge historical error was to have amazing results'.⁷⁶ The Florentines were at times wary of Hermetic heterodoxy, but Bruno, unperturbed, claimed it as original religion as well as original philosophy.

Ficino, extolling at least the philosophic superiority of Hermes, claims the Pimander to be a clearer guide to creation than the Timaeus. The Egyptian genesis paralleled the Christian myth with uncanny accuracy; but the Fall is not a consequence of willful disobedience so much as of narcissistic curiosity. Seeing himself reflected in nature, original man, a star-demon, himself drew aside the heavenly sphere and descended to earth, stepping as it were into his own shadow. In doing so he fell under the power of other stars and remained confined by natural forces. Hermes passes on to his son Tat the secrets of regeneration so that he becomes the first in the apostolic succession of Magi, cosmic 'operators', able to reconstitute themselves as divine beings through the manipulation of the celestial forces they gather within themselves.

The figure of the magus was rehabilitated, though not without risk. Ficino's Orphic music seems modest compared to the cosmic powers sought by Cornelius Agrippa who had 'cohabited with the elements, vanquished nature, mounted

higher than the heavens, elevating himself above the angels to the archetype itself, with whom he then becomes co-operator and can do all things'.⁸⁰ This immediacy, typical of the cosmology of fun, is charged however with a powerful egoism foreign to primordial experience. The liberty of signs, the infinitude of metamorphoses, in becoming systematically elaborated into a theory of the universe, loses its innocence; and in its arcadian form tends either to fantasy (Fludd) or the cult of the personality (Bruno).

The magus was a reformer as well as a wise man. He sought a type of knowledge which, abstruse and recondite, was nonetheless primarily practical and unphilosophical. He aimed at the regeneration of life in accordance with a purer inner harmony. He held out the hope therefore of an earthly salvation. Secular individualism was taken up and magnified into a new cosmic design. From the theoretically unlimited powers at man's command, a new society could be created, an order realising the harmonic code to which the cosmos clings for its coherence.

Much has been made of the practical, utilitarian aspect of the Hermetic search for original wisdom.⁸¹ The ideological tone of Hermeticism, however, stressed the 'participation' in, rather than control of, nature. Human aims could be realised through magical techniques but, in the process, these aims were themselves transformed. The Hermetic quest is a rediscovery of the natural 'harmony' of

which man is a part. It will ultimately overcome the necessity of employing any particular 'technique' to wrest from nature its inexhaustible store of energy. The Hermeticist does not place between himself and nature a mechanical contrivance as a means. This again betrays a 'mode of thought' typical of the cosmology of Fun. The magus strives, through symbolic/magical participation, for psychic mastery of the universe.⁸²

Bruno aimed to construct a wholly internalised map of the cosmos, in the form of a mnemonic code, that would allow him to participate in the whole of creation. The archetypal images and 'natural signs' alluded to by Albertus Magnus seem a crude and stumbling science in comparison. Bruno grasped the core of the magical tradition. As the subjectivity of the cosmos, human memory can be ordered and subdivided according to its own harmonic code. The cosmos is a kind of psychic system.⁸³ By engraving upon his own memory the astrological 'seals' preformed to the pattern of stellar forces, Bruno could call down into himself unlimited cosmic power.⁸⁴ He could himself become the divine being who stepped for the first time into nature from his heavenly abode.

The distinction, so important for us, between signs and symbols is dissolved by Bruno. His epistemology appears at times to be founded on a notion of immanence, at other times to be a version of transcendentalism.

Categories merge and reform in his thought. His fascination for modern writers lies less in his martyrdom than in his uncanny facility in the construction of images: the mediators between the world of nature and human subjectivity²⁵; constructions which interpenetrate in ways the scientific tradition was soon to discard.

He did not simply reject orthodoxy. His threat to authority was the more profound insistence on the unlimited freedom to create personal cosmic images. His pursuit of inner freedom was directly linked to the organisation of nature 'unmediated' by official religious, philosophical, artistic, or political institutions. The pursuit of personal pleasure (and pleasure is now firmly a qualification of the ego), and the development of knowledge of the world became identical. The distance between the sensible and the intelligible, which was only just being established in a new way, was completely abandoned. The longing predicated upon the absolute distinction between matter and spirit was finally quenched. No wonder Bruno seemed passionate! He proposed a cosmology, centred on the individuated ego, but retaining all the transformative charm of play.

Bruno's 'frenzy' is uncategorisable as a cultural event. His is the first 'absolute ego' of the bourgeois age, as he is its first schizophrenic; the paradigmatic

heroic martyr to the madness at the core of classical rationality.

Hermeticism did not die immediately upon Casaubon's definitive dating of its 'sacred texts'. Robert Fludd produced a typically extravagant programmatic cosmology three years after the Egyptian myth had been exploded.⁶⁶ And, as an 'underground' intellectual and spiritual movement, it persisted a good deal longer, exerting an obscure and gradually diminishing influence on the developing 'official' scientific worldview.⁶⁷

Cusanus and Bruno exemplify the complexity of Renaissance cosmography. Their thought moves in opposite directions. Cusanus cuts off all possible access to the transcendental and thus leaves man master of the created universe. Bruno projects man into the infinite and allows nothing to be placed beyond his reach. In the former, the secular spirit is confined within a finite universe and realises its longing for the absolute by apprehending nature's concealed harmony. The world becomes an object of beauty, an object which presupposes an individuated as well as a secularised 'observer'. The latter takes individual subjectivity as a new absolute and identifies it with the empirical universe. Instead of describing the ego as a detached point from which to observe creation, it is creation itself. These movements are geographically and politically specialised. The first belongs to Venice and

Padua, the second to Florence. One is associated with a capitalist transformation of trade, and the other with manufacture.⁸⁸

Burckhardt insists that the Italian Renaissance was a culture expressive of the individualism not only of the artist or scientist, but also of the Prince. The individual patronage of scholarship and the arts was part of a disintegrative process of competition among ruling families who scarcely bothered to claim legitimacy for their power.⁸⁹ Their brutal realism was in fact one of the most conspicuous aspects of the new secularism. Neither capitalism as a civilisation, nor an integrated and systematic worldview expressive of its fundamental principle, could thus develop. That step required the additional step of centralisation of authority and political organisation soon to become familiar as the nation state.⁹⁰

The 'transition' was discovered when the necessity of protecting the 'origins' of classical rationality became important; and that was only when suspicions of rationalism developing within bourgeois society could be identified. The Renaissance played an important role as a 'buffer' between the 'cold' logic of science and its calculative rationality on the one hand, and the symbolic hierarchy of feudalism on the other. The fundamental aesthetic categories of the Renaissance embody the political serenity

that the Prince failed to discover in the everyday social world. In either form, as patrician detachment, or as frenzied participation, it could never become a democratic vision of the world. As utopia or arcadia, pleasure was a oneness with creation which was limited to the enjoyment of a few. It was in that sense a politically expensive cosmology, one whose intoxicating freedom had first to be strenuously combatted before, much later, it could be allowed to re-emerge.

Notes to Chapter Seven

1. For an overview see Holton (1985)
2. Burckhardt's The Civilisation of the Renaissance in Italy was originally published in 1860. Hay, in Chastel et.al. (1982), p. 1. remarks the 'tenacity with which the categories established by Jacob Burckhardt have survived criticism'. See also Ferguson, in Werkmeister ed. (1963)
3. See above, ch.6, note 82.
4. Burckhardt (1921), p. 130.
5. Heller (1978), p. 200.
6. A conception often attributed, wrongly, to Freud.
7. Manuel and Manuel (1979) pp. 16-17.
8. Burckhardt (1921), p. 175, makes clear his view that, 'The Renaissance is not a mere fragmentary imitation or compilation, but a new birth'. Modern scholars have defined this new birth in terms of a revival in the systematic study of grammar and rhetoric, see Kristeller (1979), pp. 91-2.
9. Of course many Renaissance writers and artists remained self-consciously religious, but their religiosity increasingly expressed itself in forms separated and kept apart from secular culture. See Trinkaus (1970) and Heller (1978) for contrasting interpretations.
10. Cassirer (1963), p. 7, claims Cusanus provides a 'simple focal point' of Renaissance thought.
11. Cusanus (1954), p. 7. 'Distinctions, therefore, are only found to exist among things which are susceptible of "more" and "less":' ibid., p. 13.
12. Ibid., p. 8.
13. Cassirer (1963), p. 20. And Cusanus (1954), p. 70: 'it is absolutely impossible to arrive either at a maximum or a minimum'.
14. Cusanus (1954), p. 9.
15. Ibid., p. 78.
16. Ibid., p. 107. See also Poulet (1966), who views the Renaissance as a turning point in the imagery of the circle and sphere. Then: 'It is man who, equally with God,

discovers himself to be centre and circumference of an infinite sphere', *ibid.*, p. xxvii.

17. Cusanus (1954), p. 108. The 'earth' here represents the extended sphere immediately beneath the orbit of the moon.

18. *Ibid.*, p. 108.

19. Thus Manetti, 'to act and to know is the proper function of man alone', quoted in Trinkaus (1970), p. 250.

20. Quoted in Trinkaus (1970), p. 117.

21. *Ibid.*, p. 117. And Garin (1965), p. 45, also discussing Lorenzo Valla, epitomises his view as a 'suffusion of pleasure with morality', and more directly that 'Voluptas ought to be desired for its own sake'. Garin also quotes Poggio Bracciolini, 'I cannot understand how one can forget the body, for man is by no means pure soul': *ibid.*, p. 47.

22. Trinkaus (1970), p. 117.

23. Valla again, 'the pleasure that you derive observing the heavens and the stars is not greater than the pleasure that I derive looking at a beautiful face': *ibid.*, p. 123. Nor is pleasure amoral. Alberti (1969), p. 98, insists that 'pleasure leads to benevolence'.

24. Cassirer (1963), p. 79. Pleasure however as an indeterminate internal state does not prompt the ego into the world just to have it swallowed up by matter. Man must be 'completely turned towards the world and yet completely distinguish themselves from it': *ibid.*, p. 86.

25. Cassirer, Kristeller and Randall Jr. (1958), pp. 36-46. A revaluation of the isolated ego he justifies by opening St. Augustine's Confessions at random and chancing upon an appropriate text: 'And men go to admire the high mountains, the vast floods of the sea, the huge streams of the rivers, the circumference of the ocean, and the revolutions of the stars - and desert themselves', *ibid.*, p. 44. He closed the book, 'angry with myself that I still admired earthly things'. As Garin (1965), p. 21, points out this is quite unlike a monastic retreat. Augustinian inwardness, increasdingly devoid of religious content, becomes 'an exaltation of the world of man', it is 'the rediscovery of the whole richness of the inner life'.

26. Distinctions which in any event have little meaning for the Renaissance.

27. See particularly Alberti (1972), Gadol (1969), Hersey (1976), Wittkower (1962). Pythagoreanism was also significant in Renaissance literary movements, see Heninger Jr. (1974), and played a part in more explicitly cosmological works, see Heninger Jr. (1977), and Barkan

(1975).

28. Panofsky (1970), p. 29.

29. Ibid., p. 120. Gadol (1969), pp. 27-35.

30. Alberti (1972), p. 49: 'A painting will be the intersection of a visual pyramid at a given distance, with a fixed centre and certain position of lights, represented artistically with lines and colours on a given surface'.

31. Alberti (1972), p. 33. Gadol (1969), pp. 103-4: 'by the fifteenth century, the primary artistic aim was no longer to refer to something that transcends experience, but to represent visual experience itself'. The Flemish masters, emerging from the medieval metaphysics of light tradition, exploited luminosity rather than linear perspective, to this end.

32. Alberti, quoted in Panofsky (1970), p. 120. And it was individuals rather than symbolic figures that were to be depicted. See generally Abercrombie, Hill and Turner (1986), pp. 57-68.

33. Gadol (1969), p. 22.

34. Alberti provides a secular definition of beauty, for example, as 'the harmony and concord of all the parts achieved in such a manner that could be added or taken away or altered except for the worse': quoted in Wittkower (1962), p. 33.

35. Barkan (1975), pp. 130-31, Koenigsberger (1979), pp. 7-9. Pacioli in Divinia proportione, for which Leonardo provided illustrations, writes: 'from the human body derive all the measures and their demonstrations and in it is to be found all and every ration and proportion by which God reveals the innermost secrets of nature': quoted in Wittkower (1962), p. 15. This conception of arithmetical relations must be distinguished from the 'absolutely impersonal, abstract, interchangeable and measurable quantities', of classical science. See for example the confusion in Alfred von Martin (1944) from which the above quotation is taken, *ibid.*, p. 21.

36. Its very title, 'Revolution of the Heavenly Spheres' (not Heavenly Bodies), indicates his acceptance of much of traditional celestial physics. See Kuhn (1966), pp. 134-5, 146-7, 154. In spite of studying canon law at Bologna and medicine at Ferrara, Copernicus seems to have been less influenced by Cusanus than was, for example, Alberti. Scholastic assumptions are evident at many places in De revolutionibus. The universe, for example, is held to be spherical because it is 'the most perfect shape'. Duncan ed. (1976), p. 36.

37. And: 'the movement of a sphere is a revolution in a

circle, expressing its shape by the very action, in the simplest figures, where neither beginning nor end is to be found': Duncan ed. (1976), p. 38.

38. Ibid., p. 38. Less radical in their conclusions these formulations nonetheless display a Pythagorean influence. See Birkenmajer, in Bienkowska ed. (1973), pp. 38-46.

39. Stressed particularly by Ravetz (1965), pp. 47-55. 'Trepidation' was a measure of the long-term changes in the orientation of the earth and planets to the backdrop of 'fixed stars'. It was to account for this that Copernicus introduced a third motion of the earth, geometrically equivalent to the traditional astronomer's 'eighth sphere'.

40. In the Commentariolus, a simplified epitome of his new astronomy published before De revolutionibus, Copernicus had claimed his system could be completed, 'with fewer and much simpler constructions than were formerly used': Rosen (1971), p. 58. In fact the Copernican system when fully developed was geometrically as complex as the Ptolemaic but was much more highly systematised and integrated. Koyré (1973), pp. 43, 49.

41. 'But nothing is more repugnant to the whole pattern and form of the universe than for something to be out of its own place': Duncan ed. (1976), p. 45. In spite of the scholastic allusion to 'place' this is not unlike Alberti's conception of beauty, see above note 34.

42. Quoted by Birkenmajer, in Bienkowska (1973), p. 42.

43.. Rosen (1971), p. 20.

44. Ibid., p. 58.

45. The reception of Copernican ideas did not depend primarily upon technical arguments. See Johnson (1937), pp. 161-210, Burt (1932), p. 45, Bienkowska, in Dobrzycki ed. (1972), p. 80.

46. 'To be for or against Copernicus, then was to pro or contra on the question of human freedom, greatness, and dignify': Heller (1978), p. 375.

47. Febvre and Martin (1976), pp. 109-58.

48. Mandrou (1978), pp. 30-2, Febvre (1982), p. 30.

49. Mandrou (1978), p. 121.

50. Randall (1961, (1962), Schmitt (1983), pp. 16-17, Kristeller (1979), p. 99.

51. Randall (1962), vol.1, p. 75.

52. Quoted, *ibid.*, p. 75.

53. Ibid., p. 75.
54. Ibid., p. 75.
55. Ibid., p. 84.
56. Ibid., p. 204. Grant (1981), pp. 190-210.
57. Randall (1962), vol.1, p. 210.
58. Ibid., p. 210: 'Extension, far from being abstracted from things, it is presumed by them'.
59. Pleasure that is to say can be viewed historically as the secularisation of Happiness, or psychologically as the individuation of Fun.
60. Kristeller (1964) pp. 37-53.
61. Walker (1958), p. 6. And in a letter to Antonio Canigiani, Ficino writes: 'the universal soul and body, as well as each living being, conform to musical proportion... that nearly all living beings are made captive by harmony': Ficino (1975), vol.1, p. 143.
62. Walker (1958), p. 15. Thus, 'the heavenly spheres and their orbits make a marvellous harmony', Ficino (1975), vol.1, p. 45. A conviction fundamental to Copernicus, and even more explicitly to Kepler.
63. Ficino (1975), vol.1, p. 45.
64. Cassirer, Kristeller and Randall Jr. (1956), pp. 223-56, Kristeller (1979), p. 174.
65. Cassirer (1963), p. 118. Garin (1976), p. 27, summarises the Renaissance problem clearly, 'if human science is to be valid, iron laws of nature are necessary; but if universal and necessary laws of nature exist, how is free and creative human activity possible'.
67. Cassirer (1963), p. 84.
68. Ibid. p. 59. 'Man could not raise himself without ennobling the world': ibid., p. 66.
69. Ibid., p. 56.
70. Heller (1978) makes much of this distinction, but note Garin's remarks, (1965), pp. 3-5.
71. Febvre (1982), Part IV.
72. Manuel and Manuel (1979), pp. 238-40.
73. Yates (1964), pp. 1-10. An English translation of the

Corpus Hermeticum is available in Scott ed. (1924), and in part in Grese (1979), pp. 1-33.

74. A view clearly expressed by Weber, see for example Weber (1978), pp. 399-401.

75. Indeed movement is life, again reminiscent of the five-year-old. 'We know that there is nought but one sky, one immense ethereal region where those magnificent lights keep their proper distances in order to participate in perpetual life': Bruno (1977), p. 91. Bruno was not the first to extend the Copernican revolution to a picture of the created cosmos as actually infinite. Thomas Digges, less eloquently, had made a similar proposal. See Johnson (1937), pp. 161-70.

76. Garin (1976), p. 70.

77. Ibid., pp. 72-3, quotes A. Chastel: 'The universe appears as a gigantic organism in perennial vibration because the stars are the origin of the active forces in insensible matter, in plants and also in animals'.

78. Yates (1964), p. 6.

79. Ibid. p. 26.

80. Quoted *ibid.*, p. 136.

81. See particularly Yates (1964), (1966), French (1972), Pagel (1982), pp. 203-300, Rossi (1968), Walker (1958), Debus (1977), (1987). Its significance cannot be assessed simply in terms of its 'influence' on early modern scientists, a fascinating if controversial question which regrettably narrows the interpretive context. See for example the cautious remarks of Hall, in Chastel ed. (1982), and Heilbron (1979) pp. 26-30.

82. It is union with the whole of creation, rather than any limited practical end which is the goal of the hermeticist. In Bruno's eroticised cosmos the frenzied operator expands his ego to fill the world. 'By intellectual contact with that godlike object he becomes a god': Bruno (1964), p. 109. Paracelsus proclaimed a similar ambition; 'If man, the climax of creation, unites in himself all the constituents of the world surrounding him - minerals, plants, animals and celestial bodies - he can acquire knowledge of nature in a much more direct and "internal" way than the "external" consideration of outside objects by the rational mind': Pagel (1982), p. 50. See also Debus (1977), pp. 65-71. Knowledge is for both a function of the personality as a receptive microcosm rather than an intellectual operation.

83. Yates (1969), pp. 197-309.

84. For Bruno, reviving Llull's art of memory, recollection

is a process of mediation between himself and the cosmos. To adopt a modern analogy, the cosmos constitutes the universal 'hardware' and memory is the 'machine language' or software. The 'operator' can, by finding the appropriate 'code' enter himself into the system. The 'start-up' procedure for anyone unfamiliar with the system is bound to appear 'magical'.

85. Yates (1969), pp. 239-59, on Bruno's 'memory objects', and his 'unending search for a really operative organisation of the psyche'.

86. Yates (1964), pp. 432-55.

87. Yates (1972). Rossi (1968).

88. Heller (1978), pp. 50-61.

89. The 'calculative' rationality of the Renaissance was a form of political cynicism rather than a generalised 'rationality'. The Prince could not tolerate any potential centre of power to develop, 'no other individuality could be suffered to live and thrive but their own and their nearest dependents': Burckhardt (1921), p. 12.

90. For a detailed examination of the English case see Corrigan and Sayer (1987)

EIGHT

MECHANISM

How can the classical bourgeois 'scientific' worldview be grasped as a social relation? Efforts to establish a sociological account of the scientific revolution of the seventeenth century have met with only limited success. Merton's influential monograph provoked an extensive literature devoted to elucidating the social and cultural 'context' of such a revolution but did little to encourage a sociological analysis of the transformation in the conceptualisation of natural processes.¹ Different sociological traditions have offered other accounts of the historiographical background but have similarly taken the theoretical transition as 'given'.² It is difficult not to sympathise with Koyré's bewilderment, 'I do not see what the scientia activa has ever had to do with the development of the calculus, nor the rise of the bourgeoisie with that of the Copernican, or the Keplerian, astronomy'.³

At the same time, it has become increasingly obvious that the rise of science does not simply explain itself. Historians of science have become sensitive to the 'extrascientific' influences that shaped the central ideas of any of the major figures of the scientific revolution. These influences are most often viewed as the 'philosophical' or 'aesthetic' predispositions of particular personalities and as such require, apparently, no further explication. The most illuminating historical studies have been those which have attempted to trace such personal intellectual 'prejudices' to a variety of neglected intellectual traditions.⁴ Science, however revolutionary its implications, is thus understood as part of a continuous history of 'ideas'.

Science, once granted the privilege of its own inner 'rationality', can never be wholly reabsorbed into the totality of social life. Yet if this privilege is denied it, no amount of 'contextual' investigation can make it 'emerge' as a distinctive cultural phenomenon. This methodological difficulty is just one aspect of the general intractability of historical understanding which has been alluded to at various points. It is a difficulty which will be avoided (but not solved) by viewing science within the context of the four related cosmologies outlined here. In a general sense the content of the classical scientific worldview can be grasped in relation to the fundamental

structure of capitalism in the same way that the medieval worldview can be understood in relation to feudalism. It should be borne in mind, however, that this is by no means the complete picture. Science, as well as superseding the symbolic interpretation of nature, established itself by repressing in its own way the prodigal disorder of fun.

The language of hierarchy and release provided a common context within which feudalism as a 'social structure' and as a 'cosmology' could be described. In fairly obvious ways the medieval worldview encourages a 'sociological' reading of its own content. The notion that nothing stands on its own, that all appearances are connected symbolically with an ordered hierarchy of essences discourages the tendency (central to the classical scientific tradition) to 'explain' isolated phenomena in terms of specific chains of cause and effect. This is just the approach which, initially, can be used to grasp the nature of the scientific cosmology. An 'interpretive' rather than a 'scientific' understanding of its specific form is a prerequisite of any possible 'explanation' of its emergence within western society.

Fun is a society without exchange, without labour and without money, while happiness is a specific order of such necessities, an order defined within the limits of personal relations. The 'society' of fun is an hermetical self-sufficient body, that of happiness a hierarchy of

dependence. Capitalism (and its scientific worldview: pleasure) is primarily a system of relations among commodities. And it is just in a proper understanding of commodity relations that we can see the fundamental features of classical science.

For the sake of clarity the general characteristics of the scientific revolution can be summarised in advance. Koyré describes the transition from the medieval to the classical scientific view of the universe as 'the destruction of the cosmos' and its replacement by the 'geometrisation of space.'⁵ There is, that is to say, a 'substitution of the homogenous and abstract - however now considered as real - dimension space of the Euclidean geometry for the concrete and differentiated place-continuum of pre-Galilean physics and astronomy.'⁶ Rather than a 'qualitatively and ontologically differentiated whole', there is an 'open, indefinite, and even infinite universe, united not by its immanent structure but only by the identity of its fundamental contents and laws.'⁷ It is furthermore 'only in this abstract-real (Archimedean) world, where abstract bodies move in an abstract space, that the laws of being and of motion of the new - the classical - sciences are valid and true'.⁸ The new science seeks to formulate laws of nature which are everywhere the same, to absorb qualitative distinctions into an absolutely general theory of matter in motion, and give expression to the emergent totality of the universe as a system of forces.

This conception of a universal order is fundamental also to an understanding of capitalism as a system of commodity relations. Marx describes the capitalist mode of production first of all as an 'immense collection of commodities',⁹ each one of which is an 'external object' whose 'use value is wholly independent of its exchange value'.¹⁰ All the sensuous qualities which distinguish one object from another and in relation to which the human subject satisfies a multiplicity of needs, is suppressed in favour of a purely quantitative measure of value; 'As use-values, commodities differ above all in quality, while as exchange-values they can only differ in quantity'.¹¹ Commodities are marked, therefore, to a peculiar degree, by abstraction. 'Not an atom of matter enters into the objectivity of commodities as values' argues Marx, conceptualising, rather as Galileo had the dynamic relations among bodies, exchange relations as both abstract and real.¹²

If commodities are pure quantity then they vary only in the relative proportion of their 'common substance'. In terms of their exchange-values, 'all commodities are merely definite quantities of congealed labour time'.¹³ Thus, although human labour is infinitely varied in terms of its intrinsic qualities, for the world of commodities, it is 'reduced to human labour pure and simple'.¹⁴ Labour power ceases to be distinguished by particular human attributes,

every commodity contains 'the same kind of labour, human labour in the abstract'.¹⁵ Thus, as soon as an object emerges as a commodity 'it changes into a thing which transcends sensuousness'.¹⁶ Labour power, in itself being transformed into a commodity, creates only 'alienated' objects which, lacking specifically 'human' attributes, appear possessed of the necessity of nature itself. Or rather, nature, from the perspective of the bourgeois world, is endowed with the necessity, universality and abstractness of the commodity.¹⁷

Of the commodities filling the bourgeois world labour power has a special significance as the source and measure of all others. Labour power cannot be used, however, in actual exchange, as a 'general equivalent' of any commodity. As a real process, exchange requires an 'objectification' of the process of labour, that is as money. Labour power and money belong together as the essential commodities of the capitalist world, the commodities in the absence of which none others could exist. They form, so to speak, the framework for the whole process of circulation.

Equivalence, however, is not identity. The universality of labour power and money, the fact that it is everywhere the same and provides the essential framework for exchange, should not obscure their separate tendencies. They refer to two quite separate dimensions of the social

world, and from them are created the two fundamental axes of the classical scientific worldview. Money we might say is the 'space' of the capitalist social world. In place of the limited 'personal' space of exchange in feudal society money as a commodity generalises the circulation of all commodities. Money 'infiniteises' space. It allows all existing commodities to enter into relations of exchange. It is indifferent to the physical limitations of space. In the place of the qualitatively differentiated human 'space' it constructs an ideal, empty, extension through which can pass every possible commodity. Money therefore, 'is the absolutely alienable commodity, because it is all other commodities divested of their shape'.¹⁹ Labour power, on the other hand, has a special relation to time. It similarly divests human time of all its 'irrational' qualities and substitutes for it an absolutely uniform duration, an infinite extension containing all possible interactions.

In terms of the classical scientific worldview, the connection between space and money is of particular importance and has been alluded to by a number of writers.²⁰ It would be misleading, however, to suggest that money in some way 'led to' the scientific revolution. We have already seen that money in feudal societies, just because it was part of a system of personal relations, could be seen as embodying fundamental aspects of its cosmology. It is only when money becomes a general

commodity that we can see in it the formal aspects of the 'geometrisation of space'. Marx, viewing the development of society as the movement of a totality, points out therefore that 'money does not create the antitheses and contradictions' of capitalist society but rather it is 'these contradictions and antitheses which create the seemingly transcendental power of money'.²¹ It is only therefore within capitalist society that 'money is the imperishable commodity'.²²

The natural world, the universe conceptualised by the scientific revolution, is best understood sociologically as a universe 'filled with commodities'. Individuated 'objects' are distributed within the infinite extension of space and time and ordered by simple underlying and universal laws of nature. It is a world 'liberated' from the arbitrary or the subjective; reducible in the final analysis to matter in motion. Neither 'matter' nor 'motion', however, can be taken as conceptual 'givens', and to understand the social logic of the classical worldview its fundamental scientific terms must be more fully reconstructed.

Matter

It is altogether odd to discover in the greatest of modern Pythagoreans, Johannes Kepler, the spokesman of a new materialism. At first sight Kepler appears to belong

completely to the world of the Renaissance. There is in him a conviction as powerful as we find in Ficino, or Alberti, or Bruno; a conviction that the cosmos is an immanent order of harmonic relations. So strong was that conviction indeed that Kepler, a more gifted mathematician than any of his immediate predecessors, began his 'scientific' career by 'explaining' the Copernican system exclusively in terms of such relations.

Kepler's intellectual ambition was nothing less than to reveal 'the constructional laws which, in the mind of the Creator, directed the creation of the universe'.²³ The problem of planetary motion, for the first time treated systematically by Copernicus, left in Kepler's mind a number of unsolved problems. The most conspicuous of these were the number and spatial distribution of the planets. Why should there be just six, and why should their orbits about the sun fall in precisely the paths that they did? Clearly Kepler 'considered it perfectly reasonable to seek the architectonic principles which determined the structure and composition of the Cosmos'.²⁴ His initial solution, given in his Mysterium Cosmographicum which was published with his teacher Maestlin's help in 1596, was to produce the most beguiling of all cosmographical maps. Kepler was quite convinced that 'the almighty and infinitely merciful God, when he created our moving world and determined the order of the celestial bodies, took as the basis for his construction the five regular bodies which have enjoyed

such great distinction from the time of Pythagoras and Plato down to our own day'.²⁵ It was in fact a three dimensional 'model' of the solar system. There were six and only six planets because there were, and could only be, five regular solids. The relative distances of the orbits of the planets could be represented as lying within the spheres consecutively inscribed within, and circumscribed about, a unique arrangement of these solids.²⁶

The significance of this work, however, was somewhat different to those inspired by Alberti or Ficino. As the world is 'the corporeal image of God'²⁷, Kepler was not content with the revelation of a formal harmony. His 'model' had to replicate the real physical relations existing among the planets. It was the first genuinely systematic cosmology of the scientific epoch. To demonstrate the true system of the world, Kepler was forced to pass 'from astronomy to physics or cosmography'.²⁸ Kepler in fact rejected the numerological tradition, at least in its more florid Renaissance examples. In an important polemic directed against Robert Fludd, Kepler defended the use of mathematics constrained by realistic physics. Mathematics ought to be purely instrumental and logical, it could not itself 'contain' reality so that the truth of the world could not be grasped directly through mere arithmetical manipulation.²⁹ For Kepler, mathematics was a rational means to clarify and present a physical conception.³⁰

In attempting to outline a physics of the cosmos, Kepler also rejected the Aristotelian tradition which subsumed physical properties under an ontology of place.³¹ His search for an architectonic cosmic principle united heaven and earth within the same uniform space. It was the space within which terrestrial mechanics was valid.³² In extending the physicality of the earth throughout the visible universe, Kepler was heir to the arcadian fantasy. Celestial bodies were no different, qualitatively, to the earth, and therefore could be understood in terms of the laws regulating familiar matter. Kepler's physical realism was responsible for the completion of the first phase of the Copernican Revolution. It was inconceivable to him that the 'motive force' ordering the complex interplanetary relations should emanate from a geometrical point. In the original Copernican scheme, the centre of the earth's orbit, rather than the physical body of the sun, occupied the centre of the universe. Kepler objected that 'a mathematical point, whether it be the centre of the world or not, cannot move and attract a heavy object'.³³

It was the physical magnificence of the sun which, bathing the heavens in light and heat, held the celestial bodies in their proper paths. The physical centrality of the sun, however, was not fully explicated in the first version of Kepler's cosmology. In fact his initial exercise in physical harmonics was only a limited success. Impressed

by the advances in observational astronomy made by Tycho Brahe, Kepler could not ignore the imperfect 'fit' between his three dimensional model and the observed paths of the planets, especially that of Mars.³⁴ He became briefly, and somewhat uneasily, Tycho's assistant, appropriating for his own use an enormous mass of observational data on the latter's death.

Mars became the 'test case' for his new celestial physics and the centrepiece of his Astronomia Nova. Referring all planetary motions to the actual position of the sun, necessitated at first the reintroduction of all the unwelcome geometrical complications the elimination of which had been the driving force behind the Copernican Revolution. To understand the motion of the planets as instances of local motion, however, (as the result of the application of a continuous force which had its origins in the body of the sun) left him no option. The new point of view had the advantage at least of a plausible intuitive explanation for the apparent variation in the speed of the planets. The variation, in fact, was quite real and depended simply upon the varying proximity to the sun.³⁵ The historic assumption of uniform motion was abandoned, and with it the necessity of 'artificial' mathematical constructions.

Kepler conceived of the force propelling the planets as having a physical aspect, rather than being exclusively

material in nature. He could still talk of a 'soul' or 'spirit' animating its body and being the cause of its light as well as the source of its physical power. More generally he likened its force to the power of a magnet.³⁴ Yet Kepler's revolutionary astronomy was allied to conventional physics. The sun's power is a continuously acting raptus, a solar wind which 'pushes' the planets around in their orbits. It is not an 'attractive' force. Kepler pictured the sun as the central hub of a large rotating wheel. The trailing spokes, spiralling outwards, swept the planets around its centre. To account for the variations in the speed of planetary motion, Kepler had then to introduce both a resisting inertia inherent in each body and particular 'local' motive forces belonging to each planet.³⁷ The complications multiplied to the point where it appeared likely that the new astronomy would be stillborn.

Having abandoned uniform motion in one respect, Kepler finally saw that the simple solution to both the cosmographical and the mathematical problems lay in abandoning it in a more radical sense. The doctrine that celestial motion was of necessity circular had been central to Copernican as well as Ptolemaic astronomy. But if astronomy was to be an extension of terrestrial physics this need no longer be the case. Upon the earth elliptical and parabolic motion was commonplace; if this were the case also for celestial motion, then the orbits of the planets

could be simply understood as ellipses within which the sun formed one focus. The simplicity of a uniform and universal force replaced the simplicity and universality of form. The world system was the consequence of a force acting everywhere in the same way. The speed of the planets depended simply upon the quantity of force acting upon them. All celestial bodies could be considered as qualitatively identical, varying only in terms of their inherent power to resist the force of the sun's raptus.

Kepler's notion of inertia was therefore of a resisting power. The ontological distinction between rest and motion was still fundamental to his physics. Matter 'preferred' rest, and its inertia was related to its gravity. All bodies, by virtue of their materiality alone, possessed a power of 'mutual affection': 'If two stones were removed to some place in the universe, in propinquity to each other, but outside the sphere of force of a third cognate body, the two stones, like magnetic bodies, would come together at some intermediate place, each approaching the other through a distance proportional to the mass (moles) of the other'.³⁶ This is not yet a theory of universal gravitation. The nature of the force retains a spiritual quality and, more significantly, is not itself responsible for the movement of the planets which depends upon the unique force of the centralised sun.

Kepler's great 'scientific' success, his three laws of

planetary motion, were buried amidst the many false starts and blind alleys of his major works.³⁹ They were for him no more than indicators of the validity of his underlying cosmic vision. Buoyed up by his success in resolving the long standing enigma of the orbit of Mars, Kepler returned to the 'deeper' problem of the harmonic structure of the solar system. His fresh insight into elliptical orbits, and the more accurate observational material, prompted a fresh approach. The harmonic structure of the cosmos could be captured most completely in musical notation. A 'note' determined by its angular velocity could be assigned to each planet. Then, by comparing its lowest value (when its velocity was least, at aphelion) with its highest value (at perihelion), a musical 'interval' describing the eccentricity of the orbit could be computed. Kepler found indeed that the ratios of such intervals were almost entirely consonant.⁴⁰ The Harmonice Mundi completed the task begun in the Mysterium Cosmographicum and was quickly forgotten. In spite of his own deepest instincts, Kepler had turned astronomy into a physical science.

Motion

Galileo's mode of universalising nature moved in the opposite direction to Kepler's. Rather than project terrestrial phenomena into the heavens, he united them by absorbing the celestial into the earthly and gave a

scientific twist to the utopian vision.

Galileo began his professional career as a fairly orthodox Aristotelian.⁴¹ But he was already a convinced Copernican when, in 1609, he heard of a Dutchman's success in fabricating a telescope.⁴² Galileo immediately constructed one for himself, improving it several times before turning it upon the heavens. The immediate results of his observations, published in his Siderius Nuncius, was to dramatically confirm the physical assumptions of Kepler's astronomy. The general and apparently inescapable conclusion to which Galileo was drawn was that celestial bodies were no more 'perfect' and incorruptible than the earth. He could thus clearly distinguish the shadows cast by the light from the rising sun falling across the moon's irregular surface.⁴³ Not only were there 'protruberances and gaps' on what should have been a perfectly smooth surface, but they were sufficiently large to be able to estimate their dimensions.⁴⁴ Even more damaging to the traditional cosmography, was the discovery of Jupiter's four 'moons'. The great aesthetic appeal of the pre-Copernican system was its unification about a single centre. To discover not only that the sun and earth were centres of rotation, but other planets as well, seemed to introduce unacceptable asymetries. Many of course denied the 'evidence', but they found it difficult to persist in their objections and even more difficult to resist the implication of the spectacular increase in the number of

visible stars. The milky way, resolved into countless separate points of light, challenged the old theological assumption that God had placed them there as a cosmic ornament that man might enjoy and contemplate.⁴³ Would God have been so prodigal as to fill the universe with unobservable objects? The argument became strained.

Three years later, his Letters on Sunspots demonstrated in a series of careful observations that blemishes also occurred regularly on the sun's surface.⁴⁴ But in the longer term the observations through which Galileo became celebrated were not his most important contribution to the formation of the new worldview.

It was in mechanics rather than astronomy that Galileo's daring showed itself to its fullest effect. His arguments served to make the Copernican cosmos physically plausible. In making the rotation of the earth a physical, as well as optical, necessity Galileo destroyed the 'common sense' assumptions which had sustained scholastic science.

In the fourteenth century Oresme and Buridan had considered the diurnal rotation of the earth as an interesting logical possibility. But while the optical evidence could be interpreted equally on the assumption of a stationary or a rotating earth, they did not for a moment suppose such a rotation to be an actuality.⁴⁵ Copernicus, on the other hand, had certainly taken the earth's rotation

to be a real phenomenon, and Galileo recognised this.⁴⁸ Yet Copernicus had made no attempt to provide physical arguments to support his belief and it was this deficiency that Galileo set out to make good, particularly in the brilliantly argued 'Day Three' of his masterpiece Dialogue on the Two Great World Systems.

The physical objections to accepting the earth's rotation were of two fundamental kinds. The first raises the question of the simultaneous rotation of everything upon the earth's surface, and the second points to difficulties associated with the notion of 'centrifugal' force. These were both arguments which had weighed heavily with Oresme.

If the earth revolves, moving from west to east, and completes one revolution every twenty-four hours then why does a perpetual wind not blow from east to west? How do birds succeed in flying equally well in any direction? Why does a heavy object dropped from a tower, or the mast of a sailing ship fall parallel to the tower or mast rather than 'behind' it? And, a more recent example discussed by Tycho Brahe, if two similar cannons are fired, one due west, the other due east, why should the shot be carried a comparable distance in each case?⁴⁹ Kepler had answered these objections by supposing the earth is possessed, like the sun, of its own dynamic force, its raptus, which holds everything close to its surface 'as if by chains'.⁵⁰

Galileo's solution was more radical. There is no need of a crude 'mechanical' explanation of motion in these cases. Without recourse to any special 'scientific' demonstration or specialist knowledge, Galileo shows that our everyday understanding of motion, when fully analysed, is perfectly compatible with such phenomenon. Traditional 'physics' had not dealt with rotation at all and Galileo points out that it does not fit into the Aristotelian categories of 'natural' or 'violent' motion. It is movement without change of place and therefore could not be understood as if it were a special case of rectilinear motion. Instead, Galileo offers an account based upon a simple 'thought experiment'.⁵¹ A perfectly spherical hard ball will 'naturally' roll down a smooth inclined surface. It will, furthermore, accelerate as it does so.⁵² And, if already in motion, it will gradually slow down if the plane is inclined, even very slightly, upward. Suppose, rather than any actual inclined plane, an absolutely horizontal, frictionless surface. Clearly upon such a surface, discounting any extraneous forces, a ball would continue in its state of motion indefinitely; 'if such a space were interminate, the motion upon it would likewise have no termination, that is, would be perpetual'.⁵³ Equally, a ball at rest would remain at rest. In contrast to Kepler, Galileo does not assume that matter has a preference for the state of rest. Indeed, by defining motion as a continuous state rather than a condition of change Galileo

assumes an absolute indifference of matter to the distinction between movement and rest. Matter will naturally preserve its state of motion, including rest, unless acted upon by an external force.

This anticipates but does not accurately present the classical law of inertia.⁵⁴ Rectilinear motion is not preserved. To see this we have to understand the meaning of an 'absolutely horizontal plane'. One possible definition would be a tangent to the earth's surface at any particular point. Now, as movement in any direction upon such a plane would in fact be away from the earth's centre, motion upon it would naturally be diminished. The only motion which could conceivably be conserved would lie along a plane upon which every point was equidistant from an unmoving centre: that is, upon the surface or 'parallel' to the earth's surface. It is in fact circular motion which is conserved, and it is for this reason that the traditional objections to the earth's rotation fail. No force need be applied to a projectile, or anything not permanently anchored to the surface of the earth to ensure that it will 'participate' in the earth's motion. As the truly 'natural' motion of rotation, all share equally and effortlessly in its perpetuation.⁵⁵ What Galileo does come very close to comprehending is the purely 'secular' significance of circularity. However important empirically, circularity should not be viewed as an inherently privileged form: it is simply the consequence of two forces interacting upon

each other: the tendency of motion to conserve itself, and the tendency of matter to cohere about its own centre.⁵⁴

Nor did Galileo formulate the classical conception of gravity. The tendency of matter to cohere about its own centre was not generalised into a new cosmic principle. Indeed, he did not use it in a systematic way to counteract the other major argument against the earth's rotation. Small objects placed on the rim of a spinning top are thrown off at a tangent by its rapid rotation. Rotation seems in some way to 'counteract' gravity. Why are we not similarly shrugged off the surface of the rapidly spinning earth? ⁵⁷ The answer requires the same leap in scale as the Copernican insistence that the 'fixed stars' lie at an inconceivably vast distance from the earth (and therefore show no parallax). The earth's rotation does indeed make us 'lighter' than we would if it were stationary, but such is the immensity of the earth's 'gravity' that its speed of rotation cannot fling us into space.

Resisting Bruno's radical infinitisation of space, Galileo could not grasp the full significance of his own mechanics. It was only by enclosing the universe that, ultimately, its order was guaranteed. And in spite of his mechanical account of circular motion, it retained in his work the aura of perfection.⁵⁸ It is however an earthly perfection, a feature of the empirical world itself.

Perpetual recurrence, the conservation of quantity in a specific ideal form, describes an important aspect of the new society as clearly as it laid the foundations of a new mechanics. The social logic of Galileo's physics becomes apparent when it is contrasted with the impetus theory to which, at the outset of his career, he was committed.³⁹ In the feudal scheme, there is no 'conservation' principle and the entire process of 'exchange' (change of place) occurs only under the continuous application of an external force. With Galileo, nature becomes genuinely self-moving. Once set in motion, the entire dynamic system of the world continues without the necessity of any additional 'motive force'. This, of course, is just the character of exchange in a capitalist society.⁴⁰ To reach his fundamental insight, Galileo had to abstract from the world of real experience 'ideal' conditions of perfectly hard surfaces and frictionless planes. In the social world, as we have seen, the commodity form is a similarly 'ideal' reality within which all particular qualities are swallowed up into pure quantity. Money, in effecting this abstraction for us, has a special affinity with thought. It behaves with a certain philosophical cunning to reveal the necessity (and conceal the origin) of our more immediate social 'world system'.

Force

Kepler and Galileo introduced into the analysis of nature, incompletely and imperfectly, a new social logic. Secular realism (matter/labour) and a principle of conservation (motion/money) became the indispensable 'preconditions' of a scientific cosmology. Newton, developing the view of nature as a system of interacting forces, produced such a cosmology.⁶¹

Once again, the purely historical problem can be avoided. Newton as a personality remains hidden. His 'science' was clearly only part of an intellectual endeavour as baffling to our notion of 'reason' as the work of Bruno or Kepler. The 'how' of the Newtonian Revolution however is, for the moment, less significant than the 'what'.⁶² The shock of discovering that he was not a cool-headed rationalist should not distract us from the central significance of the genuine rationality of his systematic science. In arguing that this rationality is itself the expression of something 'extra-scientific', need not lead us into biographical reconstruction or an endless search for the specific 'sources' of his various arguments. It is not what was 'in his mind' so much as the 'form' into which it was shaped as a 'finished product' that is of immediate interest.

Newton's 'mathematical way' introduced quantitative analysis into the scientific description of the 'system of the world'. The reasoning involved did not aim at reproducing the force of geometric demonstration alone, but sought to establish the limits of variation of actual physical phenomenon in such a way that the empirical world could be deduced from its fundamental theorems.⁴³ This involved an initial simplification, in which physical intuition played a part as vital as that of mathematical acuity. The complexity of the material world was at first reduced to a 'one-body-system' in order to clarify the elementary forces implied in our most primitive conception of matter. Such a body is distinguished by 'extension, hardness, impenetrability, mobility and forces of inertia', but not of necessity by gravity.⁴⁴ Gravity is a universal but not essential characteristic of matter as such. It can be detected only relationally and has no meaning in reference to a universe containing only a single body.

His attribution of inertia to an isolated body is a corollary of his notion of 'absolute space' which, 'in its own nature, without relation to anything external, remains always similar and immobile'.⁴⁵ It is possible, in other words, to conceptualise an isolated body as in motion, in relation to such a body in absolute space (rather than an ideal ball on a perfectly smooth inclined plane). Galileo's principle of inertia could be seen as a special case of a more general law which applied universally to rectilinear

motion. By assuming that the relation among bodies was governed by a simple inverse square law of gravity Newton was able to demonstrate the mathematical necessity of Kepler's laws of planetary motion."⁶

In spite of the dazzling success of the mathematisation of the general dynamics of the solar system, Newton's Principia fell short of what many had already come to expect from a 'scientific explanation'. Few of his contemporaries felt able to challenge his mathematical reasoning and were consequently less critical of his scientific account of nature than they might have been.⁶⁷ Even so his ascetic denial of causal explanation could hardly go unremarked. Even more rigorously than Galileo, he eschewed 'hypotheses',⁶⁸ and refused to be drawn as to the 'cause' of gravity. 'What I call attraction may be performed by impulse, or some other means unknown to me', he suggests. And attraction is similarly just 'any Force by which Bodies tend towards one another, whatever be the Cause.'⁶⁹ For many this was hardly sufficient. What 'mechanism' was responsible for the effects Newton had so brilliantly analysed? In allowing for the possibility of 'action at a distance', was he not allowing disreputable 'occult powers' an unnecessary role in an otherwise exemplary science? A modern scholar goes so far as to describe Newton's masterpiece as 'less a battle-cry for the new science than a confession of failure.'⁷⁰

Yet 'gravity' was no more or less occult than any of the familiar 'primary qualities', the underlying mechanism of any of which was unknowable and accepted without difficulty as the 'givens' of nature.⁷¹ Newton's instincts on the matter were, later, fully justified. The 'rationality' of science, as of human action generally, depend not only upon a context of untestable assumptions but upon the 'irrationality' of values.⁷²

The immediate impact of Newtonian science, however, did not depend only upon his general solution to the problem of motion. In addition to uniting heaven and earth in a coherently ordered system governed by a simple, quantifiable law, he extended this order 'downwards' as a general theory of the structure of matter. The primary qualities which distinguished the isolated single body in space could be used to designate the nature of any elementary particle of matter whatever. The 'stuff' from which nature was composed, that is to say, was ideally like space itself: simple and 'conformable to itself'. Primary matter was everywhere the same and the bodies constructed from them differed one from another by virtue of the quantity and internal organisation of the matter they contained. Newton's corpuscular philosophy was expressed with particular clarity and freedom in the Queries appended to his Opticks. In the justly famous Query 31, he writes: 'it seems probable to me, that God in the beginning formed matter in solid, massy, hard, impenetrable, moveable

particles, of such size and figure, and with such other properties, and in such proportion to space, as most conduced to the end for which he formed them.'⁷³ Matter was ideally reducible to 'inertially equivalent' particles, each, whatever its 'figure', the possessor of precisely the same degree of 'materiality' as any other.⁷⁴

The differentiation and cohesion of bodies depended upon interparticulate forces of the kind (inertia and gravity) that ordered the motion of celestial bodies. Newton was much less successful in specifying quantifiable laws in relation to such forces. The Opticks was experimental where the Principia had been mathematical and inspired a scientific tradition in many ways at odds with the philosophical intentions of its founder. The 'mechanical philosophy' borrowed the authority of Newton but tended to a cruder form of 'corpuscularism'.⁷⁵ Newton's 'third law' seemed to provide a simple mechanical principle through which to explain almost all events. If quantity of force was conserved, impact only redirecting and never destroying motion, then a physics of contact might be presumed to explain the continuity and coherence of nature.⁷⁶ The perpetual interaction of particles was conceived as a 'market' where forces were exchanged and every outcome was governed by a simple law of equivalence.

The idea of mechanism is not to be confused with that of a 'machine'. Mechanism, as a characteristic of the

classical scientific worldview, should be understood as the view that the empirical world is the 'resultant' of a number of continuously interacting 'forces'.⁷⁷ It is by no means limited to the theory of the 'transmission' of such forces through physical contact. The 'machine', especially sophisticated clockwork, had a privileged position during the seventeenth and eighteenth centuries as an illustration of the providential design of nature, rather than as itself an architectonic 'model' of the cosmos.⁷⁸ The machine is not therefore, in itself, a construct from which genuine knowledge of the world can be derived. 'Forces' remain unknown: they constitute the irreducible relationships among particles of matter.

As well as the 'passive' force of inertia Newton also sought to elucidate the operation of the 'active' forces of gravitation, chemical 'attraction' and fermentation.⁷⁹ The most important technique of investigating small scale interparticulate forces he considered to be the observation of the interaction between light and matter.⁸⁰

The cosmos of capitalism is a mechanism not because it is constructed upon the analogy of a 'machine' (no matter how sophisticated) as an instrument of manufacture, but because its order is the outcome of the continuous interaction among indwelling forces. Nature can be conceptualised as an autonomous system of 'exchange-

relations' whose fundamental ordering principles must simply be accepted as 'given'.

The cosmology of happiness is focused upon use-value; upon the 'irrationality' of the human subject. Feudal relations are always 'personal' relations. The triumph of exchange relations, their separation from any human 'value', is expressed therefore in a new vision of the cosmos as a realm of universality and necessity.

Notes to Chapter Eight

1. R. K. Merton (1970); for subsequent literature see particularly C. Webster ed. (1974) and (1975) pp.484-520.
2. For example, E. Zilsel, 'The sociological roots of science', American Journal of Sociology 47 (1942), pp. 544-562. F. Borkenau, 'The Sociology of the Mechanistic World-picture', Science in Context, vol.1, no.1, (1987) and from a different point of view G. N. Clark (1949), and more recently Margaret C. Jacob (1976) and (1981). Compare the work of Freudenthal (1986) and Shapin and Schaffer (1985).
3. Koyré (1965), p.6: 'I am convinced that the rise and growth of experimental science is not the source but, on the contrary, the result of the new theoretical, that is, the new metaphysical approach to nature that forms the content of the scientific revolution of the seventeenth century, a content which we have to understand before we can attempt an explanation (whatever this may be) of its historical occurrence.' A view also expressed forcefully in Burt (1924).
4. See particularly the work of Yates (1964), (1966) and (1975), and Rossi (1968).
5. Koyré (1965), p. 6.
6. Ibid., p. 7.
7. Ibid., p. 7. Koyré notes the sharp distinction between the classical scientific worldview and that of the Renaissance, as well as that of the medieval period. It 'implies the disappearance - or the violent expulsion - from the scientific thought of all considerations based on value, perfection, harmony, meaning, and aim, because these concepts, from now on merely subjective, cannot have a place in the new ontology.' Ibid., p. 7.
8. Ibid., p. 8. Emphasis added.
9. Marx (1976), p. 125.
10. Ibid., p. 125.
11. Ibid., p. 128. Thus 'the exchange relation of commodities is characterised precisely by its abstraction from their use-values.' Ibid., p. 127.
12. Ibid., p. 138. In this 'it is the direct opposite of

the coarsely sensuous objectivity of commodities as physical objects.'

13. Ibid.. p. 142. Marx quotes the Newtonian experimentalist, Benjamin Franklin, approvingly, 'Trade in general being nothing else but the exchange of labour for labour the value of all things ... is most justly measured by labour.'

14. Ibid.. p. 128.

15. Ibid.. p. 126.

16. Ibid.. p. 163.

17. Thus the 'mystical character of the commodity' has nothing to do with its use-value, but consists 'simply in the fact that the commodity reflects the social characteristics of men's own labour as objective characteristics of the products of labour themselves.'

Ibid.. p. 164-5. See Schmidt (1971), pp. 63-75.

Lukacs (1968), p. 87, expresses Marx's idea as follows: 'a world of objects and relations between things springs into being (the world of commodities and their movements on the market)'. A world which organises itself into a system of forces: 'they confront him as invisible forces that generate their own power'. A situation in which 'the personality can do more than look on helplessly while its own existence is reduced to an isolated particle and fed into an alien system': *ibid.* p. 90.

18. Marx (1973), pp. 143-4.

19. Marx (1976), p. 205.

20. For example Toennies (1955), p. 81: 'In the scientific system (concepts) come together in much the same way as commodities do on the market. A supreme scientific concept that no longer denotes something real, e.g. the concept of the atom or the concept of energy, is similar to the concept of money'.

21. Marx (1973), p. 146.

22. Ibid., p. 149.

23. Koyré (1973), p. 122

24. Ibid., p. 122. Holton (1973), p. 71.

25. Koyré (1973), p. 128. Kepler notes in the same passage that even at this early date: 'I was already trying to ascribe the Sun's motion to the Earth by virtue of physical, or if preferred metaphysical reasons, as Copernicus had done by virtue of mathematical reasons'.

26. Koyré (1973), p. 146, quotes Kepler as follows: 'The

Earth (the sphere of the Earth) is the measure for all the other spheres. Circumscribe a Dodecahedron about it, then the surrounding sphere will be that of Mars; circumscribe a Tetrahedron about the sphere of Mars, then the surrounding sphere will be that of Jupiter; circumscribe a Cube about the sphere of Jupiter, then the surrounding sphere will be that of Saturn. Now place an Icosahedron within the sphere of the Earth, then the sphere which is inscribed is that of Venus; place an Octahedron within the sphere of Venus, and the sphere which is inscribed is that of Mercury. There you have the reason for the number of the planets'. (emphasis added). See fig., from Braun and Abel (1971).

27. And 'The soul is the incorporeal image of God': quoted by Caspar (1959), p. 378.

28. Koyré (1973), p. 133. Holton (1973), p. 72. On Kepler's scientific realism more generally see Jardine (1984).

29. Yates (1964), pp. 440-43. W. Pauli, in Jung and Pauli (1955), p. 196: 'For it is for the vulgar mathematicians to concern themselves with quantitative shadows; the alchemist and Hermetic philosophers, however, comprehend the true core of the natural bodies'. Kepler, Fludd claimed, 'excogitates the exterior movements of the created thing' whereas he (Kepler), contemplated, 'the internal and essential impulses that issue from nature herself': *ibid.*, pp. 196-7 (emphasis added). On the Fludd-Kepler debate see also Debus (1978), pp. 123-26.

30. Holton (1973), p. 72.

31. Caspar (1959), pp. 136/7. His rejection was less radical, but more specific than Bruno's: *ibid.*, p. 385.

32. Holton (1973), p. 71.

33. Quoted by Holton, *ibid.*, p. 73.

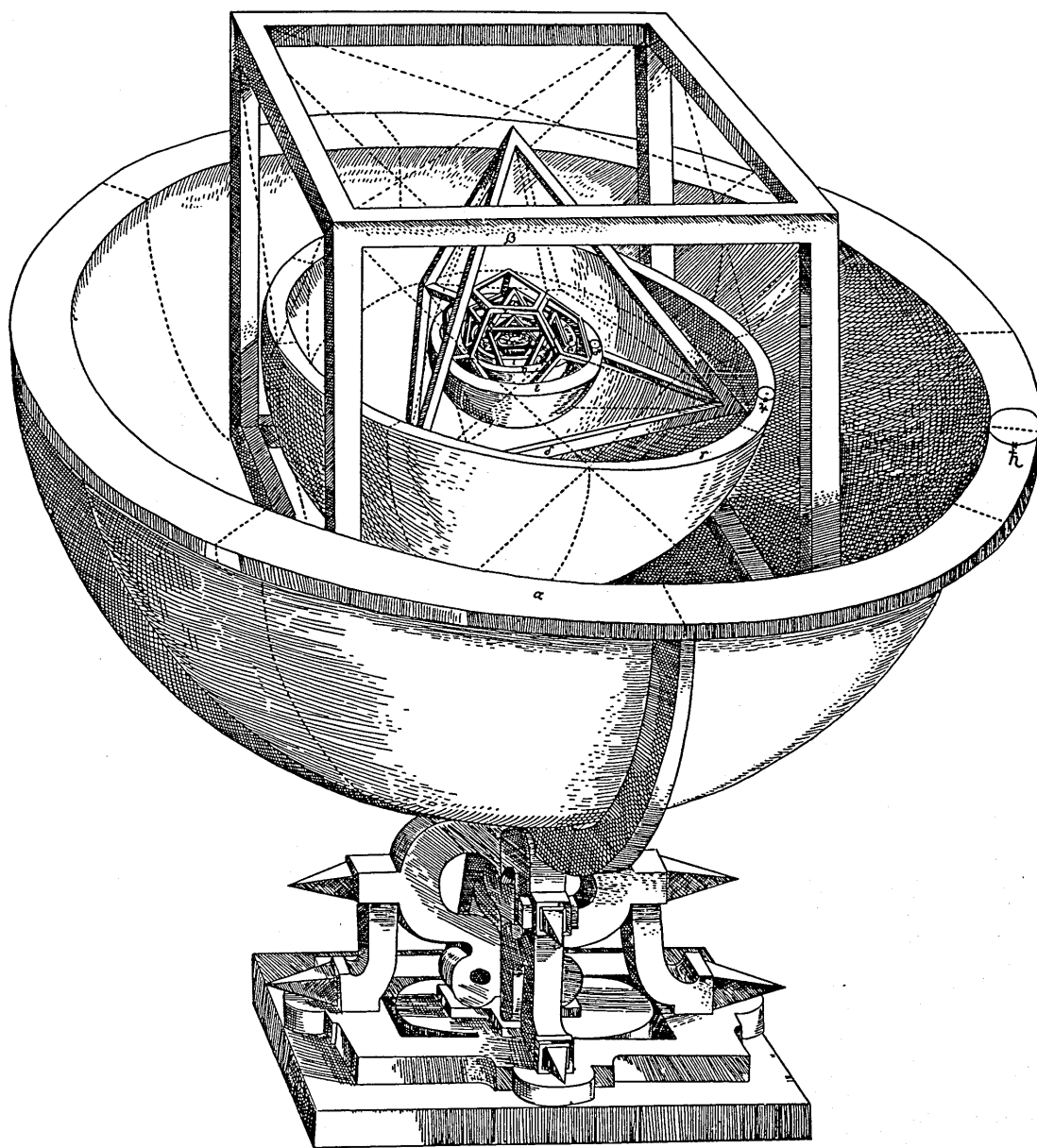
34. On Brahe see particularly Dreyer (1963).

35. Koyré (1973), p. 192.

36. Kepler was impressed by William Gilbert's pioneering book De Magnete published in 1600, in which it had been claimed that the earth was itself a large magnet and its motion was a consequence of this force. See Gilbert (1900), pp. 211-225. Kepler remarks: 'I build my whole astronomy upon Copernicus' hypothesis concerning the world, upon the observations of Tycho Brahe, and upon the Englishman, William Gilbert's philosophy of magnetism'. Quoted by Wallace (1972), p. 169.

37. Koyré (1973), p. 215.

38. Quoted in Wallace (1972), p. 172. See also Jammer (1957), p. 85: 'Here is the true doctrine of gravity.'



Keplers Mysterium Cosmographicum
Kupferstich, 1596

Gravity is a mutual affection among related bodies which tends to unite and conjoin them...Thus, no matter whereto the earth is transported, it is always toward it that heavy bodies are carried, thanks to the faculty animating it.'

39. A feature of his work brought out with particular vividness by Koestler (1964), pp. 317-48.

40. Koyré (1973), pp. 334-42. And Caspar (1959), pp. 92-3. brings out Kepler's deeply rooted Pythagoreanism: 'By sensuous means, music reveals a transcendental world in which everything is as it should be', musical harmony is truly a 'world shaping relationship'.

41. Wallace (1977), particularly pp. 63-64, 71, 84. Shea (1972), p. 85 even refers to his 'decadent Aristotelianism'.

42. Drake (1957), p. 29: 'I succeeded in constructing for myself so excellent an instrument that objects seen by means of it appeared nearly one thousand times larger and over thirty times closer than when regarded with our natural vision'. 1609 was the date of publication of Kepler's Astronomia Nova.

43. Drake (1957) pp. 32-37.

44. His estimate of four miles for the height of some lunar mountains was in fact more accurate than the maximum of one mile he allowed for terrestrial mountains. Drake (1957), pp. 40-41.

45. Ibid., p. 47: 'a host of other stars are perceived through the telescope which escape the naked eye; these are so numerous as almost to surpass belief.' Though in fact the cosmological significance of the resolution of the milky way into individual stars was little discussed. See Jaki (1973) p. 105.

46. Drake (1957), pp.89-103. Galileo's observational discoveries should be seen in the context of a lively discussion over the nature of comets and 'new stars' which Tycho Brahe had shown lay beyond the moons orbit and therefore contradicted the orthodox assumption of the heaven's incorruptibility. See Drake and O'Malley (1960), Dryer (1963), pp. 38-69, 186-197.

47. Oresme clearly stated the independence of optical and physical arguments over the earth's rotation: Oresme, Menut and Denomy eds. (1968), p. 521, Clavelin (1974), pp. 68-69.

48. Wallace (1972), vol.1, p. 154.

49. Clavelin (1974), pp. 224-67.

50. Koyré (1978), p.145.

51. Koyré in particular stresses the role of 'thought experiments' in Galileo's work: 'The explanation of the real by reference to the impossible.' Ibid., (1978), p. 155. Stillman Drake has vigorously defended the view that genuine experimentation played a vital role in the development of Galileo's thought, see Drake (1970), in which he suggestively traces the origin of Galileo's experimental attitude to his father's practical and experimental search for a physical theory of harmony: ibid., p. 54. See also McMullin (1967), pp.295-404., Wisan, in Butts and Pitt, eds. (1978), and for an attempted compromise in the view of Galileo as pursuing a programme of practical 'reasoning' rather than Platonic reason, Finocchiaro (1980).

52. Galilei (1957), pp. 160-62.

53. Ibid., p. 162.

54. First clearly stated by Descartes, and formalised by Newton, see Westfall (1971), p. 56/7.

55. Salviati can risk a rhetorical question on the subject, obviously believing his demonstration has been convincing. 'And that stone which is on the round top, does it not move as being, together with the ship, carried about by the circumference of a circle about the centre; and therefore consequently by a motion indelible in it, if all external obstacles are removed? And is not this motion as swift as that of the ship?': Galilei (1957), p. 162.

56. Clavelin (1974), pp. 220-1. Circularity remained however a unique expression of the underlying orderliness of the cosmos. Salviati claims that 'if we grant the excellent disposition and perfect order of the parts of the universe, then there is nothing but circular motion and rest': Galilei (1957), p. 54.

57. Clavelin (1974). pp. 235-44.

58. Galilei (1957), pp. 34: 'Hence I think it may be rationally concluded that, for the maintenance of perfect order among the parts of the Universe, it is necessary to say that bodies are movable only circularly'.

59. See particularly Wallace (1981), pp. 35-57.

60. A correspondence noted by Sohn-Rethel (1978), pp. 123-31.

61. In opposition, it should be noted, to Descartes's more obviously 'mechanistic' cosmology. See Westfall (1971) pp.56-98 and Westfall (1977) pp. 120-26.

62. Perhaps regrettably all history tends to the 'Whig interpretation'. It is impossible to forget who 'wins'. For an account that makes it much less obvious see Shapin and

Schaffer (1985).

63. See Cohen (1980), pp. 61-68.

64. Newton (1946) pp. 398-400, for interesting discussions of Newton's 'Rule III' (concerning the 'universal qualities' of bodies) of his 'Rules of Reasoning in Philosophy' see particularly Thackray (1970), McMullin (1978), and Freudenthal (1986).

65. Newton (1946), p. 6, a connection brought out clearly by Freudenthal (1986) p. 14.

66. Newton (1946) pp. 420-428. Cohen (1971) pp. 47-54.

67. Westfall (1971), pp. 146-194 offers clear account of one of his most sophisticated scientific critics, Huygens. Purely philosophical complaints were, of course, more general.

68. In the 'General Scholium' appended to the second and subsequent editions of the Principia, Newton states, 'But hitherto I have not been able to discover the cause of those properties of gravity from phenomena, and I frame no hypotheses.' This is not, of course, a declaration of empiricism, only an insistence that hypotheses must not be introduced on an arbitrary basis. In the same passage Newton himself introduces the 'hypothesis' that 'absolute space' can be conceived as God's sensorium. Cohen (1966), p. 66, suggests 'I feign no hypotheses' as a better translation of Hypotheses non fingo.

69. Quoted by Cohen (1980), p. 131. Newton's rejection of 'action at a distance' was obscured by Cote's widely read 'Preface' to the second edition (1713) of the Principia. See Newton (1964), pp. xx-xxxiii.

70. Ibid. p. 131.

71. Koyré (1965), p. 39.

72. See further, below chapter ten. The 'rationality' of exchange-relations, that is, still depends upon a tacit acceptance of the 'irrationality' of use-value.

73. Newton (1931), p. 400. Variation in the 'size and figure' of corpuscles in fact left considerable scope for differentiating various 'types' of matter, and provided a theoretical programme for chemistry.

74. Thackray (1970), pp 13-16. Hence Newton's early alchemical speculations. His atomism provided the basis upon which a mechanical account of transmutation could be advanced. If all matter was a more or less 'porous' structure of the same fundamental 'stuff' then it was perfectly conceivable that 'every body can be transformed into a body of another kind.': quoted *ibid.*, p. 14.

75. As favoured, for example, by Robert Boyle. See Shapin and Schaffer (1985) pp. 65-67. Cohen (1966), pp. 95-103. And for more detailed illustrations of this tradition, Schofield (1970), Allan and Schofield (1980), Donovan (1975), Hiebert, Ihde and Schofield (1980).

76. Westfall (1971), pp. 222-27.

77. See Dijksterhuis (1961).

78. Kepler, for example, expressed a wish 'to show that the celestial machine is to be likened not to a divine organism but rather to a clockwork.' Quoted by Holton (1973), p. 72. A clockwork is in fact suggestive of a 'pure' mechanism in the sense that it does not 'do' anything. Its 'purpose' depends wholly upon a subjective act of perception. More generally 'machines' transmit forces for some more specific purpose, a purpose, additionally, which controls the construction of the machine in the first instance. The cosmos as clockwork is in fact an ambiguous image. It allows for the possibility that God had some subjective purpose in its creation and structured it accordingly, but equally, could suggest the notion of an autonomous and 'blind' mechanism.

79. Newton (1931), p. 401.

80. Ibid., p. 339, 'Do not Bodies act upon Light at a distance'.

NINE

EGOISM

The correspondence between the macrocosm and microcosm was transformed, during the Renaissance, into a new metaphor of 'inside' and 'outside'. The cosmos became a unified but unbounded structure ordered through universal laws of nature. The 'intimate' reality of human experience could no longer be conceptualised as a metaphor or symbol for all-inclusive order. The human world must conform to the same laws as the rest of nature. Yet the dignity of man, which had been one of the central ideas of the Renaissance, seemed to imply a 'privileged' status for the 'human'.

This difficulty, the paradox of Renaissance humanism, lies at the intellectual heart of bourgeois psychology. No sooner had the claim to dignity been established, through the assimilation of man to nature (in arcadian or utopian forms), than it was lost. Man did not inhabit a centralised and degraded world; he assumed the dignity of celestial motion. But, in consequence, his soul was no longer the

mirror of the world. The unique advantage of his position as an 'observer' of the cosmos was lost. True, the cosmos was no longer held to be the means to proclaim an ultimate truth; but even as a mechanism, it appeared baffling. Its regularities could be formalised through the quantitative language of mathematics, but the cause of its order remained mysterious. Was 'human' nature similarly unknowable? Was it not equally contrary to presume that man was a mystery to himself?

These purely intellectual considerations were, additionally, ways of describing the new social reality of commodity exchange. The commodity embodied a dual reality. As exchange value it expressed the universality of necessary relations. It created a world of 'nature' within which man could live, a world which appeared to have sprung up magically around him and now sustained itself by the power of its own indwelling forces. As use-value, however, the commodity was ultimately relinquished to the 'irrationality' of the human subject.

The division between microcosm and macrocosm gave way, then, to the distinction between object and subject. 'Human nature' was, just as much as the physical cosmos, inexhaustible. As 'subjectivity', the human was an interior cosmos. But what was its specific 'mechanism'? A series of attempts were made to 'save the phenomenon'; to 'explain' human reality in terms of universal laws and, at the same

time, clearly distinguish between the peculiar quality of human experience and all that lay beyond it.

Cartesian dualism is the first step towards the self-consciousness of the bourgeois ego. The radical distinction between matter and mind, itself hinting at the momentous split between the view of the 'object world' exclusively in terms either of exchange or of use, cleared the way for the direct 'application' of physical concepts to human activities. This, of course, was not Descartes' intention, but as so often demonstrated in the history of ideas, innovators are powerless to exercise control over the effects of their ideas. Once the 'qualitative' character of human experience had been confined to a particular category, it could be fully explored by the methods developed within quite different fields of study.

These methods were to be Newton's, rather than Descartes', and the disciples of Newtonian 'corpuscularism' rather than those of their master. While, especially in France, controversy surrounded the ultimate significance of Newtonianism for a philosophy of nature, his 'methods' were freely borrowed and uncontroversially adopted as the foundation for a new 'science of man'. Just as the cosmos had to be described in a form commensurate with the new social reality of commodity exchange, so the human 'qualities' hidden within such a reality could appear philosophically only as elements within a 'theory' of the

market.

Society was composed of commodities: individuated objects defined by the universal attribute of exchange-value (labour). The cosmos was composed of individuated objects, bodies, that differed only quantitatively (by mass) and thereby established invariant relations with other bodies. The 'internal' reality of human nature, in spite of its 'ultimate' irrationality as 'pure subjectivity', could be grasped as a similar 'internal market' upon which some universal quantities were exchanged. Firstly, therefore, human nature became a universal defining criteria, the 'species being' of man. This had not been the case, of course, in feudal society. There only particular human beings existed, specific qualities held fleetingly within a living subject. The bourgeois revolution, opposing all feudal restriction upon internal 'freedom' of the market, created the individuated 'ego' as a new historical actor.

The human was internal and subjective, but after that it was infinite, necessary and universal. It was not a differentiated part of the cosmos, but a cosmos in its own right, a cosmos viewed from a different vantage point. The social world, which was the 'model' for both cosmologies, the order of nature and of the psyche, was self-generating and self-justifying. All that was required for its perfect order was that the individuated subjects that composed it

should be free to act 'rationally'.¹ This rationality was in turn guaranteed by the universality of 'human' attributes.² The difficulty, as outlined in the first chapter, was primarily to account for the failure to realise in practice this universal nature. Society was imperfect, and human beings corrupted to the extent to which 'reason' remained 'locked-up' within the constraints of a symbolic order the bourgeois world had already outgrown.

The intellectual problem confronted by the bourgeois psychologist was then to 'explain' the peculiar attributes of human nature in such a way that 'reason' could be deduced from it as a genuinely universal phenomenon. This was attempted in a number of different ways, with each succeeding 'school' believing itself to be overthrowing the very foundations of its predecessors. But from the perspective of a greater distance, we can see the common assumptions which guided all these efforts. In broad outline, three different but related approaches can be distinguished; characterising three rather different types of internal market. They can be designated as sensation, sympathy and desire.

Sensation

'Sensationalism' was the first and perhaps the most successful version of bourgeois psychology. Its initial appeal rested on its claim to offer a systematic and comprehensive account of subjectivity adequate to the new 'scientific' worldview. Hobbes of course, even before Newton, had proposed a radical materialistic psychology.³ It was, just for this reason, rejected. 'Mechanism', not 'materialism', was the key to the new intellectual order. Even nature could not be grasped as a purely 'material' phenomenon, and a properly scientific approach began with the recognition of the limits of our commonsense notions of 'physical causality'. The world contained nothing but matter in motion, but that was not to say that every phenomena was reducible to the effects of 'contact' and collision among its elemental particles. One of the leading 'corpuscular' philosophers, Robert Boyle, insisted upon the importance of 'emergent' and functional relations for any reasonably satisfactory account of even simple physical phenomena. The 'texture' of matter, its internal organisation, gave rise to many of the 'sensible qualities' through which we recognised it.⁴

Sensationalist psychology, in its more sophisticated variants at least, was fully alive to these distinctions. Even where it appeared to be an attempt to 'reduce'

psychology to physics, or physiology, it was careful to preserve the 'dignity' of its subject matter by making the particular and unique quality of subjectivity its ultimate frame of reference.

David Hartley, for example, the most ambitious of such psychologists begins his treatise, Observations on Man with a scientific declaration of intent. Inspired directly by Query 31 of the Opticks, he devotes his initial discussion to an analysis of sensation, defined as 'those internal feelings of the mind, which arise from the impressions made by external objects upon the several parts of our bodies'.⁵ He defines sensations, in other words, in terms of their presumed causes rather than phenomenologically, and by this procedure hopes to avoid the arbitrariness of individual variation and internal 'judgment'. It appears, indeed, that he is interested exclusively in the physical details which allow such causes to be operative. 'We are to conceive, that when external objects are impressed on the sensory nerves, they excite vibrations in the aether residing in the pores of the nerves (medullary) by means of the mutual actions interceding between the objects, nerves, and aether'.⁶

Hartley's major interest, however, soon emerges: it is 'ideas' rather than 'sensations' which form the real subject matter of his book. The simplest idea is an 'internal representation' of a sensation. Hartley insists

upon sensation as the ultimate 'source' (i.e. cause) of all subjective phenomena, and explicitly rejects Locke's division of the experiential sources of human knowledge into sensation and 'reflection'.⁷ There are no 'superadded' internal human 'faculties which are not themselves traceable to the invariant operation of external sensory causes.

Simple ideas, therefore, through a process of 'coalescing of vibrations' which are their causes, give rise to more complex perceptions. Hartley is soon unable to sustain the cumbersome language. Following Locke more closely than he might have wished, he uses the purely subjective term 'association' to designate the psychological end result of such a mechanical process. 'Simple ideas will run into complex ones, by means of association', he claims, referring both to the cause and effect of the manner in which the mind becomes filled with its specific content.⁸ 'The general process of associating ideas becomes more complex and more characteristic of human subjectivity through the interaction of two particular types of 'vibrations'. A new 'level' of association is developed through language. The range of possible association is enormously increased by the use of words, which connect present sensations to the virtually infinite reservoir of past and projected future experience. It is the associative power of words which, in fact, creates the 'arts of logic and rational grammar.'⁹

Secondly, as 'sensible pleasures and pains' are ' the most vigorous of our sensations'¹⁰, they are also the most effective in forming associative links in the human mind. Hartley indeed proposes a 'quantitative' view of pleasure and pain. Pleasure is conceived as an 'optimum' level of vibration of the nerve fibres, such 'that pain should be nothing more than pleasure itself, carried beyond a due limit'.¹¹

The doctrine of association is used more 'mechanically' by Hartley than by Locke. Having 'established' its centrality as 'force' ordering the internal experiential cosmos, Hartley attempts to derive from it all the specific characteristics of human nature. As association is founded upon a 'natural' process of cause and effect, the connections in the mind, which are derived from them, ultimately form themselves into a 'rational' picture of the world. The human subject retains something of the 'occult' quality of the 'mirror of the world'.¹² Sensory vibrations finally sort themselves out into a structure which corresponds to, though is 'qualitativeley' distinct from, the world of nature which is their source.¹³

If 'reason' is a correspondence between internal perception and the order of nature, morality equally owes its structure and validity to the process of association. Those valuations and judgments formed at the earliest stage

and continually re-enforced by the agreement of others 'appear like instincts'.¹⁴ He does not hesitate to claim that 'the moral sense is therefore generated necessarily and mechanically'.¹⁵ And as the rational mind is nothing more than the 'internal' perception of the inherent order of empirical reality, all human activity is consequently assimilated to nature: 'By the mechanism of human action I mean, that each action results from the previous circumstances of body and mind, in the same manner, and with the same certainty, as other effects do from their mechanical causes'.¹⁶

This makes Hartley's conventional 'moralising' all the less convincing. In seeking the absolutely universal and necessary foundation of human psychology, he had in fact obliterated the very quality of inner freedom through which subjectivity makes itself felt.¹⁷ 'Association' might be the organising principle of the inner life, the principle from which all its operations could be deduced, but where 'intimate' knowledge of nature could, reluctantly, be foresworn, it was much more difficult to deny to the human subject 'authentic' knowledge of its own 'quality'. Hartley's work proved popular, as had Locke's; establishing a tradition of reductionist psychology which remains unbroken. Although the most generally accepted tradition of bourgeois psychology, it is neither the most rigorous nor the most persuasive version of sensationalism, nor is sensationalism the most compelling school of thought within

that tradition. In providing a 'model' of 'scientific' psychology, however, its unfulfilled promise continues to exercise an evident fascination.

La Mettrie, seeking a view of human nature consistent with both Locke and Descartes, produced a psychology that was more coherent and more scandalous than that envisaged by Hartley.¹⁸ Much more clearly than the English empiricists, he recognised that 'the inner connection between physical cause and psychic effect remains unknowable'.¹⁹ His aim, therefore, was not so much to produce a materialist metaphysics or a complete demonstrative science of man, as to demonstrate the inherent consistency of a particular view of the human mechanism.

La Mettrie specifically rejects the Cartesian 'beast-machine' as an inadequate model of the human organism. Nor does he admit to a simple 'continuity' between sensation and some putative 'law of association' to account for human reason. The specific and universal feature of man does not 'depend' upon his organism, it is his organism. 'Man's preeminent advantage is his organism', he declares, finding the special privilege of the human in the structure of his body:²⁰ 'The human body is a machine' he claims, but a machine of a special sort, one 'which 'winds its own spring.'²¹ The Cartesian dualism was dissolved in his notion of the organic machine as 'a genuinely self-

sustaining system'.²² Unlike any man-made machine, man himself is self-moving and purposive. Genuine materialism could not afford the simplicity of a theory of motion. The complexity of internal relations defined the human organism in a particular and characteristic fashion. 'But since all the faculties of the soul depend to such a degree on the proper organisation of the brain and of the whole body, that apparently they are but this organisation itself, the soul is clearly an enlightened machine.'²³

'Sensation' ceases to be a direct 'mechanistic' principle of human perception, and expresses an inner-structure adapted to the forming of images of an external reality. Thought, he claims 'is so little incompatible with organised matter, that it seems to be one of its properties'.²⁴ La Mettrie sought to 'Vitalise the Cartesian "dead machanism" approach to biology'.²⁵ forcefully expressing the human character, as well as material form, of his man-machine. 'To be a machine' is not, as in Hartley or for that matter in Baron d'Holbach, to be 'nothing more than a passive instrument in the hands of necessity'.²⁶ but is rather 'to feel, to think, to know how to distinguish good from bad, as well as blue from yellow'.²⁷ In man necessity, so to speak, escapes from itself.

La Mettrie's psychology is a veritable aesthetics of mechanism. The whole tendency of French materialims in

fact, far more than its British counterpart, was towards a systematic conception of 'personality'. This is the case particularly in its most distinguished eighteenth century representative, Condillac, whose explicit indebtedness to Locke and Newton should not conceal the extent to which his sensationalism was very different to theirs.

The ultimate point of reference for Condillac's 'system' was the sense of self which, as inexplicably as the reality of the exterior world, presented itself to us as an accomplished fact.²⁸ But unlike Locke, or Descartes, its immediacy cannot be taken at face-value. The fact that the external world appears to us as 'outside' ourselves does not mean that we must simply accept the continuous presence within us of an observing self, any more than it unambiguously 'proves' the reality of such an external reality itself. It too must be constructed out of sensations. Psychology therefore becomes a fundamental part of the study of reality; a study which should aspire to the systematic rationality of Newton's deductive system. Condillac therefore aims 'to reduce to a single principle everything concerning the human understanding'.²⁹ His attack upon metaphysical system building did not diminish the confidence with which he proposed the 'true' psychological 'system of the world'. The multiplicity of subjective qualifications of matter were interrelated in conformity with a simple underlying law such that 'man himself is a system'.³⁰ And in renouncing the arbitrary

assumptions of the philosopher, we free ourselves to discover those systems 'which the author of nature has made'.³¹

In order to demonstrate the interactive reality of the sensory world, Condillac conducted a 'thought experiment'. He imagined, not a man-machine, but a 'statue-man' into which he introduced in turn the various senses of the external world. This can be seen as a systematisation of the discussion of the perceptual world of the blind, or the newly sighted, which had aroused considerable interest since the work of Locke.³² Particularly developing Berkeley's insight into the relationship between sight and movement, Condillac tried to develop a sensationist psychology that was at least phenomenologically adequate to the richness of human perceptions.

Sensationalism, in spite of Condillac's rigour, proves insufficient to the descriptive task. No account of the interior world of subjectivity can really begin until the sensory system, articulated and mutually interrelated, is awakened to the experience of pleasure and pain, and in so doing create from within its own interactions a personality dependent upon but not reducible to such experiences.³³ Condillac's sensationalism almost imperceptibly leads to the assertion of the 'self' as the conscious, moral and rational principle of the 'human system'. Lockean empiricism shades into a new solipsistic

metaphysics: 'whether we ascend, to speak metaphorically, into the heavens, or whether we go down into the abyss, we never leave ourselves: and we never perceive anything but our own thought'.³⁴

The emergence of the 'self' as the 'active principle' of a materialist psychology was inevitable once the classificatory division between matter and spirit (exchange and use) had been established. It was expressed less systematically but more brilliantly by Diderot for whom 'individuality is the subjectivisation of reality' rather than simply a 'feeling point of nature'³⁵, and less brilliantly but even more comprehensively by d'Holbach. The latter indeed goes so far as to propose the 'self' as the gravitational principle of the subjective world.³⁶

Rather than attempting to 'explain' subjectivity as a particular effect of matter in motion - as we find, for example, in Hobbes, and thereby assimilating man to a universal category of nature - sensationalism progressively accepted the separateness of human nature as a 'spiritual' phenomenon. As such it had to be described and understood in terms of its own internal relationships. The human subject then became an interior cosmos, a psyche, qualitatively distinct from but ordered homologously to the 'system of nature'.

Sentiments

If the perceptual world of the human subject could not be reduced to a simple 'stream' of sensation, then neither could its moral and aesthetic dimensions be explained solely upon the basis of utility. Yet just as sensationalism at first seems to be the 'natural' psychology of the bourgeois age, so utilitarianism seems to express its immediate ethical assumptions.

Sensationalism in psychology and utilitarianism in ethics were in practice linked, historically and systematically, through the powerful and somewhat diffuse ideological movement that developed around the new scientific worldview. If the material world could be intellectually reconstructed with reference only to the essential qualities of matter and motion, as Descartes and Hobbes supposed, then the inner psychological world could be fully explicated in terms of the ego alone. The 'self' was, from one point of view, the end result of a complex interactive sensory process; but from another point of view it constituted the elementary particle of social life. The essential character of the self, therefore, must 'contain' all that was necessary for the logical reconstruction of society as an ordered whole. Since the fundamental property of the self was an ego, that is, nothing other than an

unavoidable tendency to act in conformity with itself, all human activity could be grasped as modifications of this fundamental principle.³⁷

Hobbes proposed a consistent psychology of the ego as part of his general materialistic philosophy. As clearly as D'Holbach, the ego emerges in his work as the 'active principle' of the psychic world, the invariable relation through which the psyche became constructed.³⁸ Though systematic and compelling, Hobbesian psychology did not become central to the development of English utilitarianism. His uncompromising secularism was too easy to reject and it is only in retrospect that we can appreciate the adequacy of his vision of the market as a subjective reality.³⁹

It was Bernard Mandeville's Fable of the Bees that established a successful tradition of 'ego psychology' in bourgeois social thought. It is important to realise, however, that just as Condillac or La Mettrie were intent upon laying bare the sensory foundation of the perceptual world, so Mandeville's concern was the egoistic root of moral action. He did not argue, therefore, that terms such as wickedness or vice were without meaning, only that actions should be understood in terms of the private motives prompting them and judged, in part at least, from the consequences flowing from them. The usefulness of vice to the community, which he was at pains to demonstrate, did not abolish its ethical wickedness.⁴⁰ Nor was his aim to

excuse the many vices which were manifestly useless. It is difficult to read his work now without separating his 'functionalism' (the usefulness of vice) from his utilitarianism proper (the self-regarding root of all moral judgment).⁴¹

Mandeville demonstrated at greater length and with more vigour, if not always with greater subtlety than anyone else, the self-deception of 'conventional' morality: 'The nearer we search into human nature, the more we shall be convinced, that the moral virtues are the political offspring which flattery begot upon pride'.⁴² No man is 'proof against the witchcraft of flattery'⁴³ and it is the love of self, pride, which is the most powerful of human motives. The need to maintain a good opinion of ourselves is also the most civilising of forces: 'a dextrous management of our selves' ⁴⁴ depends not simply upon the satisfaction of appetites whose source lies within the individual, but requires that our actions be approved by others. To this end, we disguise our real feelings and control our spontaneous inclinations: 'a man need not conquer his passions, it is sufficient that he conceals them'.⁴⁵

Mandeville therefore interpreted all 'altruistic' actions as motivated by pride and selfishness: by love of praise and fear of blame. A compassionate act was simply incomprehensible other than as a relief of the conscience.

and conscience was only a mechanism to preserve our pride under the scrutiny of public opinion.

Bentham's later axiomatisation of utilitarianism adds little that is basically new, either psychologically or logically, to Mandeville's provocative text. If 'the principle of utility neither requires nor admits of any other regulator than itself', then everything follows as a matter of definition.⁴⁴ and the theory becomes as tautological as the action it 'explains'. The internal world of the subject is organised as a 'system' of exchange governed by the inherent tendency to 'conserve' pleasure.

Objections to utilitarianism, particularly in the work of Shaftesbury, and the important Scottish writers on 'moral philosophy' centred upon the identification of 'pleasure' with the 'self'. Human nature from this perspective also appeared to be wholly self-regarding, but a generous definition of the self made the point in a less cynical fashion.

Shaftesbury indeed, more than Hobbes or Locke, deserves credit as 'the first moralist who distinctly takes psychological experience as the basis of ethics'.⁴⁷ Assuming philosophy to be 'the study of happiness', he recognises self-knowledge and self-mastery as the central practical and intellectual problems of the age.⁴⁸ He criticises Hobbes on the grounds of the limiting conception

of man forced upon him by his dogmatic materialism. Hobbes, in failing to acknowledge anything 'which naturally drew us to the love of what was without or beyond ourselves', painted an unrealistic portrait of human selfishness.⁴⁰ But 'moral' action consisted just in this reaching beyond the immediacy of the sensuous self; if it did not, it is difficult to see how the language of morality could have developed. The utilitarians thus, 'have made virtue so necessary a thing, and have talked so much of its reward, that one can hardly tell what there is in it, after all, which can be worth rewarding'.⁵⁰ Why make an appeal to ethical principles if a narrowly conceived natural propensity to utility were in fact exhaustive of the store of human motives and sufficient to regulate social behaviour? There would be no need to deceive and flatter if all ethical action were a disguise. It is only the authenticity of our moral sense which makes hypocrisy possible.

The 'self', that is to say, is no mere reflex of a pleasure principle; or, to be more precise, pleasure is not mere sensuousness. An ethical and aesthetic sensibility, as much as natural appetite, makes demands upon the human subject the satisfaction of which draws him into a series of psychic exchanges. The self is an internal cosmos and not an 'atom' of society. It is therefore continually possessed of an inner dynamic, movements through which it seeks to 'complete' itself as a system, and 'thus is

everyone convinced of the reality of a better self'.⁵¹ The special task of philosophy is to facilitate such an inward development, 'to teach us ourselves, keep us the self-same persons, and so regulate our governing fancies, passions and humours, as to make us comprehensible to ourselves, and knowable by other features than those of bare countenance.'⁵²

Frances Hutcheson insisted just as vigorously upon the variety of the internal senses. Beauty, as well as virtue, is an irreducible aspect of selfhood and one without which our intellectual capacity for reason would hardly be roused. The new scientific worldview is itself the finest expression of the ordered expression of this internal sense.⁵³ The discovery of such arduous and impractical truths of reason, would never result 'were we not conscious that mankind are pleased with them immediately by this internal sense of their beauty'.⁵⁴ Science cannot be 'explained', that is to say, by reference to its practical advantage, any more than ethical conduct can be grasped as enlightened sensuousness.

Hutcheson's moral theory is more fully developed than that of Shaftesbury. Accepting the reality of an internal moral sense, he goes on to show the social mechanism developed from it. Virtue can be conceptualised as a 'good' possessed by an individual to the degree to which he receives the 'approbation' of others. But unlike other

goods, its accumulation, existing in the admiration of others, generates emulation rather than envy.

Hutcheson's writing, particularly his critical attack on Mandeville⁵⁵ was widely admired and influenced both Hume and Smith. And it is in Smith's Theory of Moral Sentiments that bourgeois psychology could be said to have come of age.

Smith admits that 'every man is no doubt, by nature, first and principally recommended to his own care',⁵⁶ and that a 'regard to our own private happiness and interest'⁵⁷ is a necessary element in virtue. Yet utility cannot wholly account for any of our actions: 'How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the future of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it'.⁵⁸ The core of moral life is sympathy; that is, a spontaneous 'fellow-feeling' in the spectacle of life. 'Whatever is the passion which arises from any object in the person principally concerned, an analagous emotion springs up, at the thought of his situation, in the breast of every attentive spectator'.⁵⁹ This clearly is a principle which could play little part in the moral life of feudalism and contains an implicit assumption of individual freedom upon a market. Sympathy is founded upon the formal equality and the qualitative indifference of the personality. The

individual 'imagines' the situation in which he perceives another and experiences, as a result the sentiments appropriate to such circumstances. It is not a direct imitation of another's passions; the sight of a lunatic, for example, may arouse intense sorrow in the observer, irrespective of the manifest feeling of the madman.⁴⁰

Apart therefore from sensuous satisfaction, 'nothing pleases us more than to observe in other men a fellow-feeling with all the emotions of our own breast'.⁴¹ The formation of the self in its broadest sense is an intersubjective process and is itself a source of pleasure independent of the emotional 'content' of the feelings it sets in motion. The mutuality of sympathy is thus the ground upon which we urge our sorrows upon others since, in arousing their fellow-feeling, we reduce our suffering by the addition of a fresh source of pleasure.⁴² Furthermore, as another cannot fully experience the intensity of our own emotions, we will, in enlisting the consolations of fellow-feeling, moderate the violence of our own passions.⁴³ Sympathy, the mutual interdependence of selves, provides Smith with a regulatory motive more powerful than any individualistic calculus of utility. If pleasure depends upon the feelings of others, then the 'civilised' restraint of conduct through moral codes becomes immediately comprehensible. There is an inherent 'economy' of pleasure which tends towards the expression of selfhood as personal identification with such codes. The 'person' is thus

conceived as the moral consistency running through innumerable forms of subjectivity, guiding the 'choices' enacted in individual behaviour.

Smith makes sympathy the organising principle of his psychology, deducing from it the naturalistic detail of personal life that is conspicuously absent from the sensationalist tradition.⁴⁴ The psyche becomes an internal market in sentiments. Selfhood is a tendency to pleasure, to the accumulation of approbation and virtue, all of which depends upon the exchange of sentiments. Sentiments, we might say, are the commodities of the psychic world, whose circulation is governed by an internal law of gravity that we experience as personal identity:⁴⁵ the internal 'mass', or seriousness of the personality.

This psychology is not simply 'fitted' to a general ideological view of modern society as the liberation of the universal subject from the constraints of feudal particularism; it 'accounts' for the particular social features of capitalism. Sympathy is an asymmetric principle, since 'mankind are disposed to sympathise more entirely with our joy than with our sorrow', and because of this 'we make parade of our riches, and conceal our poverty'.⁴⁶ The Scottish School, with their original historical perspective, had shown that there is nothing 'natural' in man's desire for riches and Smith concurred: 'what is the end of avarice and ambition, of the pursuit of wealth, of

power, and preeminence?' he asks.⁶⁷ Our love of commodities is stimulated by something other than the material benefits they might bestow: 'to be observed, to be attended to, to be taken notice of with sympathy, complacency, and approbation, are all the advantages we can propose to derive from it'.⁶⁸ It is to distinguish himself that the rich man displays his wealth; he 'glories in his riches, because he feels that they naturally draw upon him the attention of the world'.⁶⁹ The individual seeks to complete his personality by becoming 'distinguished' from all others. This is a process more easily and generally accomplished indirectly, not, that is to say, by arousing the sentiments of others to the personality itself so much as to its halo of commodities.⁷⁰ And as our appetite for distinction is in principle unlimited, there is no possibility of satisfying the demand for commodities.

Desire

The various traditions of bourgeois psychology, sensationalist materialism, utilitarianism, the theory of moral sentiments, all had as their common focus the emergence of the 'self' as a central philosophical and practical issue. The self, however, whatever the manner of the approach, resisted the blandishments of reason. Shatesbury indeed had taken this inspired coyness to be its hallmark.⁷¹ Personal identity lay not merely beyond the

reach of accurate conceptualisation, but also aggravatingly evaded its own existence. More often than not it refused, as it were, to crystallise within the flux of subjectivity. We could hardly doubt its reality, since our experience was apparently founded upon its continuous presence⁷², and yet it was never present to us in its completeness.

The romantic urge to grasp the self in its entirety exposed the impossible depth of universal subjectivity. As the individual was an inner cosmos, each was as unbounded as the universe of objective and 'absolute' space and time. The self, as one possible arrangement of subjectivity's infinite variety, could be understood (as the universe was understood) as the continuous operation of a specific mechanism rather than as a particular arrangement of elements or parts. Associationism, utility and moral sensibility were therefore attempts to outline the 'laws of the psyche' rather than to provide a 'phenomenology' of the subject.

The perpetual incompleteness of the self, which is the hidden motive of bourgeois psychology, is best described as desire. If pleasure is the pursuit of the ego, desire is the endless quest for the self in its 'finished' form. The transcendental infinite in which the subjectivity of happiness rested is transformed into the perpetual torment of the self's search for concrete 'authenticity'. The discovery of our own personality, its emergence as a wholly

determinate and necessary structure, becomes the 'religious' duty of the bourgeois individual.⁷³ This is a discovery of 'inwardness' and inevitably so as the 'double freedom' of capitalism extends to each individual an identical legal and political identity. The act of distinguishing one person from another, in a condition of ideal 'equality', must therefore be the work of an interior personality. The endless variety of such personalities is the corollary of the complete inner freedom of subjectivity. In reaching beyond itself, hopelessly, to complete itself, the incipient 'self' progressively discounts all the personalities which it is not.⁷⁴

The self as a relation of desire, a segment of the infinite interior freedom of the subject, is an assumption of bourgeois psychology unexamined by the majority of its conventional practitioners. It is hinted at in Hume's scepticism and agonised over by Rousseau. Perhaps only in Hegel does it become the foundation for a systematic reconstruction of reality.

In a famous passage in the Phenomenology Hegel analyses the growth of self-consciousness as a dialectic of desire.

Simple undifferentiated consciousness, the 'I', which is 'absolute mediation'⁷⁵ conscious of itself only as the immediacy of the given world, as the 'dizziness of a perpetually self-engendered disorder',⁷⁶ postulates itself

as a coherent structure by desire. The more it desires the more concrete and specific it becomes. Desire is the specific mode of existence of the self.

In desiring commodities the self seeks to confirm itself as distinct from any other self, but what it seeks in any object is the spiritual reality which lies at its core. The original disordered state of subjectivity 'alienates' itself into such material forms in order that, in recognising and reincorporating itself within its own personality, it can define its uniqueness. In seeking commodities, that is to say, it seeks itself. It seeks itself with even greater urgency in the 'purest' of its alienated forms, as another person. To become a self the 'I' must engage itself in a relationship of mutual recognition.⁷⁷ It desires the desire of another, and becomes itself only by transcending all other, animal, needs.⁷⁸

In spite of the groundless freedom of subjectivity, the personality 'emerges' by an immanent and absolutely necessary process of unfolding. Hegel's phenomenology is a philosophical description of this process. The self, in its completed, rational form (which in becoming philosophically possible becomes also, for Hegel, a practical reality) is after all a kind of duplicate of the 'world system'. It is, first of all, a system: in Hegel's terminology, pure mediation. The self is 'all of a piece', its various

differentiations so many aspects of a totality recoverable from any starting point. It is therefore 'rational'. Its development through a series of dialectical steps or 'negations', its progressive 'otherness' is an inevitable, self-moving sequence of forms. It is a system understood in terms of a simple underlying principle, desire, rather than a fixed empirical arrangement of parts. Desire, we might say, is the gravity of the self: it is what lends weight to the personality and fills it with content.

This is not to suggest of course that there is no difference between a Hegelian and a utilitarian approach to the nature of individuated subjectivity. Such a contention would be absurd. Yet they are linked as two of the logically and existentially possible versions of bourgeois selfhood. Neither are comprehensible within the cosmology of fun or happiness. What all the traditions of bourgeois psychology seek above all is confirmation of conscious selfhood.⁷⁹ And the route to conscious selfhood is through completion of the 'psychic' system. This system can be viewed in a number of different ways: as the complex interrelations of 'irritable' matter, the network of utilitarian calculations, the reflexive judgments of 'approbation', or the dialectics of 'otherness'. Each tends, in its own way, to progressively higher levels of internal organisation that culminate in self-consciousness.

THE SYSTEM OF THE WORLD

The substantial unity of psyche and cosmos, whether as the undivided immediacy of fun or as the symbolic identity of happiness, was shattered by the new reality of capitalism. Two separate realms of being disentangling themselves from the confusions of the premodern worldview confronted each other in suspicious silence. Nature at last exercised its claim to an independent existence, and in so doing exhausted the world of its material content. The human subject, no longer distracted by its implication in purely natural categories (its embodiment), counted this as a release rather than a loss.

Both cosmos and psyche, that is to, say were subject to an infinitising movement. The boundedness and fixity of the symbolic universe, its minutely regulated hierarchy of parts, was overwhelmed by a new universality. The order of the world could no longer be conceived as a 'logic of place'. Rather nature had to be seen as an inconceivably complicated mechanism whose coherence derived from its own indwelling lawfulness. Matter everywhere was the same.

Nature anywhere, to exist as nature, had to conform to a few simple formal rules. These rules could be expressed with perfect clarity in a mathematical form. The subject similarly, to exist as subject, had everywhere to be the same. It was not just some vague 'left-over' from the realm of nature. Subjectivity, discovering its proper domain of 'inwardness', discovered its own infinity. And, in order to guarantee its coherence a similar lawfulness must regulate its interior interactions, and provide it with its own, non-material, mechanism.

It is misleading, therefore, to view the classical bourgeois picture of the world as split between on the one hand a 'rational', objective and universal nature, and on the other an 'irrational', subjective and particular psyche. Cosmos and psyche it is true become qualitatively distinct. All attempts 'scientifically' to reduce one to the other, or 'metaphysically' to force them to merge, failed. Yet this difference cannot be represented as the distinction between the rational and the nonrational world.

The 'mechanism' of nature could not be immediately apprehended but, in principle at least, could be easily understood. Matter, guided by ineluctable necessity, interacted in a complicated fashion to produce effects of which we became conscious as the phenomenal world. The psyche was not itself a division within this world of exterior nature. But its own inexhaustible inner variety

was ordered by a 'mechanism' proper to itself. We experience this mechanism directly as the pursuit of pleasure. Pleasure is the spontaneous tendency, and inherent organising principle of the psyche. Its effects become visible, to ourselves and to others, as the individual and particular characteristics of personal identity. 'Reason' and 'passion' within the individual are opposed in just the same way as the complexities of real events may obscure or even 'contradict' the direct consequences of a simple 'law of nature'. The mechanism of pleasure, however, cannot any more than the law of gravity, be revoked.

The pursuit of pleasure has nothing to do with sensuous gratification. It is a mechanism of individuation; the principle by which the self emerges from the flux of consciousness. And the laws of nature are not themselves 'material', but the principle in terms of which we 'make sense' of matter. Neither directly apprehends the pure 'substance' of either nature or consciousness. The organising principles of mechanism and egoism are therefore 'rational' abstractions.

The 'theoretical' sciences of the bourgeois era, uncomfortably conscious of a gulf between object and subject inadvisedly sought to span the abyss with a yet more abstract system of philosophical categories. But there was no need. The social relations of capitalism, the

formation of the commodity world, had done the job for them. The commodity was itself an abstraction, an object drained of qualities. It was its universality and necessity that the scientist and the psychologist had rediscovered in the rational mechanisms of nature and subjectivity.

The commodity world furnished the sciences with a new social logic; one of individuated 'objects', differing only by quantitative criteria, and interacting upon a universal 'market' of pure dimensionality, according to strict rules of causality. Consequently, the philosopher who sought to reunite the disparate realms of object and subject, succeeded only in hypostatizing the commodity. And since the commodity 'thinks for itself', there was a real sense in which philosophy had become redundant.

Yet, however much the bourgeois sciences made sense only within the context of a new universal social logic, the initial steps beyond its 'system of the world' took the form of dismantling the commodity's metaphysical alter ego.

Notes to Chapter Nine

1. Unger (1975) pp. 38-46. makes the point with particular clarity but insists on the conventional 'Enlightenment' interpretation, that reason as intellect is opposed by passion so that rational action is always a form of 'self-control', a 'suppression' of pleasure. See also Macpherson (1962) and (1973) pp. 185-194.

2. Reason was the most ideally distributed good. Thus the opening passage of Descartes' Discourse on Method: 'Good sense is, of all things among men, the most equally distributed...the power of judging aright and of distinguishing truth from error, which is properly what is called good sense or reason, is by nature equal in all men.' As the distinguishing criteria of human nature it must be genuinely universal.

3. Hobbes (1840) vol. IV, pp. 1-76. In which the perceptual world is held to be an 'apparition into us of the motion, agitation, or alteration, which the object worketh in the brain, or spirits, or some internal substance of the head': *ibid.*, p. 4. Affect can be conceptualised similarly: 'pleasure, which is nothing really but motion about the heart, as conception is nothing but motion in the head.' see Raphael (1969) vol 1, p. 4. For critical reactions to Hobbes see particularly Mintz (1962).

4. Boyle (1979) pp. 18-53.

5. Hartley (1810), vol.1 p.1. and for an explicit statement of his indebtedness to Newton, *ibid.*, p. 5, and 115.

6. *Ibid.*, p. 21.

7. Thus he claims that 'all the most complex ideas arise from sensation, and that reflection is not a distinct source, as Mr. Locke makes it': *ibid.*, p. 373.

8. *Ibid.*, p. 75.

9. *Ibid.*, p. 281.

10. *Ibid.*, p. 35.

11. *Ibid.*, p. 35.

12. But now as a consequence of their both being subordinated to the same mechanical laws. Hartley makes this assumption quite explicit, e.g. p. 515: 'By the mechanism of human actions I mean, that each action results from the previous circumstances of body and mind, in the

same manner, and with the same certainty, as other effects do from their mechanical causes'.

13. Ibid., p. 492.

14. Ibid., p. 513.

15. Ibid., p. 518.

16. Ibid., p. 515.

17. A paradox central to the tradition of academic psychology to the present.

18. La Mettrie (1912), and Vartanian (1953), (1960).

19. Vartanian (1960), p. 15.

20. La Mettrie (1912), p. 109. He continues: 'Only through nature do we have any good qualities; to her we owe all that we are'.

21. Ibid., p. 93.

22. Vartanian (1960), p. 19.

23. La Mettrie (1912), p. 128. A principle clearly expressed also by Diderot, particularly in D'Alembert's Dream which can be read as a materialist rejoinder to Cartesian dualism. See Vartanian (1953), p. 13, who traces this line of thought, 'I think therefore matter thinks', back to Hobbes.

24. La Mettrie (1912), p. 143.

25. Vartanian (1960), p. 19.

26. D'Holbach, vol.1, p. 130.

27. La Mettrie (1912), p. 143.

28. Condillac's objection to 'systems' was to metaphysical systems. See Knight (1968) p. 52, Frankel (1969), p. 44. 'nature' and 'man' were however constituted as 'real' systems and consequently could be understood geometrically.

29. Quoted in Knight (1968), p. 28.

30. Ibid., p. 52. We must therefore renounce 'fictitious systems'.

31. Ibid., p. 52. Sentiments echoed by D'Alembert. 'The art of reducing, as far as possible, a great number of phenomena to a single one which can be regarded as the principle of them... constitutes the true esprit systematique, which one must be careful not to take for the

esprit de systeme with which it does not always coincide',
quoted in Frankel (1969), p. 44.

32. Particularly in Berkeley's A New Theory of Vision
first published in 1707, and Diderot's Lettre sur les
aveugles which appeared in 1749. On Condillac's 'statue-
man' see Knight (1968) pp. 79-108. It is sensation that
'gives birth to the whole system of man, a complete system
all of whose parts are linked and mutually sustaining',
ibid., p. 79. Condillac's 'statue-man' was indebted to
Buffon's account of the 'first' sensory experiences of
archaic man, see Fellows and Milliken (1972).

33. Knight (1968), p. 86.

34. Quoted in Knight (1968), p. 80.

35. Perkins (1982), p. 44.

36. D'Holbach (1966), p. 59: 'Les physéciens ont nommé
cette tendance ou direction gravitation sur soi: Newton
l'appelle
force d'inertie; les moralistes l'ont appelée dans l'homme
amour de soi, qui n'est que la tendance à se conserver, le
désir du bonheur, l'amour du bien-être et du plaisir ...
cette gravitation sur soi est donc une disposition
nécessaire dans l'homme et dans les êtres...'

37. Parsons (1949), pp. 51-60, remains the most penetrating
analysis.

38. Hobbes (1962), p. 114.

39. Mintz (1962), Macpherson (1962)

40. Mandeville (1957), vol.1, p. 231.

41. It is only since Durkheim's attack on utilitarianism
and more particularly since Parson's brilliant analysis of
it that we have come to regard functionalism and
utilitarianism as incompatible perspectives on social life.
See Parsons (1937), pp. 51-60, 344-350.

42. Mandeville (1957), vol.1, p. 51.

43. Ibid., p. 51.

44. Ibid., p. 68.

45. Ibid., p. 72.

46. Bentham (1970), p. 33.

47. Sidgwick (1907), p. 117, the first that is in England.
In many ways however Shaftesbury appears as a
conventionalisation of themes explored more resolutely by
Montaigne.

48. Grean (1967), p. 2.

49. Shaftesbury (1964) p. 62. And fails therefore to observe one of the key problems of the age, the threat of 'enthusiasm' which is a kind of 'superstition' of the moral sense, when 'the rage of the people ... has put them beyond themselves', in a way unsanctioned by conventional religion. Shaftesbury offers a 'mechanistic' account of such unreasonableness which once again, with its reference to 'fermentation' reminds us of Query 31 of the Opticks. '...strange ferments of the blood, which in many bodies occasion an extraordinary discharge; so in reason, too, there are heterogeneous particles which must be thrown off by fermentation.. ' Ibid. p. 12.

50. Shaftesbury (1964), p. 66. He complained of Mandevilles's view in which 'An honest heart is only a more cunning one; and honesty and good-nature, a more deliberate or better-regulated self-love'. Ibid., p. 79.

51. Ibid., p. 183.

52. Ibid., p. 184. The 'self' required education and moral regulation but its prior existence was accepted as the 'given' of human nature. A view that was central to the development of the 'Scottish Moralists'. Later, for example, Thomas Reid was to write; 'Every man of sound mind finds himself under a necessity of believing his own identity and continued existence. The conviction of this is immediate and irresistible; and, if he should lose this conviction, it would be a certain proof of insanity, which is not to be remedied by reasoning'. Reid (1961), p. 26.

53. Newton's formulation of a law of gravity is likened to Euclid's geometry; 'how beautiful is the Theorem, and how are we ravished with its first discovery': Hutcheson (1971), vol.1, p. 29. Hutcheson claimed a similar aesthetic pleasure in rightness sustained the diversity of moral duties, 'deduced in the various relations of human life', ibid., p. 30.

54. Ibid., p. 31. 'It is easy to see how men are charmed with the beauty of such knowledge', ibid., p. 30.

55. See particularly his The Original of our Ideas of Virtue. Hutcheson (1971), vol.2.

56. Smith (1976), p. 8.

57. This against Hutcheson's tautological moral theory. Significantly Hutcheson defended a theology of Design, whereas Smith was drawn to a Stoic philosophy within which the Creator 'contrived and conducted the immense machine of the universe'.

58. Smith (1976), p. 9.

59. Ibid., p. 10.

60. Indeed it is only because we do not directly imitate his feelings that we grasp the 'most dreadful... of all the calamities to which the condition of mortality exposes mankind': *ibid.*, p. 12.

61. Ibid., p. 13.

62. There is in other words an 'economy of feeling' which is one important aspect of an internal 'market' in sentiments; a market structured by the universal dimensions of self-identity (the 'equivalent' of time in the cosmic sphere and labour in the social world) and sympathy (which is the 'equivalent' of space in the cosmos and money in the social sphere).

63. There is therefore a powerful 'social motive' in the sharing of sorrow and we are 'not half so anxious that our friends should adopt our friendships, as that they should enter into our resentments'. *ibid.*, p. 15.

64. The Newtonian ambition of his treatise should again be noted. James Woodrow remarked of his theory of moral sentiments that it was 'a very ingenious attempt to account for the principle phenomena in the moral world from this one general principle, like that of gravity in the natural world': *ibid.*, 'Introduction', p. 3.

65. As opposed to the frivolity of sensuousness it is pleasure in acting virtuously that lends 'weight' to the personality. Luhmann (1986) provides an interesting analysis of developing codes of intimacy as an important aspect of the process of psychic individuation.

66. Smith (1976), p. 50.

67. Ibid., p. 50.

68. Ibid., p. 50.

69. Ibid., pp. 50-51. For a reformulation of this view see Douglas and Isherwood (1980), pp. 56-71.

70. 'The man of rank and distinction ... is observed by all the world ... to conceive, at least by sympathy, that joy, and exultation with which his circumstances naturally inspire him': *ibid.* p. 51. Furthermore, 'upon this disposition of mankind, to go along with the passions of the rich and the powerful, is founded the distinction of ranks, and the order of society': *ibid.* p. 52. This subtle regulation of sentiment however can be degraded into a envy and a vulgar love of wealth, 'the great and most universal cause of the corruption of our moral sentiments'.

71. For example, in Soliloquy, 'One would think there was nothing easier for us than to know our own minds ... But our thoughts have generally asuch an obscure implicit language, that 'tis hardest thing in the world to make them speak out distinctly': Shaftesbury (1964), p. 113.

72. Hume's piercing scepticism in the matter, in any event quite exceptional, was not directed at the immediacy of the experience of the self (whixch was undeniable) but towards the chain of faulty deductions drawn from it; 'The idea of ourselves is always intimately present to us, and conveys a sensible degree of veracity to the idea of any other object, to which we are related': Hume (1975), p. 354. See also reference to Reid, above, note (52).

73. See particularly Löwith (1964).

74. It is constructed through a process of 'negation'. 'This tarrying with the negative is the magical power that converts it into being': Hegel (1977), p. 19.

75. Ibid. p. 115.

76. Ibid. p. 125. The 'dizziness' which is here termed fun.

77. Ibid. pp. 111-19. See also Kojève (1982), pp. 3-30, Lauer (1982), 116-12, and more generally Butler (1987), pp. 17-100.

78. Self-consciousness 'is this whole process itself, of passing out of itself as simple category into a singular individual, into the object, and of contemplating this process in the object, nullifying the object as distinct [from it], appropriating it as its own, and proclaiming itself as this certainty of being all reality, of being both itself and its object': Hegel (1977), p. 144.

79. Unger (1975).

PART FOUR

EXCITEMENT

'Actuality cannot be conceptualised'

Søren Kierkegaard

'How should explanations be at all possible when we first turn everything into an image; our image!'

Friedrich Nietzsche

TEN

TOWARDS A CRITIQUE OF BOURGEOIS PSYCHOLOGY

The classical bourgeois worldview can be understood as a process of individuation, as the pursuit of pleasure. The pursuit of pleasure is the pursuit of the self; and the self, like the cosmos, is a system of relations tending towards a unique equilibrium. This has long since ceased to be a plausible view of either psyche or cosmos. The pre-eminence of the classical bourgeois worldview (mechanism and egoism) can claim an historical validity indeed for little more than a hundred and fifty years.¹ The cultural history of capitalism since the mid-nineteenth century has been one of disintegration. It is a process which, still continuing, does not allow us to adopt a position 'beyond' its own apparently aimless course. There is no vantage point from which to observe its bewildering succession of 'styles'. No way to avoid being caught-up in (or caught-out by) its next convulsion.

We are paradoxically therefore still firmly rooted in the very worldview we have come to despise. Or, which is the same thing, it is still firmly rooted in us. No longer convinced of the possibility of a complete and consistent 'system of the world' we nonetheless have to behave as if we did. All our criticisms turn into self-accusations and dissolve. The bourgeois worldview is as it were carried forward into the heart of the 'modern' world, the world which should have replaced it, and finding it heartless took root again. Strangely, the bourgeois worldview has come to contain its own future. Perhaps we should not be surprised it contains after all both its past (happiness) and its opposite (fun).²

More oddly still (modern criticism cannot have too much of this sort of thing), its future is contained in its own past! We find, in Montaigne or Cervantes, for example, at the dawn of the bourgeois world, all the elements of corroded subjectivity we have come to love in its afterlife.³

The problem of 'identity' which is central to Montaigne is not, thus, a biographical struggle towards the 'realisation' of the unique value of an individual. The 'self' emerges only to dissolve, existing separately and incoherently in the moments illuminated by an unreliable memory. Human personality has emerged as the privileged 'subject' of world history, but is still free of all

historical determinants. The author exists then in a void; self-determining and self-deceiving.⁴ There is no standard of validation against which the self can test itself. Any apparent norm is in the final analysis self-generating.

It was not in fact in this radically solipsistic form that the bourgeois ego emerged on to the world stage. It was rather as an uncomplicated union of reason and desire (as pleasure) that the ego made its appearance. It is almost as if Montaigne, anticipating three hundred years of brutal self-abuse, had leapt to the farther side of the bourgeois world to describe the inner decomposition of what hardly yet existed. Of course it was just because the order of capitalism was not yet visible, while the collapse of feudalism was only too apparent, that Montaigne's psychology bears such a striking resemblance to the most advanced of 'modern' writers.⁵

It is similarly tempting to read Giordano Bruno's La cena de le ceneri as an 'anticipation' of the theory of relativity;⁶ as if, immediately prior to the long tour of classical science, a prematurely 'modern' cosmology had been stillborn. Indeed, from the perspective of the present, there is much that is familiar in the Renaissance, more, it often seems, than can be found in the exhausting 'progress' of reason during the eighteenth and much of the nineteenth centuries. But we should not be misled. Theirs is a contest between fun and happiness; a rediscovery of

the inexhaustible transformative power of subjectivity released at last from the etiquette of a spiritual quest. The real struggle, however, was between happiness and pleasure, which could have but one result. 'Modernity' is neither of these; nor is it a competition between pleasure and 'something else'. It does not challenge reality, it is not antagonistic. It is nothing but decayed pleasure and quite harmless. A certain aimlessness and love of paradox is hardly sufficient to join us once again to the premodern world. We only notice these similarities to convince ourselves of our own intellectual freedom.

We cannot therefore date the advent of 'modern' cosmology from what appears, in retrospect, to be its initial spokesmen; any more than we might claim Democritus as the real founder of classical atomism.

Nor should we begin with the spectacular changes in the physical sciences, as if they were propelled by some internal dynamo of their own. Both historically and conceptually, it is safer to look for the origins of modern culture in the 'human' sciences. Transformations of culture are always complex and many sided. At this point we can simply continue with the story. In the history of human subjectivity, what has been the fate of the pursuit of pleasure?

Despair

In the writings of Søren Kierkegaard can be found the first comprehensive and critical 'depth' psychology of the bourgeois era.⁷ It is a critical psychology in a rather special sense. The general assumptions of his writings, as of his life, are just those institutionalised with the development of capitalism. An 'individualistic' psychology is therefore as central to Kierkegaard as it was to Adam Smith. He takes quite seriously the obligation to become that 'single individual' which is his unique possibility.⁸ So wholehearted is his commitment to the ideals of the age that his suffering for them exposes their cruelty. Of course he misjudges his age, importing into it the absolute demands of an older tradition.⁹ For all his love of paradox, he fails to see one of the most fundamental of modern contradictions: the absolute demand to be hypocritical. Kierkegaard's 'error' was to take life seriously, to seek the realisation of a value in himself. Modern values, however, are to be talked about rather than realised. For all that, indeed because of it, Kierkegaard is an unrivalled guide to the pitfalls of personal existence. Taking the urge to individuation to an extremity he displays for us the formal impossibility of the 'self' and incidentally exposes the (less harrowing) difficulties faced by the mundane 'ego'.

What is at issue, for Kierkegaard a life and death

issue, is not whether from some other point of view the self-evident 'rationality' of bourgeois culture might appear grotesque or absurd, but rather, given this fundamental reality, what does it mean for an individual, personal existence?

Kierkegaard's astonishing insight into the incompleteness and contradictoriness of the bourgeois psyche has two obvious and equally important sources.¹⁰ One is the philosophy of Hegel, particularly the Phenomenology to which, in common with many other radical intellectuals, he responded during the 1840's.¹¹ The second is his own personal experience. The two are perfectly merged. His 'categories' cannot be understood as abstract philosophical terms, they unnervingly take on the qualities of personal existence. And equally his personal life existed as a philosophical gesture.¹² He tirelessly attacks both the 'abstractness' of the 'system' and the dialectical insufficiency of contemporary life.¹³

Hegel is, for Kierkegaard, the apotheosis of enlightenment. He renders nature, history and the human subject into aspects of an immanent, unfolding Reason. The 'ego' is the personal inwardness of this process, continually expanding as the movement of human knowledge towards the absolute. While Marx countered Hegel's metaphysical comprehension with its 'reality' as the social world, Kierkegaard opposed both, as different versions of a

totalising rationality, with the unsystematic fragments of personal existence.¹⁴ For him 'paradox' is not a sign of logical misbehaviour, or of contextual confusion, it is the point at which life asserts itself against that part of itself (intellectual reason) which claims to speak for the entirety of human experience.

A convincing reply to the Phenomenology cannot therefore be conceived simply as an alternative 'system'. Hegel's system is (as Marx also argued) the definitive statement of bourgeois rationality. It can only take the form of a personal document, an autobiographical essay, in which metaphysical tendencies are rigorously suppressed in favour of the hard, irreconcilable differences of life itself. The reality Hegel captures in his thought is the truth of reason. But that is only part of life; 'If Hegel had written his whole logic and had written in the preface that it was only a thought experiment', claims Kierkegaard, 'he undoubtedly would have been the greatest thinker who has ever lived'.¹⁵ He is not incorrect, he is incomplete, which is worse: 'As it is he is comic'.¹⁶

Either/Or was conceived as a polemical autobiography against Hegelianism and the 'misunderstanding of the age'. This strange book, however, cannot be understood without reference to its purely personal content. It contains the 'story' of Kierkegaard's unhappy love for Regine Olsen. This 'private' matter provides perfectly sound subject

matter for a philosophical work; it is indeed passion alone which can reveal the only interesting philosophical topic, the self.¹⁷

The prospect of marriage precipitated a crisis in Kierkegaard's life. Having hastily contracted an engagement he found himself in an impossible situation. The genuinely decisive nature of the situation aggravated his peculiarly melancholic anxiety: 'If you marry you will regret it; if you do not marry, you will also regret it'.¹⁸ But more than this, it caught him in an irreconcilable contradiction between his intense and secretive life with his father, and his conception of marriage as an open relationship.¹⁹ He could not marry, but to extricate himself from the situation, or rather to extricate Regine from the situation, justified a melodramatic subterfuge. That she might not harbour any lingering hopes in him he affected a dissolute public life. By appearing to be an unscrupulous libertine he also satisfied his own guilt and left Regine unattached and without blame so that, in the small and intensely pious atmosphere of bourgeois Copenhagen society, her future prospects of marriage might not be damaged.²⁰ The situation became scandalous. It had been what Kierkegaard had intended, yet he could not help trying to 'explain' himself, to Regine and to the world. When Either/Or was published he had a copy sent to Regine. His use of a pseudonym fooled no one and the cause celebre again became a topic of gossip as his book was hastily read

for any new insights into the circumstances it might offer. As the first volume ended with a narrative entitled 'The Diary of a Seducer' and seemed to be a thinly veiled account of the entire 'affair', there was every hope that public curiosity would be satisfied.

His book, however, was far from straightforward. Whatever the significance of the 'Diary', what was to be made of its other extraordinarily diverse contents? It seemed to have no central focus, it even claimed to have been written by two different people. Either was apparently the work of a 'young man' of extraordinary literary and critical gifts, while Or was ostensibly the composition of an older friend of the author of Either. The Or, in the form of long letters addressed to the 'young man' thus forms a critical personal commentary upon the Either. This complex 'indirect communication' was not intended only as a 'confession' or as a covert 'explanation' for Regine's sake, but more generally as a description of the 'real' psychology of the bourgeois age.

Philosophy must grasp life directly, and the real content of modern life lay in just those disconcerting and 'contradictory' movements the metaphysician could not allow. Each individual is a chaotic history of internal states and dispositions that can be formed into a unity only through the deceptions of memory. In truth the

individual, at least the bourgeois individual, cannot become united with himself because he altogether lacks the guidance of a transcendental norm. He is left to define himself and is undermined by the endless self-doubt of existence.²¹ The coherence of the individual is only an ideological assumption, and is destroyed in the moment we try to live 'seriously'. This is not an 'intellectual' problem. Reason as the necessary order of immanence, unfolding in our experience by a process of inner development, is powerless to help us. Kierkegaard can describe his predicament, but he cannot by some process of rational reflection 'decide' how to act. Human activity is not a question of 'rational' decision, but of 'choice', which is quite another matter.²¹ Kierkegaard realised therefore that his failure to marry could not be understood as a decision. The account of the circumstances which he offered to the world, and to himself, were at first self-flattering. The insurmountable contradiction of remaining 'faithful' to his father and to his own melancholy, while at the same time binding himself absolutely to Regine, was nothing more than a particularly testing example of the oppositions that went to make up everyday experience. He had lacked nothing in intellectual skill and discrimination. Like the 'young man' of the Either, Kierkegaard was well aware of his own talent for reflection, what he had lacked was the courage essential to 'choice'.²²

Bereft of any 'natural' unity, the individual is not without a sense of direction, and Kierkegaard's psychology is in large measure an elaboration of the 'stages' through which the self might pass. It comprises an existential map of unprecedented (and almost unsurpassed) precision and detail. His 'aesthetic' works in particular offer extraordinary insight into the nature of the 'modern' experience of the self.²³ Either/Or is a description of the first two 'spheres' of existence, the aesthetic and the ethical.

The peculiar book is after all not chaotic; it turns out in fact to be a perfectly coherent, but deliberately unsystematic, account of these 'spheres' of existence as 'possible' modes of selfhood. From this perspective, we can see that the Either contains as a loosely connecting theme the nature of 'aesthetic' enjoyment. This becomes more apparent in the light of the retrospective commentary written by Judge William who lives under the radically different determinants of ethical values.

The 'aesthetic' sphere is 'immediate' existence. The 'young man' aspires to nothing beyond the enjoyment of the world presented to him. He seeks pleasure as the only meaning of his existence.²⁴ He is not without cultivation. He hopes to find pleasure in the finest artistic achievements. 'Immediacy' does not mean sensuousness. But his superb education is to no avail. He finds only

boredom. The more pleasure becomes the sole object of conscious endeavour the more certainly it eludes the grasp of the longing subject. Part of the difficulty is the sheer number and variety of possible sources of pleasure. No sooner is one envisaged as the ultimate and final satisfaction than its attractions pale, to be superseded by some yet more beguiling objective.²⁵ Pleasure is a relation of desire, a movement towards the completion of the self. But the self is infinitely extendable, so the object world continually takes on new attractions. It is a movement which cannot be completed. We cannot find, in pleasure, the cessation of desire. But this is what the 'young man' desires above all. His fantastic projects and fits of enthusiasm always end in boredom and self disgust because they fail to provide a real sensuous object in which he can 'take hold' of himself. The pursuit of pleasure is always the desire for the self. But the 'self' cannot become actual in 'immediacy', and remains accidentally dispersed throughout the world of experience.

Momentary pleasure is arbitrary and chaotic, it can provide neither the 'foundation' nor the 'image' of selfhood. To the degree to which the 'young man' identifies himself with these hectic adventures he also become 'volatilised' and chaotic. In a radical rejection of Hegelian philosophy and all other traditions from which bourgeois psychology had sprung, Kierkegaard begins his description of the 'individual' as an accidental

relation.²⁴ The characteristic inner feeling of existence under the sway of aesthetic 'categories' is thus neither pleasure nor frustration (which requires the clarity of a fixed objective), but boredom. The 'young man' consequently 'hovers above existence'²⁷, possessing only the melancholy which Kierkegaard himself had known so well since his childhood.²⁸

The 'young man' is in 'despair', that is to say he is failing to be himself. Indeed, in a purely aesthetic existence, despair takes the extreme form of the failure to be any self, let alone the 'single individual' each person might become. But in suffering melancholia he begins to despair 'seriously', for melancholy is already a movement of the self.²⁹ It shades into ironic detachment from the world and it is this deeper form of despair which brings him to the edge of aesthetic existence.³⁰ In it the intuition of another form of existence, entirely different from the arbitrariness of the immediate senses, comes to life. In melancholy and irony the 'young man' possesses despair, which is the starting point of 'real' philosophical existence, not intellectual doubt but a doubt of existence.³¹

There is no necessary, essential or immanent movement which leads from boredom to melancholy to irony; far less any inherent force of self-development driving him to make the 'repetition' beyond all these 'qualifications' of

immediacy into an 'ethical' life. The fundamental error of Hegelian psychology is revealed as the absurdly optimistic belief in the continuous development of reason. Real existence is made up not only of contradictions (the impossibility of grasping pleasure, for example), but also of brutal discontinuities and disjunctions. It is indeed only from the farther side of such a 'gap' in existence that its having a farther side can be known.

The ethical begins, then, not with a rational demonstration of its superiority, or by blind necessity, but by a self-motivated 'leap'. It is only in making a decisive 'choice' that the individual can exist in a different way. But once such a 'leap' has been effected, miraculously, the individual finds that he has not left or destroyed the aesthetic, but has taken it with him - and now in a form in which pleasure finally does become a realisable goal.³² The decisive choice 'crystallises' the self into ethical categories. The real meaning of existence is revealed as the pursuit and expression of some 'value'. Ethical existence is therefore polarised between judgments of 'good' and 'evil'. However, just as the ultimate pleasure sought within the aesthetic turned out to be the individuality which it could never contain, so all the choices within the ethical, in being choice made by the self, are really choices for the self. The decisive choice is not in favour of one good rather than another, or one good in preference to evil, but between life conceived as

falling within such choices and one (unaware of the 'higher' possibility) that abandons it to the chaos of immediacy.³³

Judge William's example of the ethical life is his own individuality, and in particular the decisive choice of marriage. His rather touching and naive account of bourgeois marriage as the paramount ethical life-choice has a particular relevance, of course, in the context of Kierkegaard's own failed engagement. It would be misleading, however, to regard the 'young man' as Kierkegaard or to 'explain' the latter's failure to marry by an inability to break free of irresponsible aestheticism. Kierkegaard's own difficulties lay deeper, and the choice of marriage is only one of a number of possible examples of the ethical.

The ethical organises the inner life into a coherent and continuous unity. But within it divisions and contradictions reappear. Just as aesthetic existence fails to grasp the pleasure which is its only goal, so the ethical life cannot in fact realise the good as free expression of the self. Our limited knowledge, both of the world and the complexity of our own nature, the enormous scope for self-deception and misunderstanding, all implicate us in evil. As soon as we attach ourselves ethically to the world, we cannot evade responsibility for the consequences of our choice.³⁴ The typical inner

feeling of the ethical existence is once again one of failure, this time of guilt. Guilt, however, is a 'higher' qualification of the individual than boredom; it has a precise quality of individuation, and a longer time perspective. It maintains and builds a unique vision of the self.

To undergo a second 'repetition' into the higher existence of religion, stretched between the polarities of faith and sin, requires an extraordinary effort. Beyond the highest 'potentiation' of the ethical (the comic), lies a dreadful gulf that few can summon the spiritual resources to challenge. It was from the edge of this particular precipice³⁵ that Kierkegaard wrote his pseudonymous works. Grippled by a powerful intuition of the religious 'solution' to the problems of personal existence, he yet could not for a long time summon the energy to 'leap' into faith.³⁶ There is in Kierkegaard's psychology here an extraordinary affinity with the great mystical writers of the twelfth and thirteenth centuries. There is just as obviously however a fundamental difference. The entire tendency of the Kierkegaardian 'steps' or 'stages' in life is towards the absolute inner certainty of faith as an experience of the self. The eventual attainment of religious categories grasps the profound paradox of personal existence,³⁷ and holds it in an absolutely inward and secretive relationship with God. It is the very opposite of the annihilation of all personally distinguishing features sought by St.

Bernard or William of St. Thierry. It is the ultimate confirmation of the self as a 'single individual', rather than the ultimate release from the self as that stubborn pride that blocked genuine spiritual growth.

Even Kierkegaard's religious writings are therefore works of modern psychology. The religious terminus to the process of self-development is in fact deceptive. It is an unattainable goal. No one, other than Christ, could in fact become a Christian.²⁰ The reality of selfhood in the modern world, the duty and promise at the heart of bourgeois society, is in fact boredom, guilt and spiritual terror. The 'person' never emerges from the trials of existence; he is incomplete, contradictory and unknown to himself. In the face of this psychological reality, the church has the bad taste to offer childish piety. It ministers to the superficial coherence of the bourgeois ego, which had ironically been the starting point also of Kierkegaard's subversive orthodoxy. To overcome man's struggle with himself, Kierkegaard had to resort to a solution as 'abstract' as had Hegel. Christ, as the only living example of fully developed existential unity, is a 'theoretical' rather than an 'existential' possibility.

Modern life as the experience of individuality is an ideological impasse. And bourgeois psychology is exposed as a 'false-consciousness' of a peculiarly tenacious kind. It is the failure to achieve the beatification of the

'single individual' which turns Kierkegaard's life (as well as his writing) into a critical instrument, dissecting the hypocrisy of bourgeois 'idealism' and 'piety'. In this he is far more successful than Max Stirner, whose 'absolute ego' remains a grandiose extension rather than a critical negation of the bourgeois psyche.³⁹ Despair, which is the 'sickness unto death', is the incurable disease of modern subjectivity, the inescapable mark of its corrosive self-consciousness.

Though cast in traditional, even reactionary, terms as the search for rational individuality, Kierkegaard's psychology in fact dramatises the decomposition of the modern self. In striving for unity it is driven deeper into despair, farther away from itself. The 'contradictions' of modern life do not stop with the division between subject and object; subjectivity is itself fragmented, each 'sphere' threatening the self with its own impossible vision of the world. The synthesising power of reason has somehow evaporated from everything human; poured out of the self and into the world of 'real', objective relations, into the commodity form, and into the scientific conception of nature. The human subject, thus 'liberated' from its constraint, finds itself in a world of unlimited inner freedom.

It is from the point of view of the decomposed subject that we can grasp the significance of dread as a specifically modern phenomenon. Kierkegaard devoted his most obscure work to an essay on the subject.⁴⁰ It is a notable 'anticipation' of many of Freud's key ideas on anxiety, the term sometimes used indeed to translate Kierkegaard's title.⁴¹ In Kierkegaard's text, however, the terror of an inordinate and unreasoning passion is more transparently present. Dread is to be simultaneously attracted and repelled by the world; immobilised by fright, confined by an inexplicable loss of freedom.⁴² It is fear, but of a peculiarly 'objectless' sort. It is fear of nothing. A fear of the next empty moment. Dread possesses the self and makes the simplest action an impossible risk.

It is in this very objectlessness of dread that its terror lies. Here an intense feeling is experienced, as it were, in a vacuum; in the absolute purity of emptied space. The pursuit of pleasure, or virtue, or faith, is conceivable as the search for selfhood. It is to discover ourselves in the object world that we act with an underlying consistency of motive. When this process of 'self-discovery' becomes undermined by the intuition of the 'nothingness' that lies at its end, then we become filled with dread. And where we might normally invest the world with the attractiveness of our own self-love, projecting our 'wants' into objects to render them delightful, the

decomposed self -preoccupied with its own inner fragmentation - can project only unrecognisable images of itself. In dread, the 'man without qualities' recognises himself, clothing the world of appearance in his authentic selfhood; that is, in nothing.

Kierkegaard's lingering ideological sentiment (he considers the rejection of selfhood as the core of life to be a pathology of the personality), does not prevent him proposing a genuinely critical psychology.⁴³ It is a psychology which is repeatedly rediscovered in the following hundred years. He does not so much inaugurate a tradition which, developing from his fundamental insights, elaborates and refines his 'categories', as propose a point of view which is subsequently rediscovered, independently, in a number of different contexts.⁴⁴ A fuller examination of dread, not only as objectless fear but as objectless passion in general, can be found, for example, in the major novels of Dostoevsky.

The extraordinary realism of Dostoevsky's characters can be readily grasped in Kierkegaardian terms. There is nothing artificial or ideological about their coherence. Whatever their author's original intentions each of his major characters, as if strung along the Stages in Life's Way, might be viewed in the light of one of Kierkegaard's existential images. The aesthetic, the ethical and the religious 'spheres' of existence are all 'represented' by

absolutely convincing personalities.⁴⁵ Each one presses his or her own claims on reality with the shaping power of a real human presence. It is characteristic of Dostoevsky's cycle of mature novels that the contradictions among and paradoxes within these characters are not 'resolved' by an authoritative, 'transcendental', act of synthesis on the part of the author. The complete independence of each character overcomes the residual ideological sentiment in Kierkegaard.⁴⁶ Each existential 'position' is accorded an equivalent status, a possible mode of individuation. There is no inherent order linking such possibilities, no 'development', whether from inner necessity or by the irrationality of the 'leap', leading from one to another, and no privileged final state which realises all the inner potentialities of the individual. Raskolnikov is converted at the close of Crime and Punishment only to reappear, more terrifying than ever, as Stavrogin and Ivan Karamazov.⁴⁷ The arguments among the various protagonists are never-ending and inconclusive. Reason is powerless to reconcile their differences. Equally however they cannot undergo 'repetitions' into progressively 'higher' categories that carry the hope of overcoming the inconsistencies of all particularities.

It is only as readers that we are allowed the privilege of the 'leap' from one enclosed vision of reality to another. Where his characters 'develop' it is towards a 'deeper' subjective realisation of their own reality. Any

movement from one decisive possibility of life to another is unsystematic, arbitrary and frequently reversed.⁴⁸

In the prelude to his major novel cycle, Notes from Underground, Dostoevsky introduces one of his central characters. He is 'a sick man', suffering the sickness unto death.⁴⁹ He is in despair, the despair of 'weakness'; he is incapable of acting and confines his existence to abstraction, he is only an idea of himself.⁵⁰ He lives aesthetically but, like the 'young man' of Either, is disgusted by his own trivial and meaningless existence. He is incapacitated by an overly developed self-consciousness. His disease is an inability to forget himself, even for a moment. This is a deliberate inversion by Dostoevsky of the orthodoxy, sanctified by the secular mythology of the Enlightenment.⁵¹ There the human is identified with self-consciousness, which is the unique attribute of man's species being, and in the Phenomenology the human 'develops' generically only to the extent to which this power of reflexivity can take precedence over man's instinctual life. The growth of 'inwardness', which is an aspect of the dialectic of desire, is held to be the special virtue of the human. But in the 'Underground' self-awareness becomes an affliction. The cosmopolitan 'European' has become transparent to himself and cannot cease questioning his own motives. He becomes frozen by self-conscious doubt over the wisdom of any action. He is possessed of self-loathing, that is to say the loathing of

not being himself. He envies those who intellectually and spiritually he despises but whose blissful lack of refinement allows them the exhilaration of continuous activity.⁵²

There is more here than the 'melancholy' temperament of the artist and intellectual. 'Underground Man' is a general type of modern humanity presented in its most 'intellectual' form. But less sophisticated versions are continually met with in the proliferation of neurotic symptoms, where dread, rather than expressing itself in general terms, 'fixes' itself in some objective form. The intolerable 'objectlessness' of the passions is temporarily denied by discovering some appropriate 'object' for the sensations of guilt, boredom, self-loathing and so on.⁵³ Dostoevsky presents however the purest case. A case in which the highest development of European Culture, a culture which began in a frenzy of spiritual liberation and confident self-assertion, is exposed as cancerously solipsistic.

Only the 'man of action', the thoughtless and insensitive fool, can tolerate the modern world as it is. 'Underground Man', in being 'stuck' in immediacy, is in fact withdrawing from the world as it is, the world of ideological delusion and hypocritical values. A more dramatic attempt to avoid both the anodyne complacency of conventional culture and the corrosive self-consciousness

of aestheticism is exemplified in Underground Man's immediate successor, Raskolnikov.

Crime and Punishment in fact marks a decisive movement beyond the conventions of bourgeois psychology.⁵⁴ In order to 'realise' his potential uniqueness Raskolnikov essays a fearful leap. Now, however, given the inherent incompatibility but existential equivalence of any of life's 'spheres', the leap into faith can just as easily be the leap into self-justifying violence. By killing an old woman money-lender Raskolnikov aspires to become a 'single individual'. The novel exhaustively exposes and rejects all possible 'rational' motives for his crime. No utilitarian or moral calculus can comprehend the meaning of such an act.⁵⁵ It is not an 'action' at all, but a form of inner reflection. Only accidentally related to the external world his crime aims at an interior transformation. It is a technique of 'repetition' which will precipitate the personality in a more highly determined form.

Only a profoundly immoral act can satisfy Raskolnikov's thirst for authentication. He must define himself. No external norm can validate or limit an absolutely freely chosen interior selfhood. If actions flowing spontaneously from his personality were to conform to the conventional moral expectations of his family and friends, they would serve only to irritate his relentless self-doubt.⁵⁶ The despicable murder, a 'teleological

suspension of the ethical' is a true test of uniqueness, a 'pure' act expressive of himself alone. Yet he chooses his victim with a certain amount of care and cannot wholly shake off a conventional responsibility for his motives.⁵⁷ He has caught himself in a dreadful contradiction. To remain inactive is to condemn himself to the lingering sickness of 'Underground Man'. But to become the authentic, Raskolnikov demands nothing less than an act of arbitrary criminality. Yet an arbitrary act, just because it is void of genuine expression, is powerless to bring his hidden self into existence. He cannot act in the world, nor can he withdraw from it. He has intensified rather than resolved 'Underground Man's' subversive despair. And here there is no saving 'leap' into a higher existence. Raskolnikov's 'conversion' is the afterthought of the novel and not its denouement.⁵⁸

The superficiality of his conversion follows on the failure of his second 'technique' of self-realisation, namely confession. By 'unburdening himself' to Sonia, he hopes still to salvage something of his original intention. The guilt he feels is not remorse over his crime, but pure self-loathing, which communicated to Sonia is the tenuous form in which he can appear to himself.⁵⁹ If he can despise himself he must after all be a particular, despicable individual, someone worth despising. Sonia, a genuinely tragic heroine, shoulders the guilt he ought to feel. She has the feelings he lacks, and being unable to

understand his brutal act, nonetheless forgives him. Worse, she loves him. Instead of hating him and thus confirming his perverted form of self-expression, she 'spoils' his confession, by loving him.⁴⁰ Nor can he confess to Porfiry, who knows he is guilty but treats him as the charming personality as the heart of a psychologically 'fascinating' case.⁴¹

Raskolnikov is trapped in his own subjectivity, in the paradox of aestheticism deepened to schizophrenic detachment. The theme of confession is used by Dostoevsky to show the reader, and more importantly to demonstrate to Raskolnikov, another 'version' of himself. By receiving Svidrigaylov's confession Raskolnikov can view himself in another light. His fascinated horror of Svidrigaylov is an exact description of dread. He cannot shake off the obsessive curiosity, the awful attraction, of Svidrigaylov's amoral sensuousness. He recognises in him his own double.⁴² Dread is the fear of nothing, the nothing which is the core of selfhood; in Svidrigaylov it is the terror of pure self-determination. Raskolnikov's revulsion has nothing to do with conventional moralising. Svidrigaylov as an 'objectification' of his own self-loathing shows him the ultimate tendencies of bourgeois inwardness. An active, sensuous immediacy, rather than a reflective abstract aestheticism is just as incapable of escaping the circle of self-doubt and dread. Sensuousness remains frozen in narcissism, or its close relative,

incest; and intensifying in the only 'direction' open to it, culminates in its one 'positive' act of self-expression; suicide.⁴³

Dostoevsky is a negative Kierkegaard. His existential precision is not conditioned by an implicit or explicit order. His novels are loosely organised around conventional 'stories' comprehensible in terms of 'everyday' notions of morality. The intensification of normal existence which we find in his characters tends however to invert and pervert the original 'meaning' of the narrative. The 'normal' psychology of bourgeois egoism as the rational pursuit of pleasure (the self) is overthrown. Without a transcending norm each character is 'responsible' for creating himself, a process which ends in self destruction or madness as the ultimate forms of 'authentication'; the proof that he is, as he suspected, worthless. The 'logic' of personal autonomy is turned against the self. The realisation of a unique individuality is in fact a self-defeating illusion.

Bakhtin has suggested that Dostoevsky's disregard for the formal niceties of the classical novel, his original forms and themes, his psychological 'depth', are all aspects of his revival of Menippean satire, the original literary form of Carnival.⁴⁴ Nonetheless, however indebted he may to purely literary prototypes, his novels appear

strikingly modern. He has broken through the veil of bourgeois conventions in another direction. They do not recall pre-capitalist ideals of order and disorder, hierarchy and release. His characters are caught nicely in the act of withdrawing from the 'object relations' which define the 'normal' individual. This withdrawal, catching them out with its slippery logic, precipitates a bizarre and unpredictable world of experience.

This is not Fun, but Excitement. The transformations of mood and feeling form the foreground to the grey and dismal existence of boredom. A welter of events and unruly passions are concentrated into his books, yet they stand out, even there, as unusual and never claim the inclusiveness or 'naturalness' of fun. They exist primarily to be read, to be 'consumed' by a 'normal' reader delighting in the shock, surprise and melodramatic teasing of his partially hidden wishes. A good deal of the time Dostoevsky's characters, like his readers, are 'hanging around' waiting for something to happen.⁴⁵ The hectic narrative overlays a backdrop of a decadent ruling class consumed by its own inactivity. The provincial boredom depicted particularly by Chekhov is implicitly contrasted, not with classical bourgeois self-assertion, but with the further decomposition of such composure, with its 'breakthrough' into irrational cravings for new, untested forms of experience.

Defiance

Despair is to be other than the self. Dread is the fear of being nothing, of not being able to become a self. Dread is therefore a generalised form of despair, an inability to actualise any image of the self. It is the purest form of what Kierkegaard termed the 'despair of weakness', a somewhat misleading term in the light of Dostoevsky's unconventional characters. 'Weakness' embraces not only those who have thoughtlessly embraced bourgeois complacency, but also those engaged in the most intense inner spiritual struggle over themselves. Yet despair may be 'potentiated' in another way, transforming comfortable hypocrisy into 'defiance'. Within each 'sphere' of existence there is the possibility of identification with the 'wrong' choice. There are a series of negative characters, deliberately in pursuit of unpleasure, or evil or sin. There is a powerful demonic element in such personalities, a perverse willing not to be the self: a strange power of self-possession directed against itself.⁴⁶

Such individuals, Raskolnikov hovers on the verge of becoming such a one, are 'shut-up' within themselves.⁴⁷ Myshkin, for example, and in a more sinister form Stavrogin, remain unapproachable in the perfection of their inner individuality. But while Myshkin and Alyosha

Karamazov approach the ideal 'positive' character, the Kierkegaardian religious type,⁴⁸ with whom Dostoevsky never felt totally at ease. Svidrigaylov and Stavrogin provide the more powerful image of uniqueness, as defiance. Their existence is an insult hurled against the western philosophical tradition and the values it claims to support. In the place of philosophical certainty conceived as knowledge, he claims the authentic singularity of personal truth.

Philosophy, however, was not slow to fight back. Nietzsche, towards the end of the nineteenth century, attacked the philosophical orthodoxy of the classical scientific worldview head on. He proposes a fresh philosophical approach which does not, once it has laid claim to modern reality, lead away from it into 'abstraction'. Nor is it just another voice complaining of the obstacles speculative metaphysics has placed in the path of real self-knowledge. His is not, as in Kierkegaard or Marx, a critique of philosophical language, but a philosophical critique of modern life. His writings are not conceived as exercises in a critical reason which places itself beyond existence to comment upon the shortcomings of the present.

Nietzsche generalises Kierkegaard's Attack upon Christendom to modern bourgeois culture in general.⁴⁹ The core of this culture is not the scientific knowledge of the

world to which it lays claims but the specific way of life espoused in its values. The search for 'objectivity' in philosophy is one such value and one which reveals the general inversion and turning away of bourgeois culture from a 'natural' disposition towards life. Nietzsche is primarily a moralist, not because the discourse over values can be more 'rational' than the discourse over epistemology, but in recognition of its more fundamental sense of reality.⁷⁰ Knowledge of the world, that is to say, is intimately linked to a particular way of life which it expresses. Modern science admits as much in its acceptance of the provisional nature of its results, and the conventionality of its theories.⁷¹ It has abandoned the search for 'truth' in favour of the eradication of 'error'; an apparently slight transition which turns out to be momentous. Any view of the world is just that, a 'perspective' whose claim to validity is supported ultimately by the 'will to power' which it expresses, and with which it is one.⁷²

The discourse over values has itself become corrupted, and in just the same way as the discussion of knowledge. The search for the good has been replaced by the avoidance of evil. This is Nietzsche's general statement of the character of modern asceticism.⁷³ He traces the characteristic 'transvaluation of all values' to the formation of early Christian morality. The powerlessness of early Christian groups to realise their vision of life

in the face of a powerful and oppressive foreign ruler led to an 'interiorisation' of their values. They came to identify their own weakness with these values. Humility, passivity, forgiveness became the perverse aims of a profoundly self-denying form of existence.⁷⁴ The subjective world is organised by resentment, by a host of repressed feelings that express themselves as their opposites.

Modern bourgeois morality in Nietzsche's view is modelled on the Christian prototype of transvaluation.⁷⁵ The symptoms of resentment, anxiety, guilt and self-loathing, everywhere abound. Overtaken by these pathological forms of subjectivity, the modern individual seeks relief from them in the very processes that occasion their formation; by subjugation to an external 'authority', by 'confession', the neurotic substitution of real wants by acceptable but unsatisfying playthings.

The formal coherence of Philosophy and Christianity make them both prime targets for Nietzsche. The distinction is not, as for Kierkegaard, between the cruel abstraction of the former and the existential vitality of the latter; but between the world of experience rendered as a systematic totality and the world as open possibility. The moralist cannot any longer espouse a positive value. The world is already rotten and corrupted, there is nothing in it but repetition, the 'eternal recurrence of the ever

same'. Against the perpetual grimace of demonstrative reason, the inner world of the human subject opens to reveal an undiminished plenitude. The subjective becomes the exclusive realm of the aesthetically and morally valuable; not as a dignifying principle of individuality, but as the home of freedom.⁷⁶

Nietzsche's demonic passion is comprehensible in the context of Kierkegaard's psychology. He is the defiant character, turned inwards, relentlessly stripping existence of every conventional positive value. He takes the absolute freedom of the inner self to be its only principle. 'Indeed, the notion of the 'self' is revealed as illusory. Subjectivity cannot be formed and constrained by any such individuated 'structure'.⁷⁷ Personal identity cannot rise above the incomplete and contradictory fragments of immediate experience. It is the fundamental 'error' of the Western philosophical tradition to aspire to identity, completion, integration, wholeness and systematic unity where none can exist. Personal 'integration, as much as a systematic metaphysics, is a denial of reality, a rejection of life.

The nobility of life, which is the heart of genuine philosophy, cannot limit itself to something (logic, value, pleasure) less than itself. Nietzsche's predilection for the cosmology of fun is evident. That it is life in its

undiminished fullness need not be doubted. But here again we are faced with something new. Fun has already been suppressed and cannot be recovered.^{7a} It cannot be deliberately sought or made the object of rational action. At best we can hold ourselves in a state of readiness to catch its unpredictable vibrations. Excitement, an internally decomposed state within which the 'self' cannot locate itself, is the enjoyment of modernity and the modern form of enjoyment. It is inherently unpredictable and related to the 'object world' in an arbitrary fashion. It is the choice of defiance, a love of nothing rather than a fear of nothing; a demonic attachment to everything incomplete and unfinished. In an excited state, the psyche no longer 'knows itself' and manages to throw off every pretension to seriousness.

The world of pleasure, the bourgeois world, is composed of a system of relations (commodities) differentiating and linking the 'self' and the 'world'. The distance between the two is felt as desire. The psychology of excitement resolves these relationships into projective fantasies. Objects exist for it only as aspects of its abiding narcissism. Any external stimulus might trigger off the entirely free, internal and irrational process which is the sanctuary of human freedom. Excitement is a kind of nostalgia over fun, as pleasure is ultimately the forgetting of happiness. The hope of excitement is a voracious consumer of novelties. As

enjoyment is no longer predictably related to the nature of the object world, and is something entirely inward, experimentation becomes continuous. Something which triggers a keen enjoyment on one occasion may be impotent at the next.

The Newtonian mechanism finally disintegrates towards the close of the nineteenth century. The system of forces it defined and used to describe the 'system of the world' ceased to have an unambiguous and consistent meaning. This is not just a matter of a 'relativising' tendency in the theoretical languages used to describe nature and society. These tendencies, admittedly, are important. But a more general issue emerges and becomes paramount, first within a loose 'tradition' of bourgeois thought which might be called 'philosophical psychology'. As against all 'totalising' modes of thought Kierkegaard, Dostoevsky and Nietzsche, most powerfully, but not in isolation, proclaim the priority of a paradoxical, contradictory and fragmented reality.⁷⁹ The consciousness of the bourgeois world did not founder as a consequence of attacks mounted upon it from without so much as crumble from within in the response of its most devoted philosophers to the life it had promised them.

Notes to Chapter Ten

1. From say Newton's Principia (1686), to the invention of non-Euclidean geometry and the development of critical psychology in the 1840's.

2. The use of 'contain' here is not intended to convey any sense either of Hegelian immanence or of conscious purposiveness.

3. 'We are all convention': Montaigne (1958), p. 190. boldly declares. For a brilliant exposition of his 'modernism', see Starobinski (1985).

4. Characteristically he lacks memory: 'I find scarcely a trace of it in myself', he boasts, Montaigne (1958), p. 28. See more generally Starobinski (1985), pp. 9-14.

5. Or that Cervantes' novel can appear as an 'exemplary story' in the work of Foucault (1970), pp. 46-50, and Schutz (1976), vol.2. pp. 135-58

6. As suggested by Paterson (1970), p. 41.

7. Cole (1971), provides a systematic comparison with Freud. See also Löwith.

8. Kierkegaard in general addresses his works to the 'single individual', for example, (1941), p. 109, and writes, Journals and Papers (1970), vol.2, p. 411, that: 'He can be in kinship only with "the single individual", and only "the single individual" can be in kinship with God'. As the highest 'potentiation' of the self the 'single individual' is a particular personality, and completely unlike its 'Hegelianised' abstraction, Max Stirner's 'unique one' or absolute ego which is wholly indeterminate and 'free'. See Stirner (1971), pp. 257-61; Löwith for comparison.

9. Not that he did not make many brilliant comments on the contemporary world and his relation to it. In saying (1978), p. 97, 'The present age is essentially a sensible age, devoid of passion', he is surely correct, but adds 'and therefore it has nullified the principle of contradiction' (emphasis in original), he misses the 'passionless' contradiction of hypocrisy.

10. The biographical material is not simply a useful 'background' to understanding his writings. See Kierkegaard (1962), Lowrie (1962); Thompson (1974).

11. See, generally, Thulstrup (1980), particularly pp. 320-

82; Taylor (1980), pp. 105-40; Malantschuk (1971), pp. 9-101.

12. Lukács (1974), pp. 28-41.

13. For example, a Journal entry, (1970), vol.2, p. 225, 'The System "goes forward by necessity," so it is said. And look, it never for a moment is able to advance as much as half an inch ahead of existence, which goes forward in freedom'. But the 'present age', (1978), p. 68, 'is essentially a sensible, reflecting age devoid of passion, flaring up in superficial, short-lived enthusiasm and prudentially relaxing in indolence.'

14. Hence the 'disjointed' structure of Either as a description of 'immediacy'. On the differences between Kierkegaard's and Marx's rejection of Hegel, see Lowith (1964).

15. Kierkegaard (1959), vol.2, p. 217.

16. Ibid., p. 217.

17. Philosophical reflection empties the self of all content; by reflection 'I can circumnavigate myself, but I cannot erect myself above myself, I cannot find the Archimedean point', which lies in existence itself: Repetition p. 90. It is felt by the intellect as paradox 'for the paradox is the source of the thinker's passion': Philosophical Fragments, p. 46. It is therefore to 'repetition' rather than to Socratic 'recollection' that the passionate thinker must turn. 'Recollection is the pagan life-view, repetition is the modern life-view; repetition is the interest of metaphysics, and at the same time the interest upon which metaphysics founders': Repetition, p. 53.

18. Kierkegaard (1959), vol.1, p. 37. For details of his relation with Regine, Lowrie (1962), pp. 191-231 Thompson (1973), pp. 101-16.

19. In turn representing a conflict between his own withdrawn melancholy and an urge to speak 'directly'. A 'quiet despair', Journals vol.1, pp. 345-6, and a 'passionate coldness' Letters, p. 133-8. In short, lack of 'faith': Lowrie (1962), p. 226.

20. In fact she married Fritz Schlegel six years later, in 1847.

21. The 'aesthetic' self 'loses itself in the multifarious': ibid., (1959), vol.2, p. 171; Judge William comments of the 'young man', 'you are constantly only in the moment, and therefore your life dissolves': ibid., p. 183.

22. His soul had been 'anaesthetised by despair', ibid.

p. 226.

23. Particularly Either/Or, Repetition, The Sickness Unto Death and The Concept of Anxiety.

24. And attributes his failure to attain it to his own 'melancholy', 'the most faithful mistress I have known': *ibid.*, (1959), vol.1. p. 20.

25. 'Pleasure is in itself a multiplicity': *ibid.*, vol.2, p. 188. And in another sense is the boredom of immediacy, 'the nothingness which pervades reality': *ibid.*, vol.1. p. 287.

26. Accidental that is to say from an 'inward' viewpoint. 'The aesthetic choice is either entirely immediate and to that extent no choice, or it loses itself in the multifarious': *ibid.*, vol.2, p. 171.

27. He has become 'abstracted' and literally philosophical, 'you are united with the philosophers. What unites you is that life comes to a stop', the Hegelian method becomes a reality, 'You mediate contradictions in a higher madness, philosophy mediates them in a higher unity': *ibid.*, vol.2, p. 175-6.

28. Kierkegaard (1962), pp. 76-7.

29. Kierkegaard (1959), vol. 2, pp. 229-35.

30. Kierkegaard (1965).

31. Kierkegaard (1959), 'Doubt is a despair of thought, despair is a doubt of the personality': *ibid.*, vol.2, p. 215.

32. For example marriage, 'is the true transfiguration of romantic love': *ibid.*, vol. 2, p. 31.

33. *Ibid.*, vol.2. pp. 181-2.

34. Kierkegaard (1941), pp. 468-93. 'So the essential consciousness of guilt is the first deep plunge into existence': *ibid.*, p. 473.

35. Kierkegaard (1962), pp. 44-63.

36. Journals (1978), vol.6, pp. 223-7.

37. 'The thing of being a Christian is not determined by the what of Christianity but by the how of the Christian. This how can only correspond to one thing, the absolute paradox': Kierkegaard (1941), p. 540.

38. Kierkegaard (1941), p. 457.

39. For a sympathetic assessment see Carroll (1974).

40. Kierkegaard (1957).
41. Kierkegaard (1980) the archaic term 'dread' is still much richer in associations.
42. 'Dread is a sympathetic antipathy and an antipathetic sympathy...This dread belongs to the child so essentially that it cannot do without it; even though it alarms him, it captivates him nevertheless by its sweet feeling of apprehension': Kierkegaard (1957), p. 38.
43. Cole (1971).
44. Carroll (1974).
45. 'Underground Man' is a somewhat cynical version of the 'young man' of the Either, and Raskolnikov might be considered as his 'demonic' brother. Prince Myshkin has the comical incognito of the authentic Christian.
46. Bakhtin (1973), pp. 4-7, in particular has drawn attention to the 'astonishing inner independence of Dostoevsky's heroes', and to the, 'plurality of independent and unmerged voices and consciousnesses and the genuine polyphony of full-valued voices', characteristic of his novels.
47. Mochulsky (1967), p. 463.
48. Thus, 'in Dostoevsky's world even agreement (soglasie) retains its dialogical character, i.e. it never leads to a merging of voices and truths in a single impersonal truth, as is the case in the monological world': Bakhtin (1973), p. 78.
49. In The Sickness Unto Death Kierkegaard might have been describing the paradoxically self-conscious 'Underground Man': 'Yet despair is precisely self-consuming, but it is an impotent self-consumption which is not able to do what he wills; and this impotence is a new form of self-consumption, in which again, however, the despairer is not able to do what he wills, namely, to consume himself': *ibid.*, p. 151. Mochulsky (1967), p. 244, also draws attention to the parallels between 'Underground Man's' striking insights and those of Kierkegaard and Nietzsche.
50. But rather than complete the 'abstract' development of the Kierkegaardian 'young man' this is accompanied by a characteristic 'fall' from the ethical to the aesthetical, to cynical pleasure. Mochulsky (1967), p. 249.
51. As had been expressed particularly by Chernyshevsky in his novel What is to be Done, and symbolised by the Crystal

Palace, Dostoevsky (1972) pp., 34-43. See Mochulsky (1967), pp., 253-4.

52. 'They had so little understanding of the most essential things, so little interest in the most inspiring subjects, that I could not help looking on them as my inferiors... I abominated them, although I was perhaps worse than they were': Dostoevsky (1972), pp., 68-9.

53. Kierkegaard (1957), pp. 103-5, speaks eloquently of the 'sophistry of remorse'; cf. Freud's (1971), vol. 20, later view of symptom formation as a means of dealing with 'existential' anxiety.

54. Mochulsky (1967), pp., 272-3.

55. Porfiry understands this perfectly well, 'We're dealing with quite a fantastic affair here, a sombre affair, a modern one, a case characteristic of our time... here we are faced with a determination to take the first step': Dostoevsky (1966), p. 467.

56. A theme deepened in the figure of Ivan Karamazov, in whom 'all is permitted' turns into 'metaphysical rebellion'. See Camus (1971), pp. 50-6.

57. A second 'unplanned' murder is introduced to ensure conventional moral culpability.

58. Mochulsky (1967), p., 312. In the 'Epilogue' Raskolnikov states quite clearly, 'My conscience is clear', Dostoevsky (1966), p. 552.

59. Ibid., pp. 432-3, 'I just did it; I did it for myself alone...the devil had dragged me there, and it was only afterwards that he explained to me that I had no right to go there because I was the same kind of louse as the rest'.

60. This does not, of course, resurrect some 'normal' feeling in Raskolnikov; she follows him to Siberia where she is tormented, 'by his rude and contemptuous attitude towards her', ibid., p. 551.

61. Ibid., pp. 468-74.

62. Dostoevsky had previously dealt with the the idea of the 'double', a theme he had taken from Gogol, Dostoevsky (1972).

63. Mochulsky (1967), pp. 307-11.

64. Bakhtin (1973), pp. 87-113. Interestingly John Cowper Powys (1974), also points, through the notion of play, to carnival imagery in Dostoevsky.

65. Time and space in his novels are broken into

incommensurable fragments. Bakhtin (1973), p. 124.

66. 'The individual is in the evil and is in dread of the good. The bondage of sin is an unfree relation to the evil, but the demoniacal is an unfree relation to the good'. Kierkegaard (1957) p. 106; see also Kierkegaard (1968), pp. 200-7.

67. Kierkegaard, (1967), pp. 110-14

68. His less exalted 'positive' characters. Razumikhin for example, or Sonia, are also less striking than their correspondingly minor 'devils'.

69. Kierkegaard (1944); Nietzsche (1969), (1973).

70. He rejects, of course, any unconditional moral code, his morality, like Kierkegaard's religiosity, begins with a 'teleological suspension of the ethical', with the 'stern earnestness' of 'self-overcoming': Jaspers (1965), pp. 154-6.

71. The really striking fact in this, Nietzsche points out, is the extent to which science has nonetheless vindicated itself. 'Indeed, we are so convinced of the uncertainty and fantasies of our judgments and of the eternal change of all human laws and concepts that we are really amazed how well the results of science stand up': Nietzsche (1974), p. 111.

72. In a typical passage we read: 'We operate only with things that do not exist: lines, planes, bodies, atoms, divisible time spans, divisible spaces. How should explanations be at all possible when we first turn everything into an image, our image! It will do to consider science as an attempt to humanise things as faithfully as possible: as we describe things and their one-after-another, we learn how to describe ourselves more and more precisely... in truth we are confronted by a continuum out of which we isolate a couple of pieces... The suddenness with which many effects stand out misleads us; actually, it is sudden only for us. In this moment of suddenness there is an infinite number of processes that elude us': Nietzsche (1974), pp. 172-3.

73. Nietzsche (1967), pp. 24-56.

74. Ibid., pp. 97-163.

75. A view denied by Scheler (1972), who nonetheless took over the category of ressentiment.

76. Of course we need not suppose a spiritual liberation will destroy the world. 'What at first was appearance becomes in the end, almost invariably, the essence and is effective as such. How foolish it would be to suppose that one only needs to point out this origin and this misty shroud of delusion in order to destroy the world that

counts for real, so-called "reality": Nietzsche (1974), p. 122.

77. The 'self' betrays an outmoded metaphysical prejudice in favour of a unified and 'deep' reality. But, 'would it not be rather probable that, conversely, precisely the most superficial and external aspect of existence - what is most apparent, its skin and sensualisation - would be grasped first - and might even be the only thing that allowed itself to be grasped': *ibid.*, p. 335.

78. 'Forgetting is no mere vis inertiae as the superficial imagine; it is rather an active and in the strictest sense positive faculty of repression': Nietzsche (1967), p. 57.

79. For a somewhat different reconstruction see Carroll (1974)

ELEVEN

NATURE'S STRANGENESS

The critique of bourgeois psychology is by no means an exercise in 'negative thinking'. It provides a description of the real world: the modern world. Kierkegaard, Dostoevsky and Nietzsche lay bare the reality of decomposed subjectivity. They reconstruct the world from its point of view, or rather from its varied and incompatible points of view. The experience of modern life cannot be conveyed, they claim, by any system of rational concepts. Incompleteness and contradiction (rather than ignorance and error) are its fundamental conditions, however much it succeeds in rendering the 'objective' necessity of nature as a rational order. The standard of personal truth could never be subsumed within a hypothetico-deductive 'system of the world'.

The implication, which Nietzsche fully realised, was

in fact to deny to nature as well as to personal 'identity' the rational form of a logical system.¹ The consequent attack on bourgeois metaphysical pretensions must be taken up within science itself. This line of thought is in one sense a curiously negative confirmation of the ontological argument which stands opposed to the metaphysical tradition, as it were from the other side. Both Anselm and Nietzsche deny the possibility of a reasoning 'faculty' separate from the reality upon which it reflects. Indeed, our thoughts do not lead us hopelessly astray merely because they can never achieve the 'objectivity' supposedly inherent in a wholly 'detached' view.² Our conspicuous failure to 'solve' the puzzle of self-identity offers a genuine insight into the real nature of the self as paradox. We must trust this intuition and resist all shallow forms of rational abstraction. But if we are not in fact constituted as isolated 'egos', how can we hope to understand 'nature' as if it were composed of nothing but the relations among isolated particles? Just as our own experience, if taken seriously, will undermine any rational psychological theory, so will it prevent the completion of the classical scientific worldview. The frozen psychotic stare of rational mechanics gives way, then, and with dramatic suddenness, to a new appreciation of nature's strangeness.

Although central to our understanding of it, Nietzsche's philosophical insight can hardly be held

responsible for the transformation in scientific thought. Scientists, in formulating their own problems, however, were subject to the same conditions, and had to use as their intellectual resources the same modes of experience, as those he described. The relativism, discontinuity and incompleteness which was held to characterise the experience of modernity also came to depict the basic properties of nature. We can thus find 'modernity' described, precisely but incommensurably, in the different languages of physics and philosophy, as well as in the more common idioms of painting, literature and music.³

Invisible Mechanisms

The crisis of rational science lies just as deeply hidden in the nineteenth century as does critical psychology. 'Anticipations' of the new relational and morphological concepts of nature have in fact been detected as a continuously present undeveloped alternative to Newtonian mechanics, as in the writings of Leibniz⁴ or Boscovich⁵ or Goethe⁶. In the present context, however, the first stirrings of the movement - which subsequently developed into a distinctively modern as opposed to classical scientific worldview - might conveniently be dated from Sadi Carnot's Reflections on the Motive Power of

Fire, which appeared in 1824, but was not well known until much later in the century through the work of Rudolf Clausius,⁷ and from the invention during the 1830's of non-Euclidean geometry whose full significance was likewise not immediately apparent.⁸ It is worth noting, nonetheless, that the scientific ideas which would come in time to render positivism absurd were contemporary with the publication of Comte's major works.

The aim of the classical scientific worldview was to complete Newton's Principia, subsuming all natural phenomenon and their regulatory forces within a system of rational mechanics. Two rather different views of the underlying mechanism of nature were developed as part of this endeavour. One focused upon the 'inherent' properties of matter and attempted to deduce from them the characteristics of the phenomenal world. The other, regarding matter as fundamentally 'passive', sought to isolate and describe the variety of 'forces' held to be responsible for the cohesion of and interaction among bodies.⁹ Either approach, through progressive abstraction and mathematisation, tends towards the statement of a law from which can be derived (given specific initial conditons) expressions descriptive of the real world. Such laws are typically expressed in the form of equations. From such systems of equations might be calculated, for example, the position of Mars or some other planet in relation to the Earth at some particular time. Such

procedures, central to classical mechanics, are always reversible. This formal feature has important physical implications: it means that the fundamental theories of classical science are isotropic with respect to time.¹⁰ The classical laws do not explain why the entire mechanism of the universe might not be put into 'reverse', and the sequence of planetary motions, eclipses and conjunctions run 'backwards'. Classical mechanics is in fact indifferent to time; it does not distinguish 'before' and 'after', but establishes the ideal regularities of a purely conceptual world. Its fundamental laws are therefore conservation laws and its cosmos is governed by principles of identity and exchange. Every physical process can be conceptualised as an exchange of equivalents, nothing is ever 'gained' or 'lost'. Mechanism can be viewed as an ideal market upon which pure, alienated objects perpetually circulate.

Classical science succeeded by ignoring rather than explaining nature. Meyerson expresses this idea forcefully: 'we only attain laws', he points out, 'by violating nature... by isolating more or less artificially a phenomenon from the whole.'¹¹ Newton's extraordinary success in deriving laws of motion from a general principle and using them to account for the observed motions of the planets was fortuitous. Few aspects of nature, in reality, approached that degree of conformity to 'timeless' repetition. Carnot's memoir, one of the first directly inspired by the technology of the industrial revolution,

introduced an entirely new element into scientific thinking. Rather than establish an identity, Carnot's 'principle' expresses nature's inherent propensity to change.¹² In defining the idea of the efficiency of an engine, Carnot points out that, 'wherever there exists a difference of temperature, motive power can be produced',¹³ but that, in the transfer of heat from one body to another which this involves a certain amount of energy was necessarily dissipated through frictional and other forces. As all natural processes involve such energy transfers, nature as a whole must exhibit a similar 'cooling' effect. Meyerson, again, is to the point: 'In opposition to the illusion of identity to which mechanical theories, the principles of conservation, and even the form of laws in general give rise, Carnot's principle stipulates that the whole universe is modifying itself in a constant direction'.¹⁴

Made analytically precise and quantitatively measurable as entropy by Clausius, this new theoretical viewpoint played a central role in the development of physical ideas during the latter part of the nineteenth century. Where physics had previously been concerned with ridding its conception of nature of all 'subjective' and intuitive ideas, its most advanced branches now began to develop in response to an ineradicable aspect of our immediate experience of the world. The exact relationship between the second law of thermodynamics and our own inner

certainty of duration has remained a matter of dispute.¹³ The ambition to express physical laws in a time-sensitive form, however, has become commonplace. The idea of entropy seemed to provide a new principle of cosmic reasoning. If the entire universe were considered to be an isolated system, rather like a sealed container filled with gas, then all physical events detectable within it must tend towards a state of 'equilibrium' and end, ultimately, in a condition of complete disorder.¹⁴ We can grasp this intuitively, since we know that machines 'wear out', their parts rust and become useless, that all living things perish and disintegrate, that the processes of nature are rarely in fact reversible.

Carnot, and more significantly his belated followers, were concerned primarily with the laws governing the diffusion of heat in fluids, both liquids and gases. In spite of the inherent novelty of the enterprise, this did not appear to pose any real threat to the integrity of the physical sciences or the validity of their foundation in rational mechanics. Such investigations indeed began as a confident extension of the classical laws, as nothing more than an 'application' of basic principles long since established within the Newtonian tradition. Heat was a form of energy and must therefore be associated with the motion of particles. If liquid were heated, or a gas compressed, the activity of its molecules would be increased. If a hot liquid were poured into a container

partially filled with cooler liquid, the more active particles would quickly lose heat through collisions with their colder, more sluggish companions, resulting in a uniform temperature. This kinetic theory, preserving an underlying 'mechanism' for heat transmission and diffusion, proved only partially successful. Quite apart from the difficulty of reducing a mass of experimental data to a satisfyingly simple law, the large-scale mechanics of elastic collisions had never been satisfactorily understood.¹⁷ More important still was the realistic complexity with which any theory had to deal. There could be no question here of isolating a single particle and considering its properties. The level of description had to refer to the fluid as a whole and therefore to the behaviour of millions of interacting particles. New statistical methods were developed to deal with the general problem of description, but the presumed 'underlying' elementary processes remained obscure.

The kinetic theory of gases attracted some of the most able physicists of the second half of the nineteenth century, among them William Thompson (Lord Kelvin), James Clerk Maxwell and Ludwig Boltzmann. The mathematical problem proved to be overwhelmingly complex unless the action of each individual particle was assumed to be independent of every other. If given a physical interpretation this meant that a strictly mechanical view had to be abandoned.¹⁸ The observation of the so-called

'brownian motion', the random movement (presumably as a consequence of elementary molecular agitation) of fine particles of pollen suspended in a fluid, even offered unlikely empirical support for such a drastic step.¹⁹ But this made the Second Law all the more mysterious. If elementary particles were not governed by a strict mechanism, how could the properties of fluids, on a molar scale, be so clearly defined? Why should heat always be transferred from warmer to colder regions? Why were there no instances of fluids at a uniform temperature spontaneously dividing into regions of differing temperature? Such problems were to recur, in a more acute form, at the beginning of the twentieth century, but even without new 'discoveries', the development of classical mechanics had, by the 1890's, run its course.

Difficulties over the kinetic theory of gases were not an isolated problem. Increasingly, the 'loose ends' of Newtonian science became interconnected in their recalcitrance to classical solutions. From the mid-nineteenth century, they centre on the 'newer' sciences dealing with electrical and magnetic phenomena. Well-known electrostatic and magnetic effects had never sat easily within the Newtonian picture of the world. Repulsive as well as attractive forces were involved, and their operation was not easily reducible to a universal law. And later, with Faraday's brilliant experimental demonstrations of induction, a mechanical account seemed all the more

distant.²⁰ Hence it was to the 'non-corpuscular' theory of light that physicists turned in search of instructive analogies. In spite of Newton's own professed preference for a uniformly 'corpuscular' view of nature, some of his own contemporaries, notably Huygens, and in the succeeding century, after the apparently decisive arguments of Young and Fresnel, almost everyone, conceived of light as some form of vibration within a luminiferous ether.²¹

The 'wave' theory of light was part of, rather than an anomaly within, the classical picture of mechanism. Light was held to be a physically real elastic deformation of the 'subtle fluid' which constituted the ether.²² As the medium of propagation supporting natural forces, the ether was clearly not a 'material' substance in the usual (even usually scientific) sense of the term. Pervading space, it apparently offered no resistance to the passage of planetary bodies through it. But just as clearly, by virtue of propagating light, gravitational and possibly other forces, it was not simply another name for extension or continuity. It was possessed, that is to say, of 'mechanical' as well as purely geometrical properties.²³

Faraday, however, in visualising electrical and magnetic effects in terms of 'lines of force', broke with the implicit mechanism of the ether theory. There was no hint here of a 'physical' phenomenon underlying and uniting the heuristic images offered as interpretations of his

results.²⁴ And if Faraday could for a time be ignored by mathematically sophisticated physicists, James Clerk Maxwell could not. Deeply impressed by Faraday's demonstrations, Maxwell set out to extend and complete his work by establishing a general and precise framework for the analysis of all electromagnetic phenomena. In establishing a mathematically faultless 'field theory', Maxwell quite self-consciously took the physical sciences beyond the confines of classical mechanics.²⁵ Maxwell's physical intuition, which Einstein so much admired, was entirely liberated from mechanical prejudices. Others often found his work difficult because of this and preferred to treat his physics as no more than a mathematical convenience. But this was never his intention. He always insisted upon the necessity of analogy in scientific thinking,²⁶ and treated mechanism as just one among several of its possible forms.²⁷ The aim was always to connect the unknown and unfamiliar with the known and familiar, to present the unity of nature in a series of connected images. Maxwell indeed, gifted with extraordinary powers of synthesis, felt the more pressing methodological difficulty to be the establishment of difference, rather than the forging of identities. 'If all that we know is relation' he confesses, 'and if all the relations of one pair of things correspond to those of another pair, it will be difficult to distinguish the one pair from the other, although not presenting a single point of resemblance'.²⁸

Electricity can be connected with magnetism, and both can be considered as analogous to light. They can be represented as varying states of fields of force whose local conditions remain qualitatively unlike the large-scale physical interactions known to classical mechanics.²⁹ Maxwell's electromagnetic theory, the foundation of the modern physical sciences, brought to an end the progressive mechanisation of the world picture which had been at the heart of the bourgeois 'mode of thought'.

Eccentric Observations

Clerk Maxwell, expressing a view common to many physicists during the latter part of the nineteenth century, remarks that 'all our knowledge, both of time and space, is essentially relative'.³⁰ Ernst Mach and Henri Poincaré indeed went so far as to apply this 'principle' of relativity to classical mechanics.³¹ The former, in a brilliant analysis of Newton's original 'demonstration' of absolute space, argued that, far from establishing an invariant framework for physical description, such experiments showed rather the unrestricted interaction of all matter in the universe.³² We could not imagine a physically real location from which we could observe the 'actual' motions of matter in the cosmos. Every observation had to be made from some particular place, and was subject to the 'distorting' effects of its own motion.

It was an illusion to suppose there were any physical experiments we might perform that would free us from the effects of our own particular perspective. The interpretation of classical mechanics as the true 'system of the world' was therefore an unwarranted generalisation. Classical mechanics, rather like Euclidean geometry, exercised an overwhelming attraction on our 'common sense' but, in the final analysis, could be regarded as nothing more than a convention that might be expressible equally well in quite a different form.³³

A 'relational' and 'conventional' view of scientific knowledge stimulated a wide-ranging methodological debate that most scientists were happy to ignore.³⁴ Such reflections seemed to offer no novel physical ideas. Even in the context of ingenious new experimental investigations, it prompted at best an ad hoc criticism of classical ideas.³⁵

Scientific interest centred on the development of Maxwell's theory and in particular on the search for a definitive demonstration of the reality of an ether as the quasi-physical seat of fields of force. The most celebrated and refined of such experiments was conducted by Michelson and Morley in 1887. They developed an ingenious apparatus to compare the velocity of light along two orthogonal paths.³⁶ In 'theory', its speed measured along the direction of the earth's motion should be greater than

that found for the transverse path. No difference was in fact observed, and all efforts to detect the 'drift' of the earth through the ether failed.

These developments form the immediate context of Einstein's Special Theory of Relativity which appeared in Annalen der Physik in 1905. They do not furnish us, however, with Einstein's real point of departure which was - to him - the evident contradiction between Newtonian science and Maxwell's electrodynamics.³⁷ He begins his historic paper thus: 'It is known that Maxwell's electrodynamics - as usually understood at the present time - when applied to moving bodies, leads to asymetries which do not appear to be inherent in the phenomena.'³⁸ and only later mentions the failure to detect the movement of the earth through a 'luminiferous ether'. The Principle of Relativity which he introduces to resolve these difficulties is, unlike those of Poincare or Mach, a physical postulate. The abandonment of absolute space, and a privileged point of observation within it from which to construct a 'system of the world', necessitated a much more thorough revision in our basic physical concepts than had been realised.

Ultimately, it required a scientific theory of much greater complexity than any envisaged within the Newtonian tradition. Generality rather than simplicity must become the standard of formal elegance. Einstein makes this clear in

his 1916 paper on the General Theory of Relativity: 'The general laws of nature are to be expressed', he insists, 'by equations which hold good for all systems of co-ordinates, that is, are co-variant with respect to any substitution whatever'.³⁹ The realisation, that is to say, of the necessarily 'subjective' and 'relational' viewpoint from which we observe the world does not mean that science is restricted to empty formalism and the artificiality of a purely conventional viewpoint. Properly understood, it provides us rather with the starting point for a new and more secure scientific realism. Its method inverts the, largely implicit, assumption of classical science that 'reality' is more complex than the theory through which we understand it. Now 'reality' is absolutely simple but remains unknowable in its simplicity.

Einstein's science begins, then, with a postulate of constancy rather than a relativistic hypothesis. Physical observations might be made from any point within an indefinitely large range of possible systems of co-ordinates. There is no absolute space, and there are no stationary points, and any observational platform must be considered in motion relative to any arbitrarily chosen point in the universe. Even so, assuming uniform relative motion of two such 'inertial frames', we can say that the laws of mechanics (however expressed) must hold good for that observer and, what is really implied in such a statement, the velocity of light, 'is always propagated in

empty space with a definite velocity c which is independent of the state of motion of the emitting body'.⁴⁰ The uniformity of nature, as we have seen, is the fundamental postulate of the scientific revolution and Einstein's Special Theory can be understood as a thorough analysis of the meaning of this conviction. Just as Kierkegaard or Dostoevsky exposed the depths of bourgeois self deception by embracing rather than rejecting the fundamental reality of the ego, Einstein does not base his science on a radically new principle but on a careful consideration of all the implications of the existing principle to which he remains fully committed.⁴¹

Given these two fundamental postulates, the phenomenal world must be 'deformed' in relation to them. If we know that the velocity of light must remain constant for any observer, then observers moving relative to each other must disagree about such apparently 'universal' things as the measurement of length or time. And as any measurement must depend upon the sending and receiving of light signals, this becomes a general theoretical, rather than a technical, problem. Suppose an observer A situated at the centre of an unrealistically rapid train (travelling at an appreciable fraction of the speed of light) switches on a lamp just as he passes a companion B on a platform stationary with respect to the moving train. A observes (that is, his instruments record for him) that light impulses from the lamp reach either end of the carriage

simultaneously. B however records that light impulses reach the rear of the carriage before reaching the front. This is a simple consequence of their relative motion. In the brief moment it takes for the light to reach the rear of the carriage, the carriage itself has moved forward so that, from B's point of view, the light still has some distance to cover to reach the new position of the front of the carriage.⁴² Simultaneity, that is, does not reside in nature, and in comparing events in different reference frames, is a meaningless concept. There is no 'absolute' time any more than there is an absolute space.⁴³

The constancy of the velocity of light force even more bizarre conclusions. Imagine A and B conduct a more refined experiment and each measures the velocity of the light impulses emitted from A's lamp. Before the experiment takes place, A and B have satisfied themselves as to the dimensions of the carriage while at rest relative to each other and have synchronised their clocks. Apparatus is set up on the platform to exactly replicate the position of mirrors and clocks within the stationary carriage. Again as the train speeds by B, A switches on his lamp. For A there is no difficulty, it does not matter in which direction he takes measurements as he is part of the inertial system containing all the relevant apparatus. For B it appears, at first sight, that if he measures the velocity in the direction in which the train is moving, he must arrive at a higher value than if he were to measure it

in the direction against the motion of the train. But in fact he cannot 'compound velocities' in this way. The velocity of light is not augmented or diminished by any relative motion in its source. Intuitively we can understand this must be the case. If we could, by moving very rapidly, 'overtake' light signals as we can sound waves or a ball thrown ahead of us, we could see events which had taken place before we began to move. We could move observationally into the past. The incoherence of such a possibility is far more disturbing to our sense of reason than are the non-intuitive consequences of the constancy of the velocity of light.

Suppose B measures on his watch the time it takes for the light to reach the forward end of the carriage. Because of the forward motion of the carriage, the light travels farther, relative to his 'stationary' position, than it does for A. However, since velocity is given by distance traversed divided by time elapsed and the velocity must be the same for both observers, A's clock must run 'slow' in relation to B's. Similarly if A and B agree on the elapsed time then they must disagree about the length of the carriage. It is important to note that these relativities are not 'subjective' phenomena but physical consequences of relative motion. Clocks remain synchronised and measuring rods remain of equal length only so long as they are confined to the same inertial frame of reference.

Measurements of space and time could no longer be considered as independent and absolute magnitudes. Minkowski, introducing his own formalisation and extension of Einstein's theory in 1908, remarks that, 'Henceforth space by itself, and time by itself, are doomed to fade away into mere shadows, and only a kind of union of the two will preserve an independent reality'.⁴⁴ This marks a decisive shift in the Galilean viewpoint. The physical universe cannot be understood from the point of view of an isolated, observing ego. All physical observations become comparisons among separate observers, and physical laws become the rules by which their differing 'results' can be rationalised. In Einstein's physics we are not asked to 'imagine ourselves' in a particular location or situation, we are asked rather to 'imagine someone else' in a particular set of circumstances. It is the other's observations, when compared to our own, or to a third party's, that provide the theorist with his basic material.⁴⁵ His is the viewpoint of the decomposed subject. The observing ego must be distributed into a variety of locations and times if it is to overcome its tendency to project into nature the illusion of its own rational order. And reason is powerless to recombine these disparate images into a unified and coherent picture of the world. The generality Einstein sought in his theoretical work is an expression of powerful physical intuitions which, in satisfying formal criteria of consistency, proved difficult

to visualise. In extraordinarily lucid non-technical presentations, however, the same difficulties arise. If by rational we mean the completion of a single Newtonian deductive 'model' of the cosmos, then the 'absolute simplicity' of nature cannot be rendered into the form of a rational intellect.⁴⁶ Nature must appear strange.

These difficulties become much more acute when the inter-relation between space-time as an undifferentiated continuum, and matter are considered. Minkowski, realising that the classical language of point-mass, velocity, force and so on had finally been overthrown, suggested a new geometric approach. Any 'substantial point' in the universe can be assigned a space-time co-ordinate and its 'everlasting career' represented by a world-line.⁴⁷ Then, 'physical laws might find their most perfect expression as reciprocal relations between these world lines'.⁴⁸ It was only at this point that the enormous physical implications of developments in non-Euclidean geometry became clear. The new geometric description of space-time would be an unimaginable four-dimensional and non-Euclidean manifold.⁴⁹ Only then would the 'simple' physical phenomena of accelerated motion, gravitational 'force' and field effects be fully comprehensible.

As early as 1870, William Clifford had suggested that many of the phenomena we associate with 'ponderable' matter might be better understood as properties of space. Might

not 'physical variations', in fact, be 'effects which are really due to changes in the curvature of our space?'.⁵⁰

It was not until 1916, however, with the publications of Einstein's General Theory, that such speculations were made rigorous. The extension of the Special Theory led not only to a deeper understanding of motion, but also to a new conception of matter. The technical problem was deceptively simple. The Special Theory had found ways to express the invariance of the laws of nature across reference frames in uniform motion relative to one another. But what about reference frames accelerating with respect to one another?

In a non-technical presentation, Einstein introduces the problem by asking us to imagine someone inside a closed lift from which he can make no observations of outside space. The lift, transported to a distant region of space, is in 'free fall'. For the observer enclosed within this 'inertial system', the laws of mechanics hold good and are directly observable in their classic form. Everything, including himself, is 'weightless' and objects remain where they are in relation to the boundaries of the lift, unless the observer interferes with them in some way, for example by pushing them, in which case they will persist in their motion until colliding with another object or the walls of the container. The 'mass' of any object can be determined by its resistance to motion. A 'large' object requires more of a push to achieve a specific velocity than a

smaller object.⁵¹

Now suppose the lift is acted upon by an external 'invisible' force. A rope is attached to its 'top' and a distant energy source used to accelerate it through space. For the interior observer things are now quite different. He feels a downward pressure forcing all 'heavy' objects to the base of the lift. He becomes conscious of his own 'weight'. And now he can determine the relative masses of the objects around them by a weighing device, such as a spring balance, which measures the 'force' acting upon it. The larger the object the greater the force. He might well 'explain' such fundamental physical features of his world. Einstein suggests, by supposing the base of his lift were endowed with some quality such as gravity which, 'acting at a distance', accelerated objects towards it.

The internal observer assumes the lift is at 'rest' in relation to some absolute frame of reference. An external observer, however, does not make this mistake and attributes the 'gravitational' effects within the lift to its acceleration relative to the space surrounding it. Again, this is not a purely formal relativism. It persists only because of the apparently fortuitous equivalence of inertial and gravitational mass.⁵² This equivalence, however, allows Einstein to treat 'gravitational' forces as accelerating reference-frames, and suggests, furthermore, that light and other forms of electro-magnetic radiation

must be 'bent' by gravitational fields. From the perspective of an accelerating reference-frame, this is easy to grasp. Suppose a small hole is bored in the lift and light from an 'outside' source introduced into the lift. The illuminated point on the wall opposite the hole will not be directly in line with the outside source but displaced due to the movement of the lift during the interval of its travel across the interior. For the 'interior' observer, this effect will also be attributed to the 'gravity' he has discovered governs all other displacements.⁵³

Since there is no kinematic difference between a gravitational field and an accelerating reference-frame, Einstein, in generalising the classical laws to expressions invariant under any transformation (including acceleration), arrives at a new conception of gravitational 'force'. Instead of invoking a 'force', either acting at a point or distributed throughout a field, to account for acceleration, Einstein suggests that change in velocity can be fully characterised by the geometrical properties of space. Accelerated motion does not betray, any more than does uniform motion, the action of an external 'force'. In Einstein's physics, all motion is 'effortless', all objects drift through space, irresistibly 'falling' along their world-lines. Acceleration is simply a bending of space, a contortion in its 'normally' flat metric. All motion has finally become 'natural'.⁵⁴

The naturalness of motion, however, is no longer predicated upon the properties of matter. Now, space and matter are geometrically linked. The character of space is, first of all, 'deformed' by the matter it contains. 'Our world is not Euclidean', Einstein warns: 'The geometrical nature of our world is shaped by masses and their velocities'.⁵⁵ Large concentrations of matter curve space and world-lines running through such regions converge, thereby accelerating objects. Equally, however, such concentrations of matter can be viewed simply as 'dense' regions of space: 'Matter is where the concentration of energy is great, field where the concentration of energy is small'.⁵⁶ The categorical distinction between matter and space is dissolved. 'We could regard matter' claims Einstein directly, 'as the region in space where the field is extremely strong'⁵⁷ - a statement which might be taken as the logical implication of generalising Maxwell's field theory. The cosmos, it appears, is composed of nothing but space, or rather space-time, variously condensed and warped; 'A thrown stone is, from this point of view, a changing field'.⁵⁸ The relativising of absolute space, that is to say, implied the overthrow also of classical conceptions of matter as substance separate from the 'empty' extension, or ethereal medium, containing it.

Hidden Perversities

Relativity Theory interpreted the sensible world as a specific instance of more general laws, the variations in which were observable, for us, only in exceptional circumstances. The immediate experience of the world exposed us directly to only a small segment of its relations. Inconceivably high relative velocities estranged us from this common sense reality. Reason led us, when these 'extreme' situations were considered, to bizarre results. A rational image of nature no longer seemed congruent with the 'system of the world' as a mechanism; the relational system of universal physical causality which, in the bourgeois world, had become 'intuitive' broke down under the stress of internal contradictions.³⁹ These inconsistencies arose not only in Relativity Theory, but appeared, with even greater force, when mechanical ideas were applied to insensibly minute atomic interactions.

In 1900 Max Planck succeeded in showing that the electromagnetic energy distribution within a closed system not only tended towards an equilibrium condition in accordance with Boltzmann's formulation of the gas laws, but did so in a series of discrete 'jumps'.⁴⁰ Energy was absorbed and emitted by elementary particles of matter in a discontinuous fashion; in quanta whose value was a universal constant, independent of any variation in the

empirical circumstances of the system as a whole.⁴¹ Boltzmann had resorted to a statistical approach to thermodynamics as a mathematical convenience and supposed that, in reality, an 'underlying' mechanism provided a continuous network of physical causes wholly determining the motion and energy level of each particle. Planck argued, however, that Boltzmann's theoretical results, which were extendable to all forms of radiation, could be supported only by inferring a real physical discontinuity in the process of absorption and emission.

Einstein similarly argued that light must be considered a discontinuous form of radiation. In a paper published within a few weeks of his 'Electrodynamics of Moving Bodies', he proposed a 'quantum' interpretation of the photo-electric effect.⁴² When a piece of metal is illuminated it periodically expels electrons in rapid motion. The velocity of the emitted electrons depends on the wave-length and not the intensity of the incident rays; it is independent, that is to say, of the distance of the light source. If light is considered as the wavelike deformation of an elastic ether, then its energy level, its capacity to impart motion, would progressively decline with distance. If, however, light is considered as a stream of 'photons' or light quanta, the constancy of the photo-electric effect becomes comprehensible.⁴³ Einstein was also forced to the conclusion that the metal absorbed and emitted radiation in discrete amounts or 'packets' He was

able to show that experimental results had been reached that were consistent with such a view and quite inconsistent with the classical wave theory.

In spite of the serious logical difficulties into which it seemed to lead, the 'quantum' theory made rapid strides. Discontinuity and duality appeared everywhere and refused to be unified or integrated at some 'higher' theoretical level. The more successful it became in predicting experimental effects, the more mysterious did the theory appear.⁴⁴ Systematic problems were pushed into the background for some time with the success, in 1913, of Bohr's 'quantum' view of atomic structure.⁴⁵ A growing body of experimental work, such as that on the photo-electric effect and on radiation particularly connected with Rutherford, necessitated a revision of the classical conception of an atom as an indivisible, impenetrable and simple body. The atom was itself a structure of simpler particles, but if this were the case, what accounted for the stability of this structure? Bohr developed the 'planetary' view of the atom with a positively charged nucleus and a number of negatively charged electron satellites. He supposed that atoms of a particular element possess a finite number of discrete energy states, 'stationary states', in which neither emission nor absorption of energy can occur. Atoms may 'jump' from one stationary state to another with accompanying emission or absorption. He felt, at this point, that classical

mechanics were adequate to describe the 'stationary states' but broke down when applied to the 'transitions', which remained fundamentally incomprehensible.⁶⁶

Bohr's theory had considerable success in accounting for the spectral patterns associated with different elements, and even more in providing a rational foundation for Mendeleev's periodic table and, consequently, for chemical theory.⁶⁷ The discontinuous nature of energy states, the acceptance of which Bohr's theory finally made respectable, posed acute and fundamental problems that could not be ignored for long. Imagine a piece of radioactive material. It is unstable, its large complex atoms tend to break down into simpler and more stable structures, in the process emitting a variety of energised particles. It is a strange instability. One atom, mechanically identical to every other in the sample, suddenly transforms itself. It has existed in its original state for perhaps several thousand years. Another atom may persist in its original condition for several thousand more years before it too follows its companion. In terms of classical science, there seemed no possible explanation of either the 'how' or the 'when' of this process. Yet, as a process within the sensible world, it followed its own laws. The precise number of such 'jumps' in a defined period of time, the nature and intensity of the resultant radiation could all be predicted with admirable accuracy.

The same difficulty had arisen in the statistical approach to thermodynamics. There the mathematical formalism had been justified by an appeal to an as yet unknown 'underlying' mechanism. Even so, it had been embarrassing. Lorentz admitted, in an opening remark at the first Solvay Congress at Brussels in 1911, that, 'We do not understand why a lump of iron does not glow at room temperature'.⁶⁸ Just when physicists had reached down, as it were, to a deeper level of nature, nature itself seemed to dissolve into incomprehensible processes. It was not simply a matter of a more ingenious application of existing ideas. Using conventional concepts Bohr claimed, 'a description of atomic processes in terms of space and time cannot be carried through in a manner free from contradiction'.⁶⁹ From the point of view of the 'ordinary description of physical phenomena', indeed, 'the quantum theory represents an essentially irrational element'.⁷⁰

The generalisation of quantum theory during the 1920's by de Broglie, Heisenberg, Born and Schroedinger intensified rather than resolved this 'irrationality'. The wave-particle duality was taken by de Broglie to be characteristic of any physical process whatever. Everything we called a 'particle' had associated with it wavelike characteristics, and every wave phenomenon was associated with particular particles.⁷¹ If the General Theory of Relativity had united matter and space in a new intimacy, quantum theory bound them together in the same

paradox. The fundamental characteristics of matter and energy, taken separately or in interaction, were inexpressible through a single, logically uniform, and physically meaningful set of concepts. Progressive formalisation, particularly in Schrodinger's elegant 'wave mechanics', did nothing to resolve the difficulty.⁷²

Heisenberg, in particular, offered a particularly uncompromising formulation of the conceptual problem. 'Quantum theory', he says bluntly, 'does not allow a completely objective description of nature'.⁷³ Classical physics had been founded on the possibility of 'detached' observation of nature. The fundamental 'variables' of any mechanical system could be accurately and independently measured. The limitations on our knowledge of physical events were purely practical. In the sub-atomic world of quantum physics this was no longer the case. Our knowledge of such systems is, in principle, limited. Heisenberg introduced his principle of indeterminacy as a problem of measurement. Any experiment we might perform to determine the position of, for example, an electron would, by the Compton effect, alter its momentum in an unpredictable way. And any procedure which might accurately measure its energy would be temporally imprecise.⁷⁴ We could not know the future state of a system because we could not completely know its present state. In Heisenberg's view this was something more than a limitation on our knowledge of the world. The Indeterminacy Relations, as he preferred to

describe these limitations, were all that we could know, and therefore to ask if an electron could nonetheless be conceived as a definite but unknowable magnitude associated with a specific location made no sense.⁷⁵ Even if the classical laws held, we could never at the subatomic level determine physical variables with sufficient precision to apply them.

Bohr's own view of Heisenberg's derivation of Indeterminacy Relations underwent considerable changes over a period of years.⁷⁶ From an early view of quantum physics as a 'limiting condition' of classical mechanics, he developed a methodological postulate of Correspondence and finally of Complementarity. By the late twenties, the unreasonableness that had been originally confined to highly specialised studies of radiation, namely that 'there were two incompatible models... each well confirmed; yet evidence for the one constituted counter-evidence for the other', was widely felt in all fields of physical enquiry.⁷⁷ Bohr, influenced perhaps by Höfding to a Kierkegaardian admiration of paradox, argued that the fundamental dualisms of quantum physics did not stem simply from different conventions of description.⁷⁸ They did not arise as the arbitrary but incompatible points of view from which nature as a whole might be analysed, nor did they originate in differences in the type of phenomena selected by each as central to physical structure. Each view, one associated with measurement of momentum and energy

(particles) the other with determination of frequency and wavelength (waves), was essential to the description of all physical phenomena. The logical inconsistencies in physics was no more than a realisation of the fundamental discontinuities of nature. Any physically realistic theory must contain logical incompatibilities. Rather than aim at the construction of a uniform and complete 'system of the world', or be satisfied with either a vague or a purely formal 'algorithmic' approach, the physicist should aspire to the construction of internally consistent, precise but contradictory images of nature.⁷⁹

The 'Copenhagen' interpretation of quantum physics was generally accepted within the community of physics, but in a 'harmless' form. The mathematical formalism, itself quite free of vagueness or contradiction, was held to be perfectly adequate and the 'philosophical' problems raised by Bohr were regarded as inessential complications, arising from an unfortunate insistence on attempting to 'picture' the processes 'described' by the theory. Bohr's views, however, were coherent and systematic.⁸⁰ And the issues were central to the scientific understanding of the natural world. The indeterminacy relations, the deep unpredictability of matter, the failure of strict causality, the irreducible 'weirdness' of the quantum world could only be grasped if we supposed that, prior to its termination in an observable 'event', the fundamental constituents of nature existed in their own peculiar

playworld; both 'here' and 'there' both 'now' and 'then' only relinquishing the freedom of inherent possibilities when forced to do so by the experimenter's conscious probing. Even the more positivistically inspired Heisenberg expresses himself in Kierkegaardian language on this fundamental issue. The mathematical formalism of probability theory introduces, 'something standing in the middle between the idea of an event and the actual event'. It is a 'strange kind of physical reality just in the middle between possibility and reality'.⁸¹

Thus, 'quantum theory does not allow a completely objective description of nature'⁸² not because of its limitation but because of nature's own inherent playfulness. The primordial world resists definition; distributed over every possibility it only reluctantly alienates itself into the fixed forms of the classical sciences.⁸³

Modern science has gone much further than critical psychology in 'decomposing' the subject. In the classical sciences, the ego reconstructed the world from its own point of view and discovered within it a picture of its own inevitable structure: well formed, systematic, whole. The inner collapse of the bourgeois ego signalled an end to the fixity and systematic structure of the bourgeois cosmos. One privileged point of observation was replaced by a

complex interaction of viewpoints.

The new relativistic viewpoint was not itself a product of scientific 'advances', but was part rather of a general cultural and social transformation which expressed itself in a variety of 'modern' movements.²⁴ It was no longer conceivable that 'nature' could be reconstructed as a logical whole. The incompleteness, indeterminacy and arbitrariness of the subject now reappeared in the natural world. Nature that is, like personal existence, makes itself known only in fragmented images.

Notes to Chapter Eleven

1. 'There is no "reality" for us.' Nietzsche (1974), p. 121. Cf. note '72' ch.10.
2. Nietzsche's madmen who declares that 'God is dead. God remains dead. And we have killed him', is filled with authentic spirituality. Nietzsche (1974), p. 181. But as the absolute reality expressed in God's existence is human personality it is the 'rational self' which is dead.
3. Robert Musil was one of the few really important modern writers with a deep understanding of contemporary scientific movements. Significantly he opens his thesis on Mach - which he wrote before turning to literature - not simply with an orthodox expression of philosophical scepticism but with the confident assertion that 'Exact science has shown that there are no such things as causal connections': Musil (1982), p. 15. (emphasis added).
4. See Freudenthal (1986). A Leibnizian relational physics, rather like an Hegelian relational social theory, would tend however to a systematic abstraction at odds with any form of subversive modernism.
5. Boscovich (1961) in the mid-eighteenth century proposed a conceptual reduction of matter to identical 'point-masses' connected by an oscillatory force whose strength and direction varied by distance. These 'perfectly indivisible and non-extended points', *ibid.* p. (105) have some of the elusive properties of modern quanta. It is hardly surprising that his work was ignored by his contemporaries.
6. Amrine, Zucker and Wheeler (1987).
7. Carnot (1960), and for a clear description of his work, Segré (1984), pp. 192-200.
8. Kline (1972), pp. 861-881, and Kline (1954), pp. 410-431.
9. Hendry (1986), pp. 6-45, calls the first approach 'mechanistic' and the second 'dynamistic'. Both, however, are part of the 'classical' scientific picture of the world; one begins with individuated 'objects' and treats 'forces' as secondary, the other regards 'forces' as the more fundamental. Both aimed at a complete, logically coherent, 'system of the world', and both could claim, with some justification, the authority of Newton. For the underlying equivalence of both see particularly Meyerson (1930), pp. 63-103.

10. Meyerson (1930), pp. 215-18, was among the first to draw the attention of a nonscientific audience to the significance of this point. See also Grünbaum (1973), pp. 213-14. Max Planck (1925), p. 19, also makes it clear that all reversible processes are idealisations of nature.

11. Ibid., p. 31: 'Thus the law cannot directly express reality'.

12. Ibid., p. 265. An idea developed within the classical framework most powerfully by Boltzmann. See Boltzmann (1974), pp. 13-32. Segré (1984), pp. 237-245.

13. Carnot (1960), p. 9.

14. Meyerson (1930), p. 265

15. Particularly as expounded by Grünbaum (1973), pp. 209-219.

16. This is the physical meaning of Boltzmann's celebrated 'H - Theorem': '... one is amazed that, on the assumption that the world is a large system with a finite number of bodies... not even the world as a whole can be a perpetuum mobile'. Boltzmann (1974), p. 30.

17. Westfall (1971), pp. 150-55, for some significant attempts. Impact physics was no more comprehensible, in spite of its 'intuitive' appeal, than 'action at a distance': Meyerson (1930), p. 97.

18. '...in spite of constant mutual influence each molecule pursues its own independent path, appearing as it were as an autonomously acting individual': Boltzmann (1974), p.19.

19. Though only after the kinetic theory of heat had been well established. Thomas Brown made the observation in 1828, but its significance only became 'obvious' on the publication of Einstein's paper in 1905.

20. Hendry (1986), pp. 72-82.

21. Segré (1984), pp. 84-97, Schaffner (1972), pp. 11-19, Hesse (1961), pp. 189-198, Whittaker (1958), vol.1, pp. 94-127.

22. Whittaker (1958), vol.1, pp. 128-170, Schaffner (1972), pp. 40-75.

23. A view championed by Whittaker in opposition to Einstein's revival of corpuscularism. See e.g. Whittaker (1958), vol.1, p. 303.

24. Hendry (1986), pp. 79-82.

25. Maxwell (1890), vol.1, p. 452: 'We are dissatisfied

with the explanation founded on the hypothesis of attractive and repellent forces'. Also p. 455, 'Let us now suppose that the phenomena of magnetism depend on the existence of a tension in the direction of the lines of force', and p. 527: '...produced by actions which go on in the surrounding medium as well as in the excited bodies'. Einstein (1947), p. 148, regarded Maxwell's formulation of the field equations as, 'the most important event in physics since Newton's time'. And de Broglie (1962), p. 22, concurring, particularly stresses the non-classical time asymmetry in Maxwell's theory. For a general and biographical introduction see Domb ed. (1963) and Tolstoy (1981). Hendry (1986) provides a much needed scholarly treatment.

26. A viewpoint already clearly established in an essay on 'Analogy' delivered as an undergraduate at Cambridge to the 'Apostles'. See Campbell and Garnett (1882), pp. 235-244.

27. Not only mechanism, but space and time, are structures of analogy linking nature and intellect. Campbell and Garnett (1882), p. 238.

28. Quoted in Campbell and Garnett (1882), p. 243. Hence the significance of self-conscious analogy, or theory: 'The dimmed outline of phenomenal things all merge into one another unless we put on the focussing glass of theory and screw it up sometimes to one pitch of definition, and sometimes to another, so as to see down into different depths through the great millstone of the world': *ibid.*, p. 237. This Maxwell is quite willing to concede implies the notion that 'causes' are simply reasons 'analogically referred to objects instead of thoughts': *ibid.* p. 238. It is tempting to see in Maxwell, and in his near contemporary at Cambridge, William Clifford, a presciently 'modern' conception of science as a system of 'representations'. Duhem (1954, original French 1914), p. 39, might have drawn his inspiration from Maxwell rather than Mach when he argued that, 'physical theories should be regarded as condensed representations and not as explanations'.

29. In this Maxwell was more original than Thompson (Lord Kelvin) who always strove to provide a mechanical picture of the 'underlying process' of nature. Hendry (1986), p. 144.

30. Quoted in Jammer (1954), p. 138. Stallo (1848), p. 24, was among the first of the modern 'relativists': 'There is nowhere absolute rest, but motion everywhere'.

31. Mach (1893). Einstein admitted that, 'Ernst Mach's The Science of Mechanics, shook this dogmatic faith in mechanics as the final basis of all physical thinking': quoted in Holton (1973), p. 223. Poincaré, in Čapek ed. (1976), pp. 317-327.

32. Mach (1893), pp. 231--233.

33. He thus argues that, '...the motions of the universe are the same whether we adopt the Ptolemaic or the Copernican mode of view. Both views are indeed equally correct; only the latter is more simple and more practical. Ibid., 232.

34. Mach himself became more interested in psychology than physics, see, e.g. Mach (1976), Duhem turned to the history of science, Musil to literature

35. FitzGerald's account of the Michelson - Morley result, for example, had recourse to an ad hoc physical hypothesis. See Whittaker (1949), pp. 52-53, Holton (1973), p. 268.

36. A.A. Michelson and E.W. Morley, 'On the Relative Motion of the Earth and the Luminiferous Aether' (1887), reprinted in Schaffner (1972).

37. For the immediate background to Einstein's paper see Holton (1973), pp. 197-218.

38. Einstein (1952), p. 37.

39. Ibid., p. 117.

40. Ibid., p. 38. A proposition derived from Maxwell, and already utilised by Lorentz to account for the FitzGerald 'contraction'. See Einstein (1920), pp. 30-34.

41. Namely the universality of nature's laws. Methodologically however Einstein shifted away from an early 'Machian' phenomenalism to a rational realism, from which viewpoint he resisted the new quantum physics, Holton (1972), pp. 219-259.

42. An example drawn from Davies (1977), pp. 33-35.

43. Thus, 'we cannot attach any absolute signification to the concept of simultaneity, but that two events which, viewed from a system of co-ordinates are simultaneous, can no longer be looked upon as simultaneous events when envisaged from a system which is in motion relatively to that system': Einstein (1952), pp. 42-43.

44. Minkowski, in Einstein (1954), p. 75.

45. A 'mediation' that is characteristic of the collapsing bourgeois ego. In Dostoevsky's novels desire (which is always and by definition desire of and for the self) is felt only through a series of unstable relationships. See Girard (1965), particularly pp. 83-95.

46. It is generality rather than simplicity that is Einstein's theoretical ambition. Einstein (1952), p. 117. And as we can only directly experience a limited range of metrical variations this generality can be achieved only at the expense of immediate 'picturability'. The tendency to

a Lévi-Straussian 'structuralism' can again be detected. In relativity theory, 'the structure of reason expresses itself in the arbitrariness of admissible systems': Reichenbach (1965), p. 90. The experimental 'tests' of the theory cannot rest therefore with 'everyday' observations. For an account of the standard 'verifications' of Relativity Theory see Shapiro in Woolf ed. pp. 115-36.

47. Minkowski, in Einstein (1952), p. 76.

48. Ibid, p. 76.

49. A physical interpretation of Riemann's geometry. Stein, in Earman, Glymour and Stachel (1977), Jammer (1954), pp. 145-160, Nerlick (1976). Kline (1972), pp. 889-896, who notes in passing that 'the history of non-Euclidean geometry reveals in a striking manner how much mathematicians are influenced not by the reasoning they perform but by the spirit of the times'.

50. Clifford (1885), p. 224. He also anticipated much of the physical and logical 'weirdness' of quantum discontinuities, see Clifford (1879), pp. 114-118.

51. Einstein and Infeld (1947), p. 227-228.

52. Einstein (1920), pp. 65-70: 'The same quality of a body manifests itself according to circumstances as "inertia" or as "weight".'

53. An observational test of Einstein's theory carried out in 1919 by Eddington, who, during an eclipse was able to measure the bending of starlight by the gravitational field of the sun. Eddington (1920), pp. 115-116.

54. Einstein and Infeld (1947), pp. 251-257. Tonnelat, in Taton ed. (1966), pp. 89-93. For non-technical expositions see Narlikar (1982), Geroch (1978). Reichenbach (1965), p. 3, points out that the General Theory 'asserted nothing less than that Euclidean geometry is not applicable to physics'.

55. Einstein and Infeld (1947), p. 251.

56. Ibid., p. 275.

57. Ibid., p. 257.

58. Ibid., p. 275.

59. This is not to say that the nature revealed by twentieth century science might not in time become a 'common-sense' reality, only that it found itself in contradiction to the common-sense world of classical science and the systematic reason it had justified.

60. Kuhn (1978); Hermann (1971) for a detailed historical

reconstruction. It is little consolation to discover, Jammer (1966), p. 2, that quantum physics might well have developed in relation to a less complex problem!

61. A solution to which he was driven, he claimed, 'as simply an act of desperation', quoted in Hermann, p.1.

62. Jammer(1966), 30-36; Gibbins (1987), 21-22.

63. On the wave analogy it would be as if large waves threw floating debris no farther up on to the beach than could tiny ripples. De Broglie (1939), p. 27-28

64. Not only did light appear to be, in some circumstances, particulate, but matter could, in other circumstances, appear wavelike; a duality which became particularly prominent de Broglie (1939). See Hey and Walters (1987), pp. 1-12 for a clear account of the classic 'two-slit' experiment.

65. Jammer (1966), pp. 65-80.

66. It meant , 'a complete renunciation as regards a time description': Bohr (1934), p. 80.

67. Murdoch (1987), pp, 18-19.

68. Quoted in Hund (1974), p. 34.

69. Quoted in Murdoch(1987), p. 21. Since Einstein's early papers 'free from contradiction' meant consistent with Maxwell's electrodynamics rather than Newton's mechanics.

70. Quoted in Murdoch (1987), p. 55. Meyerson (1985, original French 1925), was also quick to point to Planck's constant of action 'as a new kind of irrationality'. It was an irrationality that Einstein, having played an important role in its inception, could not accept. Interestingly quantum 'weirdness' seems to have been anticipated to some extent, not only by Clifford, but by Riemann who speculated on the breakdown of 'normal' metric relations at infinitely small distances. See Akhundov (1986), p. 140.

71. De Broglie (1939), p. 47.

72. Schroedinger (1935), pp. 149-153, regarded any physical 'picture' of nature as an unfortunate limitation. His formal approach he regarded as a species of play. Genuine science, like art and play were not 'determined by the aims imposed by the necessities of life': *ibid.*, p. 28. The difficulties remain unresolved, see, e.g. Gibbins (1987). Krips (1987), Polkinghorne (1984), Reichenbach (1948), Herbert (1985). And for interesting discussions of the relationship between modern movements in art and science, Richter (1985), Richardson (1971).

73. Heisenberg (1959), p. 96.

74. De Broglie, in Taton ed. (1966), p. 83 contrasts the view that such imprecision was 'merely an expression of our ignorance', with the conviction that 'transition probabilities became the expression of a kind of pure chance'.

75. Quantum theory, therefore, 'does not allow a completely objective description of nature': Heisenberg (1959), p. 96. The quantum formalism was not simply imprecise. It was not that a 'particle' might be either 'here' or 'there'; the superposition principle was a way of saying it was both 'here' and 'there'. See Polkinghorne (1984), pp. 19-21.

76. Murdoch (1987), Folse (1985), Holton (1973), pp. 115-164.

77. Quoted in Murdoch (1987), p. 15.

78. Too much should not be made of a direct connection with Kierkegaard, as Folse (1985), p. 47, has rightly stressed. The similarity in their philosophical outlook is, consequently, all the more striking.

79. A principle of complementarity applicable to human knowledge in general and not just knowledge of nature. See Holton (1973), pp. 154-155. Einstein always resisted such arguments and remained faithful to the classical ideal of descriptive completeness. 'I still believe in the possibility a model of reality - that is to say, of a theory which represents things themselves and not merely the probability of their occurrence', Schilpp ed. (1949), p. 256.

80. As revealed particularly in his replies to Einstein's critical thought experiments. Murdoch (1987), pp. 155-178.

81. Heisenberg (1959), p. 42. Again a statement which bears comparison with Kierkegaard's Philosophical Fragments.

82. Heisenberg (1959), p. 96.

83. Thus Pagels (1982), p. 144: 'The electron seems to spring into existence as a real object only when we observe it!'

84. See, e.g., Johnston (1972), Schorske (1979), Frisby (1985).

TWELVE

THE CHARM OF DECADENCE

Within the classical bourgeois world, cosmos and psyche tend to draw apart. The success of the physical sciences justifies attempts to 'explain' the psyche in a mechanistic fashion. But the failure of such attempts encourages a superficial distinction between an 'irrational' domain of subjectivity on the one hand, and a 'rational', objective, order of nature on the other. In time, however, the social logic of universality, individuation and exchange relations which is implicit in both becomes expressed, in apparently incompatible forms, in both domains.

With a conspicuous display of equifinality, both travel by different routes through disillusionment, to paradox, to solipsism and acquire the exotic trappings of 'modernité' at about the same time.' Neither realm can

develop to that point of systematic self-closure which would 'complete' them. Mechanical accounts of action decline and finally give way to irrational 'leaps', to outbursts of refractory and disenchanted energy. And each domain becomes more fully 'decomposed' when the elementary processes, from which in some sense they must be constructed, are found to be outrageously free of constraint. The 'sciences' of both subject and object become infected with playfulness; an ineradicable arbitrariness is rediscovered in their foundations.

The intellectual revolution of modernism does not imply the demise of the classical bourgeois worldview, far less the commodity form in which the latter is most completely embodied. Modernity is a cultural spasm; a radical but ineffectual transformation of classical rationality. The completeness and profundity of its break with the science of pleasure has to be balanced against its exoticism and lack of seriousness.² In recapturing a sense of the primordial fun of experience, it isolates it in fact at an extremity we can visit only in our imagination. Einstein and Bohr, like Kierkegaard or Nietzsche, are describing reality, but in revealing its truth they place it safely beyond our grasp. We must live in a mundane and pleasant world; non-relativised, non-quantised, free of paradox. Just as we exclude from this 'system of the world' any direct apprehension of our own transformative powers (fun), or any symbolic expression of estrangement (happiness), we

erect, ahead of it so to speak, an unattainable world of another kind, one filled with fascinating arbitrariness (excitement).

It is easy to believe, then, that quantum physics, and all the other decorative absurdity of modern culture has little to do with our immediate experience of the world. Truth has eluded us and leads its own incomprehensible life beyond our grasp.³ What interests us, however, is more immediately comprehensible and still thankfully obeys the laws of causality and non-contradiction.

Yet if we have found a clue to the separate but linked cosmological schemes of fun, happiness and pleasure in the related but different social relations of the bourgeois world (freedom from labour/dependence, mutual obligation/hierarchy, alienated labour/individuation),⁴ can we not discover another social form from which excitement is given reckless birth? A social relation peculiar to its captivating perversity?⁵

In earlier chapters the notion of reason was distinguished through a series of putative oppositions. The reasonable, civilised and self-controlled adult over against the unreasonable, uncivilised and emotional child or savage; the rational western mind as distinct from the clouded and irrational superstition of the primitive. These distinctions were associated with the development of

capitalism, first of all with an ability and willingness to work, and secondly with a facility for exchange; with the general social distinction between production and circulation.* In the modern, period, however such distinctions lose their exclusive and oppositional character. Reason and unreason come together in an intolerable purification of experience.⁷ This process is associated particularly with the sphere of consumption. It is consumption which creates the realm of the modern irrational, and therefore the realm also of the modern rational.

Consumption

In order to elucidate the connection between modern forms of the rational and irrational and between both and the process of consumption, it is helpful to look again at Freud's psychology, but this time in the context of twentieth century science, rather than nineteenth century biology or anthropology.

Freud's analytic viewpoint is admirably relativistic. The framework of absolute internal space and time (the utilitarian matrix of pleasure and identity) is completely dissolved. The individual no longer exists as a point of integration of his own experience, or telos of his own uninterrupted recollection. The normal individual is

bewildered by himself, as much as he is by the world. He is no more a privileged observer of himself than he is of the cosmos. The only 'constant' of the psychic world is an arbitrarily chosen value, a self-identity, a groundless 'I', which cannot any longer impose itself upon the flux of experience with the vigour of the bourgeois ego. Yet even in the modern world the constancy of the 'I' 'deforms' the space and time of classical subjectivity. Both perceptually and in memory, a fitful selfhood 'distorts' the previously certain framework of utilitarian expectations.⁸ This, as in Einstein's physical theory, is not observable in 'normal' life, but can be detected only in 'absent' moments when the 'I' is absorbed into the ever-changing metric of immediate experience. The parapraxes and jokes, the dreams and neurotic symptoms that we still tend to think of as the uncontrolled distortions due to an inattentive ego, are better viewed as the psychic flux within which the 'I' is a temporary 'deformation'.

Freud's 'relativism', in other words, is nothing to do with moral indecisiveness. It is more akin, as is Einstein's theory, to a Nietzschean 'transvaluation'. What had previously been conceptualised as a 'framework' or as the dimensions within which objects could be defined and events observed, ceased to have any absolute meaning. The psychic 'material' of the self could no more stand apart from its own experience and memory, than could a physical object exist as anything other than a particular wrinkle in

spacetime. The separateness and substantiality of the bourgeois ego, its differentiation from an infinitised and homogenous inner space of 'pure' subjectivity, can no longer be maintained. The persistent illusion of 'foreground' and 'background', of things standing out from non-things, is exposed.

There is more here than a vague analogy. There is a formal, though not a rigorous, relationship between the 'objective science' of nature and the 'subjective interpretation' of the psyche. Freudian psychology and Einsteinian physics are alike in both rejecting the classical market model of reality. The 'frame of the world' no longer appears as the self-evident, unchanging and homogeneous dimensionality of classical mechanism,⁹ but is made an aspect of its substance. The inner world, its primordial immediacy sunk beneath the threshold of experience is, like the cosmos, fragmented and relativised. The 'self' no longer constitutes a 'logical' totality, it appears rather in a bewildering variety of incompatible and contradictory experiences.

There are, furthermore, conspicuous 'quantum' elements in Freud's analytic writings.¹⁰ The psyche is conceptualised as an 'energised system' capable of assuming a fixed number of positions. His early 'Project for a Scientific Psychology', in spite of its evident indebtedness to the mechanistic traditions, bears a

resemblance to Planck's struggle with the gas laws. Something approaching thermodynamic equilibrium is assumed as the norm for the 'psychic apparatus'. A certain level of external 'stimulation' (energy) is 'absorbed' as perception. Beyond a particular level, however, any additional stimulation puts the apparatus into an 'excited' state, in which perceptual processes are 'converted' (emitted) as motor activities, allowing the system to return to a condition of equilibrium.¹¹ Freud, more readily than Planck, gave up the assumptions of mechanism. As an interpretive guide however, rather than a causal theory, the notion of 'excitation' and 'conversion' continued to play an important part in Freud's work.¹²

Even more significantly, Freud was well aware of the impossibility of the 'objective' observation of psychic life. Here again, his ideas changed very considerably over a number of years. In his early analytic work, he held firmly to a faith in Enlightenment. To elucidate the inner meaning of neurotic symptoms was to cure them.¹³ Later, however, he came to view the 'transference relation' as the key to the analytic situation.¹⁴ The analyst could not remain apart from the world he was trying to investigate. Nor could his 'interference' be allowed for by some mechanical calculation. The significance of the observer was not that he 'disturbed' the system he wished to investigate but, more importantly, the interrogation itself brought to light the reality he half-suspected lay

hidden in the patient's psyche. The analyst collaborated with the patient to fully realise those elemental impulses which, until they were provoked into a visible form, existed in an indeterminate but still potent world of possibility. Freud, one feels, would have been quite at home with the 'Copenhagen Interpretation'. Observation cannot be 'objective', but is not for this reason rendered meaningless. There is, in other words, no fundamental difference between an act of 'observation' and any other act; just as in physics there is no fundamental difference between an 'observation' event and any other event.¹⁵ The protean world of possibility terminates, in an unpredictable fashion, in 'events', and the scientist has no option but to participate in such events.

In attempting to describe the psyche, Freud is driven to the same extremities as the quantum physicist. Quite apart from the apparently disconnected (or connected but incompatible) elements within the psyche, each well formed part on closer examination was found prolific of contradictory images. The 'simplest' dream proved to be inexhaustible source of competing and paradoxical meanings. No neurosis would relent in the face of an 'explanation' of its symptoms. A casual joke both conceals and reveals violent and ambivalent feelings. Psychic images cannot be given a simple 'rational' translation because reason is itself just one of these images; a differentiated segment of the primordial world to which it remains fatally

attracted.

Freud proposes a relativised 'microphysics' of the psyche, and, correspondingly, Bohr adopts a psycho-analytic approach to Nature.¹⁶ Both, that is to say, having rejected the determinateness and endless causality of mechanism, are prepared to accept incomplete, arbitrary and contradictory images of reality. Both find in reason itself, or rather in reason 'diffracted' in another, tiny clues to a vast and perplexing world that lies hidden within the conventions of our normal experience. The unconscious is the quantum world of the psyche. It 'knows no contradiction'.¹⁷ Each of its elementary images can refer simultaneously to different and incommensurable systems of meaning.¹⁸ Many of its elements are interchangeable.¹⁹ It exists as a continuous flux from which, inexplicably, the settled world of everyday perceptions and experience is distinguished - yet never quite distinguished.

In the bourgeois world, the psychic 'constant of action' had been as effectively masked as had been its natural counterpart. But once admitted as a possibility the irrationality of the 'self', its fragmentation, and incompleteness became perfectly obvious. The philosophical problem of 'quantum psychology' is thus rather different to that raised by physical questions. The discontinuities

within the psyche are directly experienced and the everyday world cannot escape them. Freud's psychology may be logically unsatisfying but it certainly 'makes sense'. We are willing to admit irrationality of ourselves, indeed only the mad refuse to do so. But we still cling to a rational image of nature as the inherent truth of things, and consequently find nature's elemental processes profoundly strange.²⁰

Rational individuation is therefore only one 'model' of human activity. The obligation to impose upon primordial experience an ever more clearly defined self identity is subverted by a tendency to give way to its elemental incongruity. In Freud's psychology, the pursuit of pleasure oscillates with the hope of excitement. The 'ego' can no longer be understood as the necessary outcome of a continuous 'development'. Kierkegaard had already exposed the emptiness of such a view, but Freud went much further in his analysis of 'illusory' selfhood. The ego, like matter, is differentiated from the 'primary process' by the observation of a rule rather than the application of a mechanical 'force'.

What gives matter its impenetrability, its hardness, when its elementary constituents are tiny in relation to the 'space' which they appear to occupy? The answer offered by Pauli takes the form of a grammatical rule rather than a physical 'cause'. The Exclusion Principle

prohibits any two electrons sharing the same 'quantum number'. This results in a 'quantised' space around each nucleus, providing for the more complex elements a characteristic set of physical and chemical 'properties'.²¹ The 'solidity' of the ego is similarly constructed. A series of prohibitions organises the continuous flux of the primary process into an interior 'space' upon which can be 'mapped' the features of the 'outside world', and an objective 'self' which can move and act within it. An Exclusion Principle defines for each 'self' a set of unique features which preserves the personal identity of each inner world. The psyche's exclusion principle however is a mere convention. It is far less difficult to envisage, and in doing so to actually invoke, the primordial inner freedom of unlimited psychic interchange, than to imagine the undifferentiated particle 'soup' that was nature before time and space had any meaning.²²

The fact that cosmologists now regularly describe the 'polymorph perversity' of the very early universe, and seek to understand the present structure of the cosmos in relation to this singular origin, should not be understood simply as the result of 'objective' scientific progress.²³ The process of 'self-understanding' is structurally similar, and conforms to a common 'grammar'. This is not a matter, as it is for the cosmology of happiness, of a direct comparison of macrocosm and microcosm. The rejection of mechanism and the formation of new images of

space and time derive in both cases from changes in the social relations of capitalism, changes that is to say, in the direct experience of the world.

The classical bourgeois world was experienced through a network of alienated relations. It was just this which lent it its logical coherence and overwhelming objectivity. The psyche's relation to an 'outside world' was first of all of need and then of desire. In expressing itself as desire, it differentiated from itself 'objects' the appropriation of which would 'develop' its potentiality for absolute individuation and completeness. The world of objects was primarily a world of commodities. Objects bound to each other through the, logical and practical, process of exchange. Their circulation was governed by a classical rule of mechanism, a principle of conservation which insisted that in every exchange no value was lost or gained. In such a world, production was concealed as a 'natural' process and consumption 'subjectivised' and personalised as desire. Circulating commodities ideally formed a distinct realm within which the mechanistic illusion was born. Every exchange was reversible, and linked with every other by an uninterrupted chain of causes. The 'laws' of exchange were binding and irreproachable. Consumption was the process through which, in satisfying his various needs, the individual could 'attach' himself to this ideal system. Consumption, beyond the level of mere survival, was the process in which inner

uniqueness realised itself in the world. Desire was the determination of the self, and endowed particular commodities with the special attractiveness of anticipatory satisfaction. To consume was to possess particular commodities, those which had received and reflected the inner movement of the self as desire.²⁴ Consumption was therefore a process of individuation; it was above all others the sphere of self-realisation.

The peculiarly distinctive character of the modern sciences, in addition to their special subject matter, describe a new relationship of self and world, and a new form of consumption. The distance between subject and object,²⁵ is suddenly overcome. The self no longer exists as the desire stretched between itself and the distant image of itself which it had attached to an object. The self could exist only as a continuous flux.²⁶ The object world, or rather the commodity world, draws closer. The ego ceases to be defined by a force (desire), but falls effortlessly along its path of least resistance, the geodesic of continuous consumption. To consume does not distinguish and individuate, but joins and merges.²⁷ We no longer consume 'rationally' in the pursuit of pleasure (the form of self-realisation), but 'irrationally' in the hope of excitement.

Excitement, unlike pleasure, expresses itself openly and outwardly. The hidden and inward 'maieutic art' opens

into a direct appeal to others.²⁸ Excitement, which might occur anywhere, is never contained. It communicates itself directly and does not require pre-existing social relationships to 'channel' its meaning. In an excited state strangers become friends through mutual consumption. The anonymity of the modern metropolis is therefore, as Freud as well as Simmel noticed, the privileged setting for modern, exciting, experience.²⁹ The metropolis is exciting just because it is anonymous and and unsettled; capable therefore of receiving ever new impressions and reflecting them. The metropolis is the ideal social 'black-body', in perfect equilibrium, absorbing and radiating each new wave of fashion, each unpredictable surge of opinion.

'Object-cathexes' are no longer sought as 'tests' of the ego against the world. There is no strenuous effort here to bridge the gap created by desire. In principle any commodity might prove exciting, and in an excited state any commodity might be consumed. There is no guarantee that something found satisfying once will prove satisfying a second or third time. The distribution of excitement in relation to the commodity world is randomised, so that the attainment of subjective satisfactions can never become the object of precise calculation. The ego has a new accidental relation to the object world.

The ideal commodity therefore ceases to have any personally distinguishing features. Properly speaking

commodities should become identical one with another, or reduced at least to a few fundamental 'types'. As the possibility of excitement is no more than an arbitrary relationship, we cannot choose what to consume on the basis of the commodity's own distinguishing features. If they are all the same the chance of success is manifestly equalised. No promise is made. The commodity will not necessarily bring pleasure, but in consuming it there is a thrilling possibility.³⁰ Consumption in being freed from the cycle of need, want and satisfaction, is made permanent. Paradoxically it is as its satisfactions have become episodic that consuming has become an ideally continuous process.³¹

The only really important distinguishing characteristic of the commodity, for the consumer, is its novelty. It is newness that is craved as the most probable stimulant of excitement.³² This fundamental condition allows the homogenous and isotropic commodity world to be inherently expansive. As distinct from all mechanisms an 'arrow of time' marks its most superficial appearance.

Freud's patients suffered from the diseases of consumption.³³ The neurotic is, literally, overly excitable. He does not consume because every potential 'object-choice' has aged before it can be possessed. The 'cathexis' has become so superbly mobile that it keeps too far ahead of the ego and is distributed too 'thinly' over

the object world which consequently takes on a uniformly drab and uninspiring appearance. The psychotic, conversely, is not excitable enough. The 'cathexis' never leaves the 'muffled interior' and he remains indifferent to any possibility. The psychotic consumes himself; the neurotic lacks the self with which he might consume the world. As types, they serve to define a model of regulated insatiability; the ideal modern consumer, or better the ideal consumer of modernity. An open acceptance of the ephemeral and insubstantial, a conscious identification with the 'arbitrary, fleeing and transitory' as the accidental relationship of selfhood. The Man Without Qualities, as Musil does not tire of repeating, is the same as 'qualities without the man'.

The notion of excitement, then, like the other 'subjective' terms, fun, happiness and pleasure, describes both a form of immediacy and a picture of the cosmos. These terms stand so to speak on the boundary between nature and the psyche and from them the appropriate descriptive languages for each realm have been developed. This is possible only because these terms initially describe fundamental social relations. Excitement is not confined therefore to the process of consumption but can be rediscovered in any social sphere.

Circulation

Since the eighteenth century, a close association between the social process of circulation and the attributes of reason has been maintained. It is the sphere of circulation which appears most readily to conform on the one hand to the metaphysical requirements of pure thought,³⁴ and on the other to the principle of mechanism. This is particularly the case when the general process of circulation is represented by money rather than any particular class of commodity. It can then be described both as a conceptual and as a natural system. From the first perspective its 'timeless' qualities become its most significant characteristics; its universality, its absolute mobility and fluidity, its power to represent any value, and to bring together any commodities no matter how distant in time and space.³⁵ In the second perspective the 'material' character of money becomes more evident. Its interaction with all other commodities, which defines the relationship among commodities themselves, follows a principle of conservation. In any exchange in which money acts as a universal equivalent value is conserved. Money seems to purify the process of exchange of all accidental and extraneous elements. It was just in this 'condensation' of conceptual and physical principles that the classical notion of reason existed.

It is all the more significant then that Simmel is

able to find in the modern money form all the relativities, discontinuities, and contradictions celebrated in the new scientific imagination. Money embodies a new social logic. It is a logic discovered, however, in a more consistent and a more general application of already existing social assumptions. Just as Einstein brings to light the nonintuitive implications of an orthodox belief in the universality of nature, and Freud uncovers the radical consequences of viewing the self as a rational pursuit of pleasure, Simmel describes the new social world that grows, uncontrollably, from the apparently unprovocative idea that money constitutes a general equivalent of all values.³⁴

The general process of exchange, Simmel points out, tends to 'objectify' value. It 'converts' purely subjective judgments into, 'objective, supra-personal relationships between objects'.³⁷ And it is only in exchange that 'objects' can take shape from, 'the chaotic material of our images of the world and the continuous flux of impressions'.³⁸ Money as the 'autonomous manifestation of exchange relations'³⁹ is therefore the general medium through which our 'images of the world' become ordered and rationalised. It is its very lack of particular qualities⁴⁰ which allows money to become a general 'signifier' of exchangeability, and therefore of all that is most fundamental to rational social life. 'The philosophical significance of money', he argues, 'is that it represents within the practical world the most certain

image... of all being'.⁴¹ And as it, 'represents pure interaction in its purest form; it makes comprehensible the most abstract concept'.⁴²

In addition to being the general representation of all relations, and therefore the immediately available form for the conceptualisation of reality, the development of money as a general social mechanism enormously extends the range and power of 'rationality'. Money is a pure means in social life, and its general development lengthens the chain of purposive activities that we can project into the future, and provides a common language into which the plurality of qualitatively different values can be translated and compared.⁴³ It is, as Max Weber also argued in a somewhat different context, the foundation of calculability in social relations.⁴⁴

The indifference of money to any particular value, its characterless 'dimensionality' and its pure instrumentality also make it, however, susceptible to new forms of irrationality. The ultimate goal of any chain of purposive action tends to become detached from the sequence of means.⁴⁵ Money, in this respect, is only the most extreme example of a general process inherent in the growth of social complexity. But just as money most completely embodies the central rationalising tendencies of capitalism, so it most openly expresses the subversive tendencies of modernism. Simmel is acutely conscious of

the inherently contradictory notion of rationality as 'pure instrumentality'. All particular values, in finding a rational form of representation, are in fact made less realisable. Life's, 'ultimate purpose is floating above the teleological sequence'.⁴⁶

Money's prodigality of inter-relations leads the individual into a network of connections within which he becomes lost. An earlier sense of worth and dignity which came from the power to use money is overtaken by a kind of 'dispersal' of the ego over a seemingly infinite variety of possible 'projects'.⁴⁷ It seems preferable to possess money rather than the specific values for which it might be exchanged. In money possibility is stored, and in possibility, apparently, lies freedom. We have returned to the familiar psychology of the Either/Or. The loss of reality Kierkegaard so brilliantly described through the literary experiments of the 'young man' finds its social meaning as a money fetish. We have returned also to the still unfamiliar world of a later 'Copenhagen Interpretation'. Money is a 'quantum phenomenon'. Its 'reality' is somehow hypothetical and provisional. Initially nothing in the social world seems more precise than money. Yet its effect is to render reality strangely vague and dreamlike.⁴⁸ The preponderance of intellect over sentiment in modern times, which is itself, 'the consequence of money's character as a means',⁴⁹ should not be mistaken for a general 'rationalising' process. In

fact, as the human 'content' of social life exists primarily in 'sentiments', the formalism of money has the effect of 'distancing' the psyche from the direct apprehension of reality.

The perversions of money relations are, therefore, typical rather than otherwise of the modern situation. Simmel writes strikingly of the stimulation of wishfulness in the money relation.⁵⁰ In its 'extreme' forms of greed and avarice, we see a 'pure' relation to money. An overwhelming wish for money, for an object without qualities, is only the realisation of money's real nature. And the possession of money is an adult and legitimate fantasy.

Simmel hints in these passages at a new psychology of excitement. If satisfactions are only accidentally related to the possession and consumption of commodities, then money itself becomes, for the first time, a genuine commodity. The acquisition of a characterless 'equivalent' can bring no more than an anticipatory pleasure, but to possess modern money might be truly exciting. Money has just the right 'texture' for the ideal commodity, a divisible substance, homogenous and isotropic, it does not divert its possessor with superficial particularities. In greed and avarice Simmel identified a new distrust of commodities, or what, from a different viewpoint, might be termed secular despair. The commodity is described by a

'probability function'; the chance that it might precipitate a state of groundless excitement. But frequently it will fail to do so. To attach to money itself the hope of excitement, to make it glamorous, avoids the recurrent disappointments of 'real' consumption. Each 'quanta' of money is identical to the last, but above a magic and wholly indeterminant threshold, its possessor will glow with excitement. In the 'saving' in anxiety a wish for money, rather than any specific value, displays a certain rational force.

More directly, Simmel illustrates the new psychology by the inverse phenomenon. Extravagance is not genuine purchase or consumption so much as a form of radiation. It is no more than excitement in spending.⁵¹ Everything hard and 'impenetrable' in the self has been dissolved. The ego, identifying itself 'rationally' as means, is wholly 'volatilised' into the sphere of circulation. This sphere, however, in perfecting itself as pure instrumentality has lost the synthetic unity which was the foundation of the Enlightenment's claim to Reason. Its inner world consists then in a multiplicity of inherently meaningless 'projects'.⁵² The 'ego' is fragmented. Its most strenuous efforts to 'realise' itself in the world issues in a series of disconnected 'adventures', each once again expressive of nothing more than an ephemeral excitement.

Simmel argues that a less florid but more widespread cynicism, and a characteristically metropolitan 'blase' attitude, are indicative of the same dissolution. There is a typical, 'reduction of the concrete values of life to the mediating value of money'.⁵³ Money is fundamentally antagonistic to all distinguishing characteristics. Its general indifference imposes a new kind of anonymity and erodes the social form of the personality.⁵⁴

The continuity and fluidity, the unbroken mediation, of the circulatory process, on closer inspection is seen to be sustained by irrational and incommensurable acts of abandonment. The contrast between classical and modern science is replicated, or rather that antithesis is itself a rediscovery of the fragmentation of the sphere of circulation. And as with the breakdown of a single, coherent and systematic 'system of the world', the contradiction upon which it founders proves to be intractable to any 'theoretical' solution. It is not simply a contrast between, on the one hand, a 'statistical' description of an 'individuated' micro-world, and on the other, a causally complete and deterministic explanation of the gross qualities of a macro-world. Rather the elementary processes - themselves neither 'micro' or 'macro' - that make up the sphere of circulation prove recalcitrant to rational analysis.

The 'irrationality' of circulation has two distinct

aspects. Firstly, as with any formal logical system, it can never be complete.⁵⁵ The rationality of any 'system' of social interaction depends upon its content. This content however cannot be expressed within the system itself, which is composed only of interconnected means.⁵⁶ By investing money, which is pure instrumentality, with the gravity of an 'ultimate end' the rationality of means becomes transformed into the irrationality of disconnected psychic adventures. And secondly, the primordial reality in which circulation takes root, when it does expand into a general form, loses the sharpness required of rational distinctions. Its fundamental relations, flaunting their arbitrariness, become decadent with excitement.

Production

The universe appears to be homogenous and isotropic.⁵⁷ The self seems to be composed of its own images. It is somewhat odd therefore that we should be so convinced of duration, that an 'arrow of time' imparts a particular direction to the order of nature, and shrouds naked selfhood in a biographical narrative. This is not the case in the cosmology of fun or of happiness, and only with qualification can it be said of the cosmology of pleasure.⁵⁸ How can relations among identical elements take on the character of an immanent 'development'?

If cosmos and psyche are viewed as images, of each other and of particular types of social relation, then we can understand this curious 'asymetry' as a representation of the historic role of production in the creation of modern society. The world of commodities, like the 'developing' self and the 'expanding' universe, if it is to exist at all must continually extend its boundaries. From the ultimately irrational 'singularity' of Northwestern Europe around 1600 (the date of Bruno's execution), the capitalist mode of production irresistibly expands. The unity of this mode can be grasped only as a picture of continuous and uninterrupted development.⁵⁹

This was first of all a generalisation and extension of production within a larger 'space' of the 'undeveloped' world. Both in principle and in fact this expansion was limited by simple geographical exhaustion. It nonetheless provided for almost three hundred years the 'cosmographical' framework of capitalist production. During this period it was always possible to visualise the market expanding independently of production itself. Capitalism sent ahead of itself so to speak an ideological halo. The benefits of a 'rational' civilisation were to be bestowed upon the world at large. And as a consequence of this act of farsighted charity newly made 'rational' workers and consumers were drawn into a system of commodity exchange. New processes of production 'naturally'

followed.⁴⁰

The inherent tendency to equilibrium within such a cosmographical scheme was clearly expressed in Newtonian science.⁴¹ When capitalism expanded to fill the available space of the world it ought to 'settle down' to the stability of the cosmological model, and look forward to the slow decay of inevitably increasing entropy. This of course did not occur, and it is the endlessly inventive dynamism of the commodity which invests the revolution in modern cosmology with its social significance. Capital accumulation, without regard to the 'classical' limitations of the market found new expandable forms. The 'absolute' dimensionality of the market, its independence from the commodities exchanged upon it, turned out to be illusory. The market is itself an aspect of production, locally 'deformed' by the mass of commodities in it and directly expandable, perhaps infinitely so, through the creation of new exchange values. Production is best understood relativistically. The 'flat' Euclidean and independent space of the market gives way that is to say to the exotic complexities of 'imperfect competition'.

It is not simply a matter then of large corporations monopolising production and, by ideological means, manipulating the 'need' for a particular commodity.⁴² Modern commodities are no longer subservient to the market; they are not tied 'rationally' to needs or desires. The

wishfulness they might satisfy is intrinsically renewable and unlimited. The 'space' for their exchange is created in the same moment that the commodity is produced. Continuous production, however, does not make the world dense with commodities because any commodity, to be exciting, must be new.⁴³ Novelty is the only distinguishable feature of the ideal commodity, and perpetual novelty is the commodity world's own 'arrow of time'. Excitement breaks the symmetry of all classical equilibria and precipitates the dizzying advance of modernism. Exciting commodities can be endlessly produced and the sphere of production, in principle still constrained by the fiction of a 'market economy', is best described in a formula common to Nicholas of Cusa and the modern cosmologist as 'finite but unbounded'.⁴⁴ There is always room for something new because novelty is a 'timelike' rather than a 'spacelike' transition in the commodity's worldline.⁴⁵ The overriding tendency within classical thought towards the 'spatialisation' of all categories brought expansion to a halt. But modern thought, in 'temporalising' space, confirms the possibility of endless development.⁴⁶

Production is primarily, then, the creation of new values. This of course places an insignificant constraint on the homogeneity of commodities. Newness must become recognisable, it has to be represented by some, preferably minimal, stylistic feature.⁴⁷ Once classical stability had been swept aside,⁴⁸ the appealing idea of production as

perpetual creation was given a direct cosmological interpretation.⁶⁹ The 'steady-state' model, as its name implies preserved a fundamentally spatial notion of stability (the universe had always been much as it appears to us), and accounted for the Hubble expansion on the hypothesis of the continuous creation of matter.⁷⁰

A deeper cosmographical picture of modernity emerged in the so called 'Standard Model'.⁷¹ The large-scale spatial structure of the universe appears to be very nearly isotropic. This was given impressive confirmation with the discovery of a universal background radiation of about 3 degrees Kelvin measured in any direction.⁷² The most economical account of this distribution of matter and of its presently observed expansion is to suppose a timelike variation. By reversing the process we are led back to a singular origin, some fifteen to twenty billion years ago, from which sprang the entire detectable universe in its present form.⁷³ Modern cosmology seeks to account for the observable universe by a physics of this origin. The present 'laws of nature' cannot be simply generalised to the very early universe. In the first moments of the 'Big Bang' the few types of fundamental particles interacted freely with each other, and the 'forces' of nature were coalesced into a single interactive rule.⁷⁴ As the universe cooled and expanded, a series of differentiations occurred, prohibiting certain interactions and establishing

certain basic distinctions.⁷⁵

The correspondence between modern cosmology and modern psychology is fairly evident. Both place primary significance on origins. More than this they interpret the present in terms of a primordial, undifferentiated, reality. They define the structure of cosmos and psyche as the spontaneous breaking of symetries inherent in such a primordial reality. This correspondence should not be viewed as an extension or extrapolation of a 'theory' of the commodity. It is not ideological in form, it is rather an interpretation of the commodity itself.

The commodity world indeed is heavy with its own history. Each act of production is a small theatrical recreation of the origins of capitalism. Through it a primordial equivalence of human labour to all other commodities is established and then concealed. In alienating itself, human labour takes on the general characteristic of all commodities, and becomes indistinguishable from them. Labour simply exists, alongside other commodities, and enters into an indefinite sequence of exchanges with them. But as commodities are 'known' primarily through consumption the entire process of production becomes, as a result, 'invisible'. New commodities continually appear, effortlessly extending the social and psychic space of modern life. They appear as so

many stimulants to excitement. It is only by an act of critical reflection that we can discover the human content 'frozen' within them. and discover from this the peculiar circumstances of their birth.

This is a peculiar 'history'. Its narrative content does not unfold as a necessary sequence of cause and effect. Rather, for any arbitrarily chosen point, a common origin is postulated and 'proved' as its essential 'precondition'. 'Events' are linked together through their embodying in different ways these preconditions. The 'origin' of the commodity is covertly carried forward into modern society in much the same way, therefore, that our early experience is disguised and protected by the adult psyche, or the initial conditions of the hot 'big bang' are embedded in the present distribution of matter and energy.⁷⁴

So deeply embedded that production no longer requires justification; its existence is not in doubt. Indeed, so secure has it become that, no longer fearing criticism it can allow subjectivity the freedom to seek excitement. This, in its turn, encourages the 'experimental' consumption essential to the continuous accumulation of capital. The political genius of capitalism has always lain in its principled defense of 'freedom': initially from the constraint of 'tradition' in the extension of market calculability; then to allow the 'rational individual' the

unhampered pursuit of his own interests; and finally to release the psychic energy of wishfulness. Each step is founded upon a more highly 'energised' state of capitalist production. Only in the initial stage is an 'ideological' control over production essential,⁷⁷ and a close relation between production and consumption established. Thereafter the bifurcation of 'object' and 'subject' becomes possible as 'wants' are expressed and acted upon in conformity to a causally effective 'rationality' common to both. In modern society even the fiction of reason, placing a theoretical limit upon the self-expansion of production, has been dispensed with. The accidental relation to the commodity, which at an earlier 'stage of development' would have been hopelessly disruptive, proves the best guarantee of 'growth'.

Classical science, as the intellectual and practical mastery of the world of immediate experience is also secure. It is still the 'real' science of the engineer.⁷⁸ Beyond the realm of the technologist, however, we are free to speculate. The theoretical sciences, infected with this new freedom, are able to indulge, albeit within an enlarged framework of reason, the most exotic images of reality. The marriage of particle physics and cosmology seeks in the origin and foundation of things a bizarre other world upon which the coherence of our own more prosaic world depends. A world filled with 'virtual' events; with particles born in the first moment of time only to spend the rest of

eternity, as the cosmos cooled beneath the temperature at which they could interact with any other particles, to no 'purpose'; with 'quarks', both charmed and strange that can never now be liberated from their tiny hadronic prisons; with multi-dimensional superstrings, wrapped in themselves, to make the elementary 'quanta' of space as baffling as its large-scale structure.⁷⁰

The 'givenness' of the commodity world encourages the decadence of theoretical imagery and allows reason to escape the constraint of production. Practical mastery of nature is assiduously renewed, but becomes tangential to the life of reason. Indeed, the rational and the irrational become in some circumstances indistinguishable.⁸⁰ Reason becomes 'infected' with a beguiling strangeness.

THE SYMMETRY OF CREATION

The decomposed subject experiences quite a different world to that of the integrated and rational self. Nature no longer confronts him as a 'self-enclosed world of bodies'.⁶¹ Cosmos and psyche, during the classical period, having been separately and independently constructed from the laws of nature, were thrown together again, giving rise to a series of fragmented and 'mixed' images.

These images take on a meaning only in relation to the classical 'system of the world'. They offer their separate, impractical and effective opposition to the completion of scientific rationalism as the exclusive carrier of bourgeois consciousness. Excitement is a partial cosmology then, and relishes the fact. It exists as a defiant gesture against the philosophical abstractedness, facile individualism, and totalising mechanism of the classical sciences. It is a perversion of rather than an alternative to the cosmology of pleasure. And as modernity exists only as a perversion of capitalism this could hardly be otherwise.

Not that excitement lacks anything in profundity or originality. It is nothing if not radically perverse. Indeed, it is only through its subversive thoroughness that we have come to appreciate the true character of the classical worldview.⁸² The 'cosmology' of excitement is best viewed, in fact, as the consequence of preserving the most fundamental principles of the classical picture. Nature must everywhere be the same; and in order that this should be so, the more superficial uniformities of Newtonian science must be 'relativised'. Once this is accepted, the Laplacean ambition to render the cosmos into a single equation is thwarted. The reversible relations of the classical system are then found to be an incomplete and inadequate representation of a moment torn from the real flux of nature.

This transition was 'simultaneously' effected in the decomposition of the self. The rationally integrated person fragmented into a collection of discrete experiences, each containing a separate and incompatible 'intuition' of the self,⁸³ and any one of which was likely to undermine the synthetic unity of consciousness.

The systematic totality of both cosmos and psyche dissolved into partial and paradoxical images. The causal mechanism which had been central to both had, at the limits of observation, broken down. The fundamental simplicity and symmetry of the rational structure which had been their

common property was therefore pushed back into the origin of the world. Reason was itself transformed in this process. The rational interconnectedness of differentiated elements had been conceptualised as a causal mechanism, this mechanism could be expressed as quantitative conservation laws; now in their turn the conservation laws could be viewed as but imperfect replicas of the symmetries constitutive of primordial nature. The reality of cosmos and psyche thus became comprehensible as the spontaneous symmetry breaking of a primordial undifferentiated flux. In this primary process, the origin and transcendence of all difference, reason and unreason merge.²⁴

The parallel decomposition of cosmos and psyche, their mutual rejection of a totalising mechanism, is not to be understood as the generalisation of a single 'idea' originating in one particular discipline. Nor should it be interpreted as part of a general cultural decay.²⁵ Just as the 'mechanisation of the world picture' can be seen as the mode of thought most appropriate to the development of the commodity world, so the perverseness of post-classical modernism should be viewed, wherever it arises, as expressive of a new relationship to this commodity world: to the appearance of a new commodity relation. The language of relativities and quanta, as of dream interpretation or symptom formation, invokes a new excitement; the excitement inherent in the arbitrariness of the modern commodity form. And in common with cosmos and psyche, the commodity is

understood 'historically'. A singular process of symmetry breaking gives rise to the differentiations of the social world, establishing the spheres of production, circulation and consumption upon which both reason and its perversities are founded.

Excitement, by its very nature, cannot be a comprehensive, exclusive, or exhaustive cosmology. An accidental relation to the commodity is possible only provided that, at another level, production is organised still on the basis of classically conceived rational necessity. In liberating wishes into the sphere of consumption it is assumed that 'authentic' needs continue to be met within the framework of 'everyday' calculability.

CONCLUSION: Intimate Cosmology

The bourgeois world, for a time, believed itself to be in possession of a uniquely 'rationalising' power. The scientific revolution provided it with a means to eradicate the ignorance and to subdue the errors corrupting less fortunate views of the world. Today we are only too ready to congratulate ourselves upon outgrowing such rash optimism. Yet, for the most part, we uncritically accept the distinctions bequeathed to us by just such optimism. Science and Reason can still appear as different expressions on the world's benign face. Object and subject go their separate unrelated ways. We unhesitatingly 'explain' isolated events within the physical or the psychological world with an appeal to universal principles and causal laws.

It has been the purpose of this work to show that such optimism has never been justified. The project of bourgeois thought was not, and could never have been, carried through to its putative conclusion.

It is rather too simple to say that this is a

consequence of a 'contradiction' inherent in capitalism; that bourgeois culture must betray in the incompleteness of its systematic sciences the incommensurability between use-value and exchange-value. The language of 'consequences' covertly accepts the exclusive validity of the very view of the world we wish to challenge. This is why questions of 'causality' and in particular of 'historical explanation' have been avoided. These problems are part of the classical worldview, and remain the concern of what is here called the science of pleasure. A critical reconstruction of the bourgeois worldview, however, must now be made from a point of view which, so to speak, has been only half released from the totalising ambition of all 'classical' theory. The result is bound to appear, by outmoded but still authoritative conventions, 'unsystematic' or even 'incoherent'. As the alternative is to recycle a form of 'theory' founded upon an illusion of rigour this may be a risk worth taking. It might even stimulate a certain amount of intellectual 'excitement'.

The central task therefore is not to 'explain' but to discriminate. Here the 'official' distinction between object and subject takes on an air of ideological simplicity. The formal 'antinomies' of the classical world force the varieties of human experience, including the varieties of its modes of thought, into a single relation. Confronted with its stark choices the 'correct' answer is always obvious: only the demonic clings to the negative.

The superiority of the objective, universal, necessary and rational is clear to all.

From the perspective of the present however it is clear that the bourgeois theorist was never so confident as he would have us believe. The rational cosmos and its equally rational psyche had to establish their supremacy, not so much over the recalcitrant material of their own imperfectly developed theories as against the resistance of relations which could not find a place within any of their imperative oppositions. These relations did not belong to the modern world and ought simply to be forgotten. But they were not forgotten and now that the demands of 'rationality' have been relaxed somewhat their continuing presence can be more easily detected. Old distinctions re-emerge and contest the exclusive ground of reason. They do not make their challenge on the basis of any formal claim, to do so would be to admit defeat at once because, in those terms, science is more rational than magic or religion. They propose rather a new division of experience within which the undoubted superiority of scientific rationality can be contained.

The 'classical' worldview, therefore, is only part of bourgeois cosmology; that part which knows only the science of pleasure. In contrasting it in different ways with the cosmologies of both fun, happiness and excitement 'ideas' are not being pitted one against another. The key

classificatory terms used here, fun, happiness, pleasure and excitement are deliberately chosen as words rather than concepts. They are rich in associations; associations which in becoming more self-conscious separate themselves from each other to describe fundamentally different relationships.

The cosmology of fun is not a naive or impoverished account of the same world as that described by the classical scientist or psychologist. It captures and conveys a world of its own, a world which the scientist can only ignore. A description of this world of metamorphic freedom leads directly to its intellectual elaboration as an order of signs. Similarly a hierarchy of symbols emerges from an attempt to convey the inner meaning of the cosmology of happiness which lies equally outside the scope of classical reason. The 'system of the world', as a language of causality, is exclusive, in other words, to the classical picture of the world. 'Beyond' causality we cannot yet (should we try?) lay claim to a total vision of reality. But in the cosmology of excitement as the enjoyment of its incomplete and contradictory images we have decisively rejected the classical world's search for systematic order. This is as true of the 'modern' scientist as it is of the modern novelist or painter. The 'ideal' (rather than typical) scientist is now closer to Calvino's bewildered Mr. Palomar than to Thomas Mann's self-confident Professor Kuckuck.'

Fun, happiness, pleasure and excitement, that is to say, constitutive inner worlds of meaning the elements of which cannot be 'translated' from one to another. Each is associated with a different apparatus of thought (order of signs, hierarchy of symbols, system of causes and network of images), and different intellectual preoccupations (description, exposition, explanation, interpretation), each is 'expressive' of a different social relation (absolute dependence, personal subordination, market freedom, leisure relations), and each constructs a different 'object world' (toys, goods, commodities, images). The list might be arbitrarily extended, arranged into groups, cross tabulated and diagrammatically consecrated. The temptation to formalism remains powerful, but can be resisted. Each distinguishing term, the centre of its own world and not just a means to trigger a series of cognate terms (terms that are divisions within the science of pleasure as much as they are distinctions among the different cosmologies), is better left unmolested. These distinctions, if they are real, invite their own forms of exploration; and if they are not, cannot by any amount of 'rational' analysis be made so.

Notes to Chapter Twelve

1. Mach, whose writings on mechanics were among the severest criticisms of classical science, was oddly reluctant to consider newer 'relativistic' or phenomenological psychologies. His insistence on the 'relational' aspects of experience could not conceal that he was at heart a sensationalist. See Mach (1976), p.6; Hiebert, in Machamer and Turnbull (1976); Musil (1982).

2. Increasingly the classical bourgeois conception of rationality has been allied with technological systems, rather than to scientific theories, as pointed out, from a somewhat different perspective by, e.g. Marcuse (1964), pp 19-32, and Habermas (1971), pp. 81-123.

3. The Complementarity Principle is by no means restricted to a particular interpretation of quantum physics, Folse (1985), pp. 27-31. It has become quite characteristic of modern thought to regard empirical reality as only one, usually arbitrary, selection from a range of theoretical possibilities the generality of which cannot be rationally reconstructed.

4. 'Bourgeois' is here used as a broader concept than 'capitalism'. The latter refers primarily to the rational order of the commodity, the former to the forms of life in fact sustained by such an order.

5. There is no suggestion here that a particular social relation is the 'cause' of a new cosmological view; particularly as the language of 'causality' is foreign to such a view.

6. Again, it is not that either production or exchange holds the key to a process of rationalisation. Rather each sphere of activity is marked by a typical opposition between rational and non-rational forms.

7. Cf. above Ch. 3.

8. It is within just such a framework that Freud's work is still frequently read; thus Rieff (1965) makes of him an orthodox bourgeois moralist, and Hartmann (1964) claims him for 'ego psychology'.

9. Čapek (1961), pp. 135-140. Freud's initial attempt at a psychological synthesis was couched in mechanistic terms and was quickly abandoned. Freud S.E., Vol.1, pp. 283-399.

10. There is then a considerable irony in Freud being regarded as a 'developmental' psychologists.
11. See Freud S.E., Vol.1, pp. 312-321.
12. Especially in important theoretical works, for example in The Interpretation of Dreams S.E., vol.5. pp. 537-44, 573-82, 610-17; and the Introductory Lectures S.E., vol.16. pp. 356-57.
13. Breuer and Freud S.E., vol.2, p. 180.
14. In 1912, Freud S.E., vol. 12. pp. 99-108, 159-171.
15. Murdoch (1987), pp. 94-103
16. An approach which does not, of course, borrow specific concepts from psycho-analysis. For an approach which does see Bachelard (1964).
17. Thus, in dreams for example, 'Thoughts which are mutually contradictory make no attempt to do away with each other, but persist side by side', Freud S.E., vol.5. p.596.
18. Approximately what Freud referred to as 'condensation', see Freud S.E., vol.4, pp. 279-82.
19. And 'displacement', see Freud S.E., vol. 4, pp. 305-09.
20. Thus Feynman's warning remark: '...I think I can safely say that nobody understands quantum mechanics', quoted in Hey and Walters (1987), p. 1. Understanding, that is to say, is still identified with classical scientific rationality. Bergson's attempt to shift the philosophical foundation of natural knowledge to active intuition, was largely ignored. See Capek (1971), pp.30-51.
21. Feinberg (1977), pp 59-63; Hey and Walters (1987), pp. 76-8; Feynman (1965), vol.3, 4/13, remarks that: 'In fact, almost all the peculiarities of the material world hinge on this wonderful fact'.
22. On the 'particle honeymoon' of the very early universe see Rowan-Robinson (1985), pp. 230-88; Barrow and Silk (1984); Weinberg (1977).
23. In fact Hubble's account of the observed redshift of distant objects was accepted almost at once and in the absence of reliable data. Wagoner and Goldsmith (1982), p. 103-4; Harrison (1981), 208-9; Silk (1980), pp. 43-49; Peebles (1971), pp. 6-7.
24. See for example Veblen (1925), p. 29: 'It becomes indispensable to accumulate, to acquire property, in order to retain one's good name'. And Douglas and Isherwood (1978), pp. 25-55.

25. A distance common to the natural sciences and to bourgeois psychology.

26. Cf. above Chapter 3 for specific reference to the writings of Bergson and Proust in this regard. Within a more academic tradition William James (1980), vol.1, pp. 224-400, and particularly pp. 373-379, is most fully aware of the instability inherent in the classical model.

27. This much at least can be granted to the critics of 'mass society', see particularly Riesman (1965).

28. Kierkegaard referred to his pseudonymous works as a 'maieutic art'; meaning literally 'obstetric', they were intended as an 'indirect communication' and, in an extreme version, a means of deceiving people into the truth. Kierkegaard (1962), pp. 147-50.

29. Simmel, Wolff ed. (1950), pp. 409-24.

30. Consumption, that is to say, is a gamble, and while the commodity cannot be guaranteed to induce a state of excitement, the risk involved in its acquisition can. It thus remains 'rational' to consume, whatever the outcome.

31. A superficial paradox to be sure. Behaviourist psychologists have long been aware that intermittent reward is the most secure foundation of habit.

32. The 'failure rate', never fully determined, is more of a known quantity for old commodities. Given that it is always high new commodities are always 'worth a try'. Additionally, as familiarity and excitement seem to be inversely related, the probability of excitement decreases with repeated use.

33. From this perspective Freud can be viewed as continuing the tradition of the Enlightenment rather than of nineteenth century medicine. See above, ch. 1.

34. An association explored by Thompson (1961) and Sohn-Rethel (1978) but made evident first, and most strikingly, by Simmel.

35. Characteristics of money analysed in the Grundrisse, Marx (1973), pp. 146-51, and summed up in his aphorism, 'All commodities are perishable money; money is the imperishable commodity'. Ibid., p. 149. See, from a different perspective, Douglas in Firth ed. (1975).

36. Thus, 'Money is the purest form of the tool'. Simmel (1978), p. 210; '...money is detached from all specific contents and exists only as a quantity': ibid., p. 216.

37. Ibid., p. 79. Though even before it is objectified in exchange, 'subjective' value exists as a form that is never

'merely capricious', but, 'exists in our consciousness as a fact that can no more be altered than can reality itself':
ibid., p. 63.

38. Ibid. p. 108.

39. Ibid. p. 119.

40. Simmel points out that, 'Money is the representative of abstract value', (emphasis added), and explicitly draws attention to the linguistic distinction between signifier and signified. Ibid., p. 120.

41. Ibid. p. 128 (emphasis added).

42. Ibid. p. 129. He continues: 'Thus money is the adequate expression of the relationship of man to the world'.

43. Ibid. p. 231.

44. See, for example, Weber (1978), p. 107-9, a calculability which simultaneously depends upon a number of other formal and historical conditons.

45. Because of the length, complexity and objectivity of the 'sequence of purposes' 'given' in the conditon of modern society.

46. Ibid., p. 235. One is reminded of Kierkegaard's depiction of 'aesthetic' existence; the young man of Either, 'hovers above existence'.

47. Compare pp. 326-31, on the role of money in the development of the sense of individual worth with, for example, pp. 389-94, on money and the ideal of distinction. Thus 'Money thoroughly destroys that self-respect that characterises the distinguished person': ibid., p. 394.

48. A process Marx noted as a general characteristic of capitalism, see, for example, Marx (1976), pp. 1052-3, only after he had considered it in relation to money, Marx (1973), pp. 196-99.

49. Simmel (1978), p. 429.

50. See particularly pp. 238-47, on greed and avarice. Simmel is clealry aware of the unpredictability inherent in the wishful relation to a commodity; 'the relation of wish to its fulfilment is an infinitely diverse one, because the wish almost never allows for all aspects of the object and its effect upon us': ibid., p. 243. If wishes are 'transferred' to money, as a 'thing absolutely lacking in qualities', this particular source of uncertainty is diminished.

51. Ibid., p. 248.

52. Simmel's discussion is reminiscent, not only of Kierkegaard's description of aesthetic despair, but of Dostoevsky's celebration of uncertainty in The Gambler.

53. Simmel (1978), p. 255.

54. Ibid. p. 296.

55. For an interesting discussion of the implications of incompleteness in a number of fields see Hofstadter (1979)

56. An idea central also to Max Weber view of modern society, for a brief discussion see Gerth and Mills eds. (1964). pp. 77-128.

57. This is usually referred to as the Cosmological Principle, or Copernican Principle and describes the large-scale structure of the universe. In its modern form it is usually attributed to Milne, or Einstein who puts it succinctly, 'all places in the universe are alike': quoted in Harrison (1981), p. 88. See also Peebles (1974), pp. 31-42; Silk (1980), pp. 51-5; Rees, Ruffini and Wheeler (1974), pp. 270-5; and for a fuller historical discussion Barrow and Tipler (1986), pp. 367-444.

58. In the classical sciences not only are all movements ideally reversible, the cosmos as a whole is stable and 'complete'. The 'self' similarly is composed of internal 'exchanges' and constitutes in itself a 'finished' structure.

59. A view recently championed by Braudel and his school, rather than by conventional Marxists. Wallerstein, for example, used the revealing title Historical Capitalism as an introduction to his work.

60. Though not of course without a good deal of bloodshed.

61. And most directly by Laplace, see Čapek (1961), p. 122.

62. Far less of these developments spelling the end of capitalism, as periodically, since Schumpeter (1943), is suggested. See, for example Galbraith (1967).

63. A typical comment for example from On The Genealogy of Morals: 'Europe is rich and inventive today above all in means of excitation; it seems to need nothing so much as stimulants and brandy'; Nietzsche (1969), p. 159 (emphasis added). And there is nothing so exciting as novelty, 'what distinguishes truly original minds', is the ability to see, 'as new what is old, long familiar, seen and overlooked by everybody', *ibid.*, p. 176. Of course, as most people are not original in this sense, they require the artificial stimulus of novel commodities, or at least a good illness, as, 'being sick can even become an energetic stimulus for

life': *ibid.*, p. 224.

64. A view persuasively espoused by Hawking (1988).

65. Čapek (1971) argues that Bergson, in introducing duration into nature, is one of the most important and neglected sources of modern cosmology. Even in Weyl and Minkowski, he claims, there is no genuine succession and time is again reduced to a spatial order as, 'blindfolded consciousness creeps along its world line to discover the future': Čapek (1961), p. 165.

66. Bohm suggests that if genuine duration is introduced into nature then no fixed mode of being can remain permanent or any conceptual distinction remain inviolate. Nature then becomes a 'qualitative infinity' implying that, 'the development of the universe in time will lead to an inexhaustible diversity of new things': Bohm, in Čapek ed. (1976), p. 559.

67. Ideally, as with motor car license plates, by dating.

68. Classical equilibrium on the large-scale was a tenacious assumption. Einstein in 1917, finding no stable solution to his new field equations, felt obliged to introduce an arbitrary cosmological constant. See Narlikar (1977), pp. 111-2. Yet, ten years later, Hubble's discovery of a direct correlation between distance and apparent recession velocity of distant objects was very quickly accepted. Peebles (1971), p. 7.

69. Bondi (1961).

70. This proved socially as well as scientifically wide of the mark. Matter is again treated as something 'different' from space-time, and 'creation' is really a device to maintain a 'timeless' equilibrium.

71. There are a number of variants, open or closed, finite or infinite, depending on the choice of constant, Silk (1980), pp 94-99; Harrison (1981), pp. 293-307.

72. By Penzias and Wilson in 1965, Silk (1980), pp. 75-9.

73. Several nontechnical accounts of modern cosmology take this approach, for example: Wald (1977; Weinberg (1977); Goldsmith and Levy (1974); and for interesting variations Rowan-Robinson (1985) and Barrow and Silk (1984).

74. Rowan-Robinson (1985), pp. 236-41, 288; Weinberg (1977), pp. 101-6. Barrow and Silk (1984), p.ix, describe this primordial state of nature as a period, 'when all the laws of physics were on an equal footing, all nature's elementary constituents, heavy and light, interacted freely and democratically. The most exotic particles known, or even dreamt of, by man were liberated to participate in this unrestrained interchange'.

75. The universe retains clues to its original playfulness. Weinberg (1977), p. 149, points out that: 'The present universe is so cold that the symmetries among the different particles and interactions have been obscured by a kind of freezing'. Thus there is in the presently observable universe an 'imbalance' of matter over anti-matter, and of photons over protons, as well as a 'differentiation' of different forces. See particularly Barrow and Silk (1984) on these and related observations. One is forcefully reminded of Freud's theory of sexual 'development', a kind of differentiation and 'cooling', from an original 'hot' state of 'polymorph perversity'.

76. And cosmologists formulate their accounts of the universe in terms of the specific initial conditions of the universe, rather than in terms of continually acting 'laws of nature'; and aim from these conditions at, 'nothing less than a complete reconstruction of the past history of the universe'. Barrow and Silk (1984), p. 208.

77. In Weber's famous argument a spirit of capitalism is one of the 'initial conditions' of capitalism itself. See also Abercrombie, Hill and Turner (1980), pp 95-127.

78. This is the case even where 'new technologies' make use of effects, such as lasers, which remain classically incomprehensible.

79. Barrow and Silk (1984); Feinberg (1977); Weinberg (1983); Polkinghorne (1979); and Pagels (1982), for these and many other modern exoticisms.

80. See above Ch. 3.

81. Husserl (1970), p. 60.

82. Meyerson's Identity and Reality dates from 1908, prior that is, to much of the turmoil of modern science, but not of course prior to the general cultural transition of which science was to form such a significant part.

83. A view powerfully expressed by Bergson and Proust as well as by Freud; see above Ch. 3.

84. Symmetry, that is to say, has largely replaced 'force' as the most fundamental of physical concepts. See Gal-Or (1981), p. 30-1; Davies and Brown (1988), pp.33-47, and more generally (and technically), Shubnikov and Koptsik (1974).

85. As represented, for example, by Lukács (1980).

Notes to Conclusion

1. Calvino (1983), Mann (1958). Kuckuck is of course a critical and comic portrait. His worldly naivete does not impinge, however, on his scientific authority. His portrait of the cosmos rivals Humboldt's in its classical self-confidence.

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