PSYCHOLOGICAL THEORY IN CULTURAL CONTEXT c.1850 - 1880

Thesis submitted for the degree of
Doctor of Philosophy
at the University of Leicester

by

Richard William Rylance BA (Leicester)
Department of English
University of Leicester

October 1990
This thesis examines work by a number of psychological theorists in the mid-to-late nineteenth century. It is organised in four chapters. The first gives an overview of the main issues and arguments in psychology in the mid-century and a detailed account of Henry Holland, a writer representative of the middle ground of opinion. Subsequent chapters detail the development of psychological theory by three writers - Alexander Bain, Herbert Spencer and G. H. Lewes - who were at the forefront of new work. However the broad context of argument is not lost. All three were polymaths who saw themselves not just as theoretical innovators, but as public spokesmen for a new and challenging attitude to the understanding of nature, society and human consciousness. Their commitment to the scientific analysis of human development questioned prevailing conceptions of the spiritual life, and the political and cultural implications of the new theory (as well as the personal commitments and backgrounds of the writers) brought them into conflict with intellectuals who possessed more orthodox outlooks.

The detailed examination of psychological theory is therefore integrated with discussion of cultural context. Arguments and polemics are followed through the periodical press and other publications, including some literary material, especially by George Eliot. The intention is to produce an integrated account of the development of a body of theory in a specific cultural context and to demonstrate its growth through both the ‘internal’ dynamics of the search for answers to the problems set, and the ‘external’ cultural and social circumstances of the period in which those answers were sought.
CONTENTS OF THESIS

Contents  
iii
Note on Presentation  
iv
Acknowledgments  
v
Preface

Chapter 1. The War of the Psychological Schools: An Overview of Mid-Century Argument and Opinion

i. Psychology and its Quarrels  
ii. Henry Holland: An Example of Centre Opinion


i. The Reception of the Work, especially in its Social and Cultural Context  
ii. The Place of Bain's Work in the Development of Psychological Theory  
iii. Bain's Theory of the Will

Chapter 3. Herbert Spencer and the Beginnings of Evolutionary Psychology

i. Introduction: Changes in Models for the Mind in the Second Half of the Nineteenth Century  
ii. Spencer's Psychology - From Associationism to Evolutionary Theory  
iii. Spencer and the Changing Religious Response to Psychological Theory  
iv. Epistemology, Evolutionary Psychology and the Idealist Critique

Chapter 4. History, Mind and Language in G. H. Lewes

i. Problems of Text and Context  
ii. Mind, Metaphor, Biology and Man  
iii. Epistemology and Ontology in Problems of Life and Mind  
iv. Lewes, Darwin and Lamarck  
v. Problems of Mind and Conceptual Organisation  
vi. Back to the Future: Lewes's Convictions and Appropriations

Bibliography  
356
NOTE ON PRESENTATION

This thesis was produced on a DEC VAX-11/780 computer, using the paginator Digital Standard Runoff (DSR) under VAX/VMS version 5.3. The text is justified to left and right margins, and occasionally spacing between words will be generous. Footnotes are given at the bottom of each page and numbered sequentially chapter by chapter; occasionally, and unavoidably, one appears on the following page. As it was not possible to superscript characters on this system, footnote numbers are bracketed.
ACKNOWLEDGEMENTS

I would like to thank Bill Myers for supportive and stimulating supervision; Kelvin Everest and Martin Stannard for useful exasperation and chivvying; Nigel Wheale for sensitive reading and comment; Ian Gordon, and the old CCAT Research Board, for research time; Lynn Bancroft, Ed Esche, Nicky Morland and (especially) John Blanchfield for help with the computing; and Judith Boddy for putting up with it for so long.
Preface

This work grew out of an early interest in George Eliot's fiction, and in particular its intellectual context. From an interest in Eliot I moved to Lewes and from him to the broad development of psychological theory in the nineteenth century. It seemed to me that Lewes had been both underestimated and misunderstood, and that an adequate account of his work could not be given without a fuller understanding of the climate of opinion, argument and theory in which he worked.

When I began there was only residual - though developing - interest in scientific, or for that matter philosophical, issues among literary critics. The situation now is very different, and after the partitioned intellectual world of the post-war 'two cultures' (a climate that included not just the Leavis-Snow debates of the 1950s, but also the anti-technology movements of the 'sixties), there is a much more sensitive awareness of the common ground between various disciplines. This applies not just in the humanities, but across the board in what is sometimes rather grandly called 'the sciences of man', and some of this interest has translated into stimulating work on the period studied here (to which attention will be called as the thesis proceeds).
Yet it is still true to say, I think, that the main current of opinion in Britain continues to observe the line drawn between science and the humanities, a situation that the prevailing ethos of mainstream literary studies has done little to rectify. As with Leavis and the New Criticism, most recent literary thought—especially in its post-structural manner—has privileged text over context to the detriment of both. To a considerable extent, then, in educational and intellectual practice, the quarrel that took place between Matthew Arnold and T. H. Huxley in the 1870s has never been superseded. Arnold's hostility to 'practical science' is notorious; Huxley, replying, argued that 'for the purposes of attaining real culture, an exclusively scientific education is at least as good as an exclusively literary education.' (1)

The principal writers examined here were enemies of such exclusivity on either side, and tried, by and large, to integrate the two cultures into one. Their main work was undertaken between 1850 and 1880, the chronological parameters of this thesis. It was a thirty-year period in which the intellectual capital accumulated by the empirical tradition of psychological analysis stemming from Locke was realised in a substantial body of sophisticated and controversial work. And so some of the lines of thought developed between 1850-80 were innovative, some of the problems they inherited were classic; some of the research on which they drew was new, some of the language and conceptual structure they used was traditional. By and large this thesis does not stray much beyond its chronological boundaries, but

this should not blind us to the importance of the accumulating tradition which lay behind both the successes and controversies which are investigated here. A different kind of study could be written, for instance, on why it was that, as late as 1879, T. H. Huxley could declare that ‘Hartley’s propositions embody the most probable conclusions which are to be drawn from the latest investigations of physiologists.’ (2) In some essential respects the problems faced by evolutionary thinkers in 1880, with Darwin behind them, were not too dissimilar from those tackled by Hartley in his Observations on Man of 1749. For one thing, Hartley’s speculative description of the nervous system as a structure of strings vibrating in patterned waves bequeathed a metaphoric - and with it a conceptual - structure which was widely deployed later. At the same time, however, the historical perspective of the question could be reversed. In the last chapter some very modern formulations of persistent problems will be examined which bear a striking resemblance to formulations proposed at the time of Huxley’s backward-looking remark on Hartley.

But intellectual work develops from contemporary as well as traditional resources, and it addresses immediate as well as perennial problems. The kinds of arguments examined here have an obvious ‘Victorian’ stamp, and tackle well-known ‘Victorian’ issues. The quarrels between science and religion, free-thought and conservatism, modernity and the Romantic tradition, for instance, had an immediate bearing on the topics discussed here in a political and cultural climate that was volatile and often hostile to new work in these areas. This study therefore will examine the formation of

(2) T. H. Huxley, 'On Sensation and the Unity of Structure of Sensiferous Organs', in Science and Culture and Other Essays, p. 251.
psychological theory during these years from the point of view both of
the 'internal' intellectual dynamics of a developing discipline, and
the 'external' historical factors which shaped that development. Such
a procedure involves careful thought about criteria of relevance and
judgement and this focuses on the idea of error.

Errors of fact and theory are often made, obviously enough. But
judgements about error often have an *ex post facto* character which can
- and this is frequent enough in the standard histories of psychology
- pull the history of a body of thought out of shape. This is because
the criteria used are retrospective rather than historical. In this
study, therefore, I am primarily interested in the intellectual and
cultural context of ideas and not their 'scientific validity'. This
is because my aim is essentially historical, and because the areas in
which I am dealing are often not amenable to judgements about validity
remote from the context in which ideas are articulated. The criteria
of relevance I use, therefore, are essentially local rather than eventual.

This thesis aims to understand the circumstances of one sector of
intellectual debate in its public context. I concentrate on certain
writers to organise the material because I believe, contrary to the
direction of some recent thinking, that intellectual work is a human
as well as a structural or 'discursive' event. The writers chosen
are, I believe, both important for the developing theory, and
representative of the discipline's relations with the wider culture.
Bain, Spencer and Lewes are of course already well-known, but there
has been little substantially written directly on Bain, and even less
on Lewes - whom, I argue in the final chapter, has been badly
underestimated. But at the same time I also examine a range of
related work by contemporaries which either supported or took issue with their assumptions and conclusions, and I pay particular attention to the network of debate in the periodical press. One's intellectual obligations are always massive. Some of these are, I hope, evident in the text and acknowledgements, but it is perhaps worth remarking that this work would have been very much harder without the Wellesley Index of Victorian Periodicals: a text of contexts in itself.
CHAPTER ONE

THE WAR OF THE PSYCHOLOGICAL SCHOOLS:
AN OVERVIEW OF MID-CENTURY ARGUMENT AND OPINION

I. Psychology and its Quarrels

It is now widely recognised that the period 1850-1880 was crucial for the establishment of a scientifically-based psychology in Britain. However this claim needs to be understood in context. For what is understood as scientific in one period will not necessarily be so understood in another, and this is probably especially true of the so-called 'soft' sciences like psychology. None of the writers examined here were major scientists, if by that is meant that they made decisive empirical discoveries or theoretical formulations - like Darwin or Maxwell - which turned the direction of subsequent work. But they were, nonetheless, important for the development of a 'scientific' understanding of man in this period. Their importance partly lies in their conceptual reformulation of the discipline. But it also lies in the work they undertook which lead to the public acceptance of science as a guiding principle for the study of the human mind. Their application of discoveries made in biology, physiology or medicine to the new discipline was tentative, hypothetical and sometimes (on empirical grounds) wrong. But this does not devalue their importance to the historian of culture and ideas. The writers in whom I am interested in this thesis were philosophers, men of letters, polemicists and publicists who had a sharp sense of the intellectual marketplace and of the possibilities of influencing opinion. Their role in the development of psychology
was not just to set-out new understanding but to act in the public realm of ideas - to bring forward a new conception of the discipline in a troubled public context often hostile to the fledgling science.

In the mid nineteenth century psychology seemed to have both a long and a short history. It was long in history of the philosophy of mind, but short in the history of the bio-medical sciences. This work was only slowly building upon the neurological discoveries relating to the sensory-motor arc made in the earlier part of the century by Charles Bell, Francois Magendie, Johannes Muller and a host of others. The task of British psychological writers like G. H. Lewes or T. H. Huxley or John Stuart Mill (to take three of the better-known examples) was, as it were, to take psychology from one intellectual domain to the other and put together older conceptions with newer findings and theories. Such a process inevitably entailed rejection of cherished conceptions and orthodoxies, and the battle of ideas that ensued was fought out in a highly-charged public climate. In 1876 when Mind, the first 'purely' psychological journal in Britain, was founded, its full title was revealing: Mind: A Quarterly Review of Psychology and Philosophy. The conjunction expressed both a necessary relationship and a desired independence. Psychology was both specialist and common intellectual property simultaneously, and whilst psychologists were eager to 'procure a decision of this question as to the scientific standing of psychology' (1) favourable to the science, the philosophy, as it were, pulled the discipline into the public realm and it was here that these writers did their work.

(1) George Croom Robertson, 'Prefatory Words', Mind, 1 (1875), 3.
Historians have tended to date psychology's coming of age from its move into the laboratory, particularly the German laboratory. The long philosophic past tends to be reduced to short first chapters. However, psychological science was, from its empirical inception, deflected by the philosophic paradigms set for it, as research in recent years has shown. Robert M. Young, for instance, has demonstrated in great detail the complex interlocking of experimental data and concepts with pre- or extra-experimental paradigms in the investigation of the localisation of brain functions throughout the nineteenth century,(2) and similar conclusions have been developed elsewhere.(3)

The results of this work show that philosophical assumptions could direct work into theoretical dead-ends, legitimate non-empirical conclusions on the basis of empirical findings, or serve to fill out findings which, in themselves, were too insubstantial to maintain larger projective hypotheses. Even within relatively local fields and over large periods of research time, there could be a hiatus between coherent, projected theoretical awarenesses and the particular exigencies which bear on their fulfilment in experimental investigation. The lag between these made the particular concepts


deployed within actual research both potentially highly unstable at a scientific level and acutely vulnerable in wider, more public, areas of debate.

June Goodfield-Toulmin, for instance, has shown how pressures of a directly ideological kind in post-French Revolution England forced William Lawrence to abandon his tentative work on nervous organisation under pressure of public attacks which associated it with radical 'French Materialism'. As she makes clear, the scientific ground work was in this instance too slender to maintain explanations which could challenge the prevailing doctrine of special human vitalism, and Lawrence quickly withdrew his book - Lectures on Physiology, Zoology and the Natural History of Man (1819) - and retreated to his medical practice.(4)

No doubt the political and ideological pressures of this period were particularly severe, and by the mid-century physiologists had a more secure standing ground, particularly as applied science was more visibly important in the generation of wealth. Nevertheless one need only mention the evolution debates to recognise a fraught public context for an area of investigation which was seen to interfere with prevailing conceptions of man.(5) Goodfield-Toulmin notes that in his preface to Man’s Place in Nature of 1863, T. H. Huxley (who was a friend of William Lawrence) explicitly invoked parallels between his own predicament as a champion of evolution and the hostility visited


(5) For a fascinating recent study of the pre-Darwinian political context of evolutionary ideas, both within and without the bio-medical community, see Adrian Desmond, The Politics of Evolution: Morphology, Medicine, and Reform in Radical London (London, University of Chicago Press, 1989).
on Lawrence in 1819. G. H. Lewes, too, was particularly alert to the ideological force which could be mobilised behind charges of 'materialism', and to the complex mediations between science, philosophy and politics which the period demanded.

Lewes began his career as a belletrist, jobbing journalist and man-of-all-parts in the rich, interlocking intellectual life of early-Victorian Britain. He was a sometime novelist, actor, playwright, theatre critic, literary biographer and mediator of German and French thought (both of which languages he spoke fluently) into Britain. He was also a champion of science. In 1867 he published his A History of Philosophy from Thales to Comte. The textual status of this work is peculiar. In one sense it is a fresh text, written very much under the influence of Lewes's immediate theoretical concerns. Yet it is also an old text, a re-writing of the highly-successful A Biographical History of Philosophy which Lewes published in four volumes in 1845-6 and subsequently revised for a one volume edition in 1857. This revision entailed an explicit repudiation of some earlier formulations, though these were as nothing compared with the comprehensive overhauling which Lewes undertook in the mid-1860s for the rather misleadingly-called third edition of 1867. This itself also incurred revisions, albeit minor, for the fourth edition of 1871. Lewes undertook this work whilst he was preparing, and in the later stages writing, the initial series of his

psychological magnum opus *Problems of Life and Mind* (which he began in a formulated way as early as 1862), and at a point when George Eliot records that his only occupations were with 'physiological psychology'.

The effect of the revisions was to construct the shape of the history of philosophy such that it pointed even more firmly towards the triumph of science. Many of the more traditional concerns of philosophy, and whole sets of problems, are simply abandoned to the dustbin of 'metaphysics'. Thinkers such as Spinoza, Condillac, Hartley, Erasmus Darwin, Cabanis and Gall, on the other hand, are given greater prominence and attention. The book is also unashamedly teleological. All versions of *The History* look towards the victory of some version of Auguste Comte's science-orientated positivism. All enjoyed large sales and wide influence, not least amongst proletarian intellectuals.

Having repudiated the first edition of the *Biographical History* in 1857, Lewes became increasingly immersed in physiological studies, especially following the favourable reception of *Seaside Studies* (1856-7) by, as Eliot put it, the 'scientific bigwigs'. In April of 1857 Eliot records him surrounded by physiological books open around him 'like a prairie' as he planned *The Physiology of Common Life*, and the letters and journals make frequent reference to physiological

---


(9) *Letters*, II, 438.
experiments including dissections of the spinal cord and the optic nerve and vivesections of frogs. These provided the basis for three papers given at the British Association for the Advancement of Science conference in Aberdeen in 1859. The central arguments of these papers relevently suggest the philosophical bearing of his physiological work. They highlight the relationship between the biological organism and the environmental medium.

In the first, Lewes argues that the composition of nerve tissue is homogenous throughout the system, there being no separate neurological tissue in the sensory as distinct from the motor systems. The property of a nerve thus depends on location, whilst function is dependent on the nerve’s relation to the somatic periphery and thus to environmental use. The other two papers deal with the inadequate taxonomy of nerve physiology as it is related to variable function, and a demonstration of the special class of sensations which were localized in the muscles rather than the skin.(11) This last is important for, as Roger Smith has shown, the importance of muscle sense, and hence of the volitional control of sensation, was central to nineteenth-century physiologists’ attempts to theorise the human organism as capable of active learning and interaction with the environment.(12)

During this period Lewes also had regular involvements with emerging psychological and physiological societies and journals. In 1862 he was involved in the founding of what was later to become the

(10) Letters, II, 319.
(12) Smith, 'The Background of Physiological Psychology'.
Metaphysical Society which, on its dissolution, left its residual funds for the founding of *Mind* in 1876. (13) George Croom Robertson, its first editor, consulted Lewes over the title and Lewes offered to contribute gratis. (14) He also edited (from 1864-5), and wrote regularly for, *The Fortnightly Review* which adopted a pro-science platform. In the 1870s he was a founder-member of the Physiological Society and worked with the Royal Commission on vivisection in 1875. Lewes’s work in philosophy and psychology, then, emerged alongside engagements with public issues in a fast-changing context. Its provisional and engaged nature is indicated by George Eliot in a letter of May 1869 to Harriet Beecher Stowe. Stowe had passed-on praise for the comprehensive formulations of the *History* (which edition is in question is uncertain):

> let me assure you that whoever else gave you that description of my husband’s History of Philosophy namely, ‘that it was to solve and settle all things’ - he himself never saw it in that light. The work has been greatly altered as well as enlarged in three successive editions, and his mind is so far from being captive to his own written words, that he is now engaged in physiological and psychological researches which are leading him to issues at variance in some important respects with the views expressed in some of his published works. (15)

It is not difficult to see why Lewes’s work should have this provisional character. His output during this period was enormous (as it was throughout his life) and he was working in extended and difficult areas in a newly-emerging field trying to establish itself as a discipline in a hostile public context.


(14) *Letters*, IX, 143 and 171.

In his conclusion to the 1867 History, 'The Present Condition of Philosophy', Lewes addresses himself to the question of materialism:

Materialism is a very ugly word, which connotes certain opinions of very questionable validity held by some writers, and opinions both silly and immoral which are wantonly attributed to these writers by rash and reckless polemicists.

Though Lewes rejects any crude materialism, 'the materialists have this important advantage, that they strive to get rid of all metaphysical entities, and seek an explanation of phenomena in the laws of phenomena'. Opinions, he continues, 'should be refuted as false, not denounced as dangerous. Research is arduous enough without obstructing the path with bugbears'.(16) Like Huxley he invokes the period after the French Revolution to indicate the difficulties experienced by contemporaries. It is a passage worth quoting at length because not only does it signal Lewes's sense of the difficulties of the immediate moment, but also his alert awareness of the means by which historical pressures deform ideas. This sense of the historical pressures placed upon, and the ideological limits of, the formation of intellectual concepts is central to Lewes's work and represents a crucial advance on the naive Comtean view, offered in his Comte's Philosophy of the Sciences of 1853, that evolution in thought and opinion provokes historical development. Of the post-Revolution period Lewes writes:

The reaction against the Philosophy of the Eighteenth Century was less a reaction against a doctrine that had proved to be incompetent than against a doctrine believed to be the source of frightful immorality .... Associated in men's mind with the Saturnalia of the Terror, the philosophical opinions of Condillac, Diderot and Cabanis were held responsible for the crimes of the Convention; and

(16) Lewes, The History of Philosophy from Thales to Comte, 2 vols., 4th edn. (London, Longman's, Green, and Co., 1871), II, 745. (Hereafter abbreviated to History followed by volume and page number.)
what might be true in those opinions was flung aside with what was false, without discrimination, without analysis, in fierce impetuous disgust. Every opinion which had what was called 'a taint of materialism', or seemed to point in that direction, was denounced as an opinion necessarily leading to the destruction of all Religion, Morality, and Government. Every opinion which seemed to point in the direction of spiritualism was eagerly welcomed, promulgated, and lauded; not because it was demonstrably true, but because it was supposed capable of preserving social order. And indeed when, looking back on those times, we contemplate the misery and anarchy which disgraced what was an inevitable movement, and dimmed what was really noble in that movement, we can understand how many generous hearts and minds, fluctuating in perplexity, did instinctively revolt not only against the Revolution, but against all the principles which were ever invoked by the revolutionists. Looking at the matter from this distance we can see clearly enough that 'materialism' had really no more to do with the Revolution than Christianity had to do with the hideous scenes in which the Anabaptists were actors; but we can understand how indelible was the association of Revolution with materialism in the minds of that generation.

Towards the end of this paragraph the reader is perhaps pushed towards a comfortable historical retrospect. However in his next, Lewes, in a manner similar to many moments in George Eliot's fiction, surprises the reader with a pressing contemporaneity which returns to his polemically bleak account of the present situation.

So profoundly influential has this association been, that a celebrated surgeon of our own day perilled his position by advocating the opinion, now almost universally accepted, but then generally shuddered at, that the brain is the 'organ' of the mind. He had to retract that opinion, which the pious Hartley and many others had advanced without offence. He had to retract it, not because it was scientifically untenable, but because it was declared to be morally dangerous.(17)

Lewes presumably had William Lawrence specifically in mind here, but the broad point is central to his thinking.

Lewes's perception of a fraught cultural and political context is a formative feature of the 1867 *History*, and he was more or less conscious of this throughout his career. As a proclaimed Comtist he could not be otherwise. Though he took significant distance from Comte in many respects - including over the question of the status of psychology as a discipline - the political resonances of Comtism were unavoidable.

Comte’s later work was of a directly social and political character as distinguished from the earlier, to which Lewes broadly adhered, which was concerned with laying down a method of intellectual inquiry based on the classification of the sciences. The distinction between these two phases was mirrored in England by the split between, as it were, the methodological positivists and those more interested in the social and political platforms. These latter - who included Lewes’s friends Frederic Harrison and Richard Congreve - were highly active (which is not to say highly effective) in the alarmed political climate of the 1860s, as Christopher Kent has shown.(18) Through their work with trades unions and in working-class journalism, and their at times shrewd agitation of middle-class opinion, a reputation for revolutionary radicalism was established.

In this context, in illustration of just the process on which Lewes was commenting in 1867, analogies and associations were cast back to the French Revolution. Matthew Arnold, for instance, associated the English positivists with Jacobinism in *Culture and Anarchy* (1869); and Marie Blaze de Bury, in an article for the conservatively-inclined *North British Review* in 1867, lauded Victor

Cousin, an implacable anti-positivist, whom Lewes held largely responsible for the contemporary decay of French thought, and who was consistently hammered by pro-science groupings in both Britain and France. According to de Bury, Cousin had 'during the last half century laboured to rescue France from the moral penalties of her political weakness' in defending spiritualism against a materialism which had brought about the cycle of revolutions. Cousin was teaching against a 'Materialism [which] was rampant and gorged with success'. But 'what could the spirit, the soul, the flame from on high, immaterial and divine, mean to men who had beaten down thrones and crushed creeds?'(19)

Arnold and de Bury were not isolated instances of the prevailing hostility. Reviewers of Lewes's 1867 History were almost unanimous in placing this context, though it was generally done more temperately. William Henry Smith, for instance, alerted readers of Blackwood's to the political bearing of Lewes's championship of positive science and Comte's methodology, though he admitted that

enthusiastic minds, looking for some terrestrial millenium might easily fall into worse teaching. Our Socialists and Communists would learn some lessons from M. Comte which would make them safer neighbours and citizens than they are likely to be. A Comtist would never be a revolutionist, in the sense of turning the world upside down, or levelling all things.

The same kind of point, though often more fiercely (Smith was a friend of Lewes's), was made elsewhere.(20)

---

(19) Matthew Arnold, Culture and Anarchy, ed. Ian Gregor (Indianapolis, Bobbs-Merrill, 1971), pp. 54-5; [Marie Blaze de Bury], 'Victor Cousin', North British Review, 7ns (1867), 162-71. For a contemporary French assessment of Cousin from a pro-science viewpoint, see Th. Ribot, 'Philosophy in France', Mind, 2 (1877), 366-86. For Lewes's attacks on Cousin see, for instance, 'History of the Psychological Method', Leader, 6 (1855), 1036-37.
As we have said it would distort Lewes's work in the 1860s to see it as having any conscious sense of a direct, specific political intervention, but the context was there and Lewes had a record of sporadic political support for radical causes. He had gained his entry to the London intellectual world through the circle of radicals around Leigh Hunt in the late 1830s. In addition to early-century figures of the older generation, this circle included Carlyle and John Stuart Mill, with whom Lewes maintained a life-long, though never especially intimate, friendship.

In this earlier period Lewes had expressed his political interests in campaigning journalism, principally through his editorship of The Leader with Thornton Hunt (Leigh Hunt's son) in the early 1850s. In the 'forties he had championed Shelley as the poet of the coming generation against attacks on him in Tory journals, especially the Quarterly, and the 1848 revolutions inspired him to write a biography of Robespierre which argued for the historical inevitability of the French Revolution. In Leader articles in the 'fifties he constructed positive images of the working class (they were sturdy and sensible) and defended Communism as an ideal, if not as a political form. The Leader also expressed enthusiasm for the leaders of the 1848 revolution in France including the socialist Louis Blanc. As the decade wore on, however, Lewes's direct political writing more or less ceased (he gave up The Leader in 1854), though

(20) [William Henry Smith], 'Lewes's History of Philosophy', Blackwood's Edinburgh Magazine, 104 (1868), 552. See also [James Scott Henderson], 'Positivism', North British Review, 10ns (1868), 203-56; [John Tulloch], 'The Positive Philosophy of M. Auguste Comte', Edinburgh Review, 127 (1868), 303-57; and 'Morality without Metaphysics', Edinburgh Review, 144 (1876), 470-500, where he couples Comte with Proudhon. Lewes himself, recognised the adjacency of Comtism and Communism in the public mind and was at pains to separate them; see Comte's Philosophy of the Sciences (London, Bohn, 1853), pp. 11-12.
the fact that he maintained contact with Louis Blanc until as late as 1875 is suggestive. (21) More pressingly the readers and critics of The Fortnightly Review recognised the adjacency of radical politics and the new physiological psychology in the 1860s. John Morley, who succeeded Lewes as editor in 1865, recollected that

people justly perceived that there seemed to be a certain undefinable concurrence among writers coming from different schools and handling very different subjects. Perhaps the instinct was right which fancied it discerned some common drift, a certain pervading atmosphere. People scented a subtle connection between speculations on the Physical Basis of Life and the Unseen Universe, and articles on Trades Unions and National Education; and Professor Tyndall’s eloquence in impugning the authority of miracles was supposed to work in the same direction as Mr Frederic Harrison’s eloquence in demolishing Prince Bismarck and vindicating the Commune as the newest proof of the political genius of France. (22)

The bugbear of Comtism, then, was a powerful presence in the climate in which Lewes undertook his work, though it would be wrong to see the issue as merely confined to arguments over Comte. The ideological war in the periodical press was waged more widely. The republication of The History of Philosophy from Thales to Comte in 1871 coincided with the general furore over Darwin’s Descent of Man and, as is well known, reviews of that work were again an opportunity for critics hostile to science to mount attacks which again mounted charges of ‘materialism’. We cannot go into this episode thoroughly, but it is important to recognise that much of debate centred on

(21) Tjoa, George Henry Lewes has a useful chapter on Lewes’s early political involvements on which I have drawn here. See also Anna Theresa Kitchel, George Lewes and George Eliot: A Review of the Records (New York, John Day, 1933), ch. 4 and p. 273, and Williams, Mr George Eliot.

matters of interest to psychologists, and that it spilled-over into adjacent areas such as anthropology. Two pieces from the *Edinburgh Review* are representative.

A review of Darwin’s book claimed that

still less can the theory explain the phenomena of mind. We owe indeed to Mr Darwin some gratitude for his attempt to explain the origin of the intellectual faculties by the purely materialistic argument, since his failure is that of one of the greatest natural philosophers who has ever attempted to approach this most difficult problem. It might indeed occur to some that this method of dealing with the subject would be about as likely to result in the discovery of truth as that of a chemist who should approach the deepest and most abstruse phenomena presented to physiology by means of analysis, without taking into account the vital processes which transcend his skill. Mr Darwin, before he can fairly argue from matter to mind, must prove that they are both the same thing, which is manifestly impossible. (23)

Likewise an article on E. B. Tylor’s anthropology in 1872 attacked the ‘contemporary fetishism of modern science’ and claimed that

the attempt, indeed, to bridge over the gulf that separates animal from human intelligence, by any analysis of the conscious elements that constitute the latter, or the necessary products of these elements, appears to us the result of psychological confusion and mistake. It rests on the assumption that there is no difference in kind between animal and human intelligence; that will may be resolved into appetite, and reason into sense; and that, as the lowest forms of life have rudimentary appetites and senses, the mind of an oyster is identical in kind with the mind of a Newton or a Shakespeare. (24)

Within the social and ideological contexts of the attempt to constitute a scientific psychology these were powerful arguments.

Both articles assume a categorical difference not only between species but also between mind and matter. The purchase of


physiological analysis on man's higher faculties is denied, in the piece on Darwin by a rhetorical sleight-of-hand which reduces physiology to chemistry. Distinctive - Lewes would say ‘metaphysical’ - categories of special human vitalism are installed in its place. In the piece on Tylor these capacities are then used to motor, in an uncomplicated way, human historical development.

We have thus in human life and human history a new power, manifesting itself by new and distinctive products, of which no traces are found in any form of merely animal life. This power is conscious intelligence, which determines a vital difference in kind in all the activities of the human mind, from the highest to the lowest.... Even the operations of sense, in a being endowed with self-consciousness, are conditioned by the higher attribute.(25)

As Matthew Arnold and Marie Blaze de Bury had claimed earlier, history is spirit, stripped of its material determinations both at the socio-historical and the organic levels. The privileging of the higher psychological faculties beyond their material determinants is repeated at the level of historical process. Man is a conscious, intellective, active being with utter responsibilities and, saving the Divine Will, directive capacities, and the rhetoric pitches the argument at the level of common sense, of the recognisable psychological attributes. Man is of course not an oyster.

Indeed, as Raymond Williams has pointed out, the texture of the very meaning of the word 'psychological' in general usage in this period was coming to signify this privileged area of inner, personal and private experience.(26) Thus if psychology was to gain real purchase in the public arena where the sharp ideological battles were being fought, it had to enter the ordinary and comprehensive

(25) Baynes, 'Tylor', 118.

(26) Raymond Williams, Keywords: A Vocabulary of Culture and Society (London, Fontana, 1976), pp. 207-9.
experience of complex living. If it failed to make this - at least theoretical - recognition then it became vulnerable to refutation and dismissal merely at the level of 'common sense'. It was in this area that writers such as Lewes and Huxley, and a novelist such as George Eliot (whom Henry James complained was too scientific in her vocabulary and conceptual understanding (27)) did their work.

Charges of physiological reductionism made by critics hostile to the new psychology were not without foundation. In order to give a theoretically adequate account of the physiological bases of mind both the physiology and the psychology had to be sufficiently supple not to exclude ordinary senses of complex behaviour. In the mid-nineteenth century such theories were, unsurprisingly, not forthcoming. The state of research on the cerebral localisation of brain functions, and on the relation of passive reflex mechanisms to voluntary action, could not provide adequate answers in their raw state. The physiological concepts needed to be mediated through the old and more familiar theories drawn from psychology's philosophic past, and forms of dualism provided common solutions. The mind, spirit and moral sense presided autonomously over the organic processes and functions. They were categorically different registers of experience. In this situation, champions of a physiologically-based psychology could easily turn to reductionist models. One writer who did so was Auguste Comte. In view of the influence that Comte exerted on Lewes and others it is necessary to situate the concern for an adequately complex psychological theory in relation to Comte's views and contemporary reactions to them.

In his book-length exposition of Comte in 1853 Lewes devoted a chapter to 'Psychology: a New Cerebral Theory'. The effect of this was to carve-out a space for psychology within Comte's theory which the master himself had not allowed. Lewes indeed was careful in this respect to take his distance from Comte who, in the 'thirties and 'forties, explicitly denied that psychology could have scientific independence. According to Comte, psychology, as it was then constituted, had the introspective observation of mental life as its only method. This he believed was insufficient to constitute a science. One portion of psychology was therefore to be given over to biology (where Gall's phrenology would provide the basis for a theory), and the other was to be given to sociology which would study the exercise of the intellectual powers in societies. (28)

Comte formed his analysis against his perception of the relevant, rival philosophical traditions: Cartesian dualism, German idealism, and the sensationalist-associationist tradition stemming from Locke and developed in France in the late-eighteenth century. Each was insufficient. Descartes articulated a view of mind as above material conditions; German idealism celebrated only a unitary ego as the energetic core of mental life (whereas human nature is 'included in various directions by distinct and independent powers, among which equilibrium is established with extreme difficulty' (29)); and the sensationalist tradition's only method was introspection.

What all three shared was an over-emphasis on the intellectual functions at the expense of the affective, and hence a splitting-off


of man's intellectual from his biological nature, and a segregation of
the human and animal worlds. Comte argued for the 'relational study
of the mind and the ways of animals'(30), and a more rigorous
physiological and anatomical attention to the taxonomy of human
faculties and their cerebral localisation. Gall's phrenological
theories could provide the basis for such a programme, though Comte
disaagreed with Gall's actual division of the mental faculties which
seemed to him not to respect the true division of intellectual and
affective capacities, nor their anatomical relations within the
cerebrum. Once a true classification had been established, however, a
'phrenological psychology' could be founded by reconsidering the
faculties as instincts. The concept of instinct would then
theoretically connect the intellective and the affective, and the
human and the animal worlds.(31)

From the vantage of the relatively-advanced work of the later
century it was easy to dismiss these formulations, and particularly
Comte's reliance on Gall. John Stuart Mill did so in *Auguste Comte
and Positivism* (1865), and so did T. H. Huxley as we shall see. Lewes
too had doubts, even in 1853 when his enthusiasm for Comte was at its
height. However Comte's analysis had strengths.

The stress on the affective life as a central component of any
psychology was undoubtedly necessary, and this was one of Comte's
attractions for Lewes and for George Eliot.(32) Equally attractive was
his emphasis on a conflictive model of psychological life; and his


Philosophy*, pp. 218-32.

critique of philosophical dualism and German metaphysical psychology became a commonplace position amongst scientific psychologists in mid-to-late-century. Recent work on Gall has also reassessed his importance in the development of nineteenth-century physiological theories of the mind. Robert Young has emphasised how Gall broke from prevailing ideas of the 'sensorium commune' and insisted upon seeing the brain not as a unitary organ and faculty (and hence perhaps the seat of a soul) but as a grouping of multiple interacting functions. This had a number of theoretical advantages. The division of the cerebrum into diverse faculties provided an impetus for correlating brain function and behaviour. Further, Gall's stress on the development of innate faculties through environmental contacts enabled a developmental perspective. Finally, a rigorous distinction needs to be made between phrenology and cranioscopy - the theory of 'head bumps' which provoked much Victorian ridicule. As a theory of brain organisation and functioning phrenology exerted a persistently provocative influence on serious research through the period. (33)

Nevertheless there were serious difficulties in Gall's work, and Comte's use of Gall, which were not lost on later psychologists. Mill's critique was widely supported. He pointed-out that the idea of generalised faculties could not develop a psychology of specific individual contents and differences. These were only, Mill believed, accessible through careful self-observation. Further, Comte's classification of the faculties on the basis of supposedly-objective categories of personality type involved a grave methodological flaw.

To establish a relation between mental functions and cerebral conformations, requires not only a parallel system

(33) Young, Mind, Brain and Adaptation; see also R. J. Cooter, 'Phrenology: The Provocation of Progress', History of Science, XIV (1976), 211-234.
of observations applied to each, but (as M. Comte himself, with some inconsistency, acknowledges) an analysis of the mental faculties, "des diverses facultes elementaires" [sic], conducted without any reference to the physical conditions since the proof of the theory would lie in the correspondence between the division of the brain into organs and that of the mind into faculties, each shown by separate evidences. (34)

In other words the supposedly relational analysis was nothing of the kind. There were no scientifically significant correlations between the two discrete sets of phenomena. In addition, Mill argued, Comte's belief that such faculties were innate at the level of instinctual propensity seriously underestimated the influence of environment in determining mental character, collective or individual. Comte's views implied a severe reductionism, a kind of anatomical determinism, in which the hard scientific categories were in fact tendentious social ones which regimented the diversity of human character and capacity.

Mill's are strong arguments and are all the more so for being launched from a broadly-sympathetic position overall. They were echoed in some respects by Lewes in Comte's Philosophy of the Sciences. Drawing on an earlier formulation by Mill, Lewes too felt that a true positive philosophy must modify the hierarchy of the sciences to provide a space for psychology, which could not be consumed by Biology on the one hand and Sociology on the other. An independent discipline must be formulated with its own procedures and object, just as Biology could not itself be reduced to organic chemistry. (35)


(35) Lewes, Comte's Philosophy, pp. 210-11.
There remained however the problem of investigative method. Was psychology to be constituted on the basis of physiology, or upon the old methods of introspection? Though Mill allowed that 'the Science of Physiology must never be overlooked or undervalued', he doubted that an exacting correlation could be made between mental phenomena and nerve states. Partly this was due to the lack of a sufficiently extensive physiology, but he also believed that mental phenomena had their own scientific regularities and therefore mode of study.

The successions, therefore, which obtain amongst mental phenomena, do not admit of being deduced from the physiological laws of our nervous organisation; and all real knowledge of them must continue, for a long time at least if not forever, to be sought in the direct study, by observation and experiment, of the mental successions themselves. Since, therefore, the order of our mental phenomena must be studied in those phenomena, and not inferred from the laws of any phenomena more general, there is a distinct and separate Science of Mind.(36)

The effect of this was to return psychology to the older 'mentalist' traditions. Comte's phrenology 'supposes as its necessary preparation the whole of the Association psychology'.(37)

In a strong sense then, Mill's critique of Comte, backed by the long history of British associationism which was transmitted forcefully to him through Utilitarian thought, returned psychology to a dualism. In the absense of explicit correlations between mental and physiological processes each sphere was to retain its autonomy. The specific object of psychology was the contents of self-observed consciousness, and Lewes, in 1853, did not make an issue of this. He approved of Mill's retrieval of associationist methods, but at the same time insisted upon seeing mind as a biological function in the

(36) Quoted by Lewes, *Comte's Philosophy*, p. 211.
long run. This stalemate position was not untypical of mid-century thinking.

Mill and Lewes were of course not the only writers to respond to Comte's theories in a psychological context. T. H. Huxley, too, took issue with Comte and his eminence as a champion of science, and of evolutionary biology and physiology in particular, gave his views particular bite and made them of importance to Lewes for instance.

The two knew each other socially. After an uneasy beginning in the mid-fifties when Huxley regarded Lewes as a scientific dilettante on the evidence of his book on Comte, the two became increasingly friendly during the 'sixties, matching the growth of Lewes's scientific reputation. Huxley was one of the 'bigwigs' who applauded Seaside Studies in 1858, and he delivered and defended Lewes's papers at the British Association a year later when they caused controversy. In the late 'sixties and 'seventies Huxley, Lewes, Tyndall, Herbert Spencer, Hughlings Jackson and Alexander Bain held 'scientific dinners' together, and Huxley and Lewes were both involved with the Metaphysical Society, the Physiological Society and the Royal Commission on vivisection. (38)

Mill and Lewes were more or less sympathetic to Comte's positivism. Huxley was not. He hammered Lewes's exposition of Comte in a review for the Westminster Review in 1854, and from the late 'sixties into the 'nineties skirmished intermittently with the English Comtists, utilising his considerable polemical and expository gifts. (39) We will here focus on Huxley's contributions to the initial exchanges in 1869. These were two articles published in the

(38) Letters, VIII, 196; Kitchel, Lewes and Eliot, pp. 177, 194, 268-70, 280; Tjoa, George Henry Lewes, pp. 9, 30, 89.
Fortnightly Review of that year. Neither piece focuses directly upon Comte's rejection of psychology, though the first, 'On the Physical Basis of Life', covers similar ground. Rather the articles are wholesale refusals of Comte's general arguments, both his attempt to found the general Positive Polity ('Catholicism minus Christianity', according to Huxley) and the Positive Method in science. Huxley's attacks on the latter are our concern here.

According to Huxley, Comte's classification of the sciences was mere 'meddling systemisation and regulation'. He regarded the positive method in general in science - whereby the concrete sciences gave way in the hierarchy to the abstract and generalising sciences - as a pernicious reversal of actual scientific practice which always began with observation of, and experimentation on, the small and the concrete and only then generalised its conclusions by induction. Specifically, Huxley objected to the privileging of abstract mathematics over 'molecular physics', by which he meant the integrated structures of matter. To privilege mathematics was to privilege theory over empirical findings, and hence categories of mind over the laws of matter itself.(40)

In the light of this, it is not difficult to see how a critique could be made of Comte's phrenological physiology, which Huxley himself merely ridiculed. As Mill pointed out, there was in Comte no empirical correlation between faculties and brain systems. Further, the supposed correlation was not in any case physiological but


anatomical. The faculties were supposed to exist not in physiological process but in portions of brain substance. As Lewes pointed out in his 1867 *History*, a psychology based on anatomy involved a category mistake as severe as equating mind and spirit. (41)

The effect of this on what putative physiology there was in Comte’s account of mind was utterly damaging. The various faculties in their located areas were asserted to be neurologically autonomous.

The positive theory of the effective and intellectual functions is therefore settled, irreversibly, to be this: it consists in the experimental and rational study of the phenomena of interior sensibility proper to the cerebral ganglions, apart from all immediate external apparatus. (42)

The important clause is the last. The whole effort of physiological research into brain functions in the nineteenth century was to extend the sensory-motor arc beyond the sub-cortical functions to the brain itself. In doing so it combatted dualisms which stressed the non-materiality of mind based on idealist or Cartesian-rationalist premises. Comte here, in effect, reverses the whole trajectory. As an organ, the brain is insulated from its sensitive systems, and physiological materialism has been, quite literally, stood on its head. As Lewes noted, in his chapter on Gall in the 1867 *History*, the faculties end-up as spiritual entities which only have material manifestations by virtue of logic. They ‘were in no sense products of the organ.’ (43)

In this context it is hardly surprising that Huxley took the opportunity of an article on ‘The Physical Basis of Life’ to attack

(41) Lewes, *History*, I, xcvi.


Comte. It was a statement of an alternative psychological materialism. Huxley posited 'a single physical basis for life underlying all the diversities of vital existence.' By 'vital existence' he understood not only fundamental substance and function, shared by plant, animal and human alike, but also the higher cerebral functions.

Even those manifestations of the intellect, of feeling, and of will, which we rightly name the higher faculties, are not excluded from this classification, inasmuch as to everyone but the subject of them, they are known only as transitory changes in the relative positions of parts of the body. Speech, gesture, and every other form of human action are, in the long run, resolvable into muscular contraction, and muscular contraction is but the transitory change in the relative positions of parts of the muscle. (44)

The position is the exact reverse of that of Comte. The cerebral faculties are reduced to the sensory-motor effects.

Of all the writers considered here, Huxley states the boldest case for a psychology reduced to organic processes. However this is not a naive reductionism. It is a philosophically highly-calculated move. His polemical pieces against Comte are directed towards establishing not only the discipline of psychology, but also towards an assessment of the limitations of philosophy as a mode of enquiry in this area. Entailed in the latter is a description of the conscious subject which skirts the margins of epistemological scepticism.

In the passage quoted above, for instance, it is interesting that Huxley distinguishes between the subject who observes and the subject who experiences. What is available to the former is not available to the latter. The experiencing consciousness will experience all the higher attributes of consciousness. To the scientific observer,

however, all that will be apparent in a functional perspective are the laws of the organic series. These laws, Huxley continues, will only consist of observed regularities. There will be nothing philosophically necessary in them from which to generalise to inevitable reductionist conclusions: 'Fact I know; and Law I know; but what is this Necessity, save an empty shadow of my own mind's throwing?' The question is aimed at 'materialism', which for Huxley means the idea of a necessitous, driving force in matter itself which is beyond human volition. As such it is categorically indistinguishable from spiritualism: 'matter and spirit are but names for an imaginary substrata of groups of natural phenomena.' (45)

Methodologically, Huxley recommends an observing neutrality which is paralleled by his religious agnosticism. The problems set for a fully-integrated physiological psychology, which will do proper justice to both faculty and function, are not in his view presently susceptible of solution. The scientist observes one group of phenomena (the exercise of the higher faculties by thinking subjects) and another group (the biological functions), but as yet can make no meaningful correlations between them at the level of physical law. As he wrote in his physiological text-book, Lessons in Elementary Physiology, cerebral sensation is the conscious component of reflex action, but

what consciousness is, we know not; and how it is that anything so remarkable as a state of consciousness comes about as a result of irritating nerve tissue, is just as unaccountable as any other ultimate fact of nature. (46)

(45) Huxley, 'Physical Basis', 144 and 143.

Huxley’s position on these matters was not unique in the ‘sixties and ‘seventies. It was shared, for instance, by John Tyndall (47) and in a way it mirrors that taken by John Stuart Mill. In one sense it is a restatement of a philosophic dualism, but it is one born out of caution and theoretical agnosticism, not positive principle. Indeed, in ‘On the Physical Basis of Life’, Huxley looks forward to the point when,

as surely as every future grows out of the past and present, so will the physiology of the future gradually extend the realm of matter and law until it is co-extensive with knowledge, with feeling and with action. (48)

At other moments he was not so sanguine. As Huxley’s work developed through the remainder of the century there was a growing separation of consciousness from physiology on the one hand, and consciousness from environment on the other. At which point the epistemological consequences of this defensive dualism became more and more apparent. If consciousness is separate from world in analysis, can there be any guarantee, within the terms of the argument, that the contents of consciousness are accurate representations of that world? Huxley remained agnostic on the matter, but he continued to explore the logic of the arguments. The result was a degree of pessimism which was imminent in 1869:

as the ages lengthen, the borders of physicism [Huxley’s word for non-Comtist positive science] increase ... even Theology, in her purer forms, has ceased to be anthropomorphic, however she may talk. Anthropomorphism has taken stand in its last fortress - man himself. But science closely invests the walls; and Philosophers gird themselves for battle on the last and greatest of all speculative problems - does human nature possess any free, volitional, or


truly anthropomorphic element, or is it only the cunningest of Nature's clocks? Some, among whom I count myself, think that the battle will for ever remain a drawn one, and that, for all practical purposes, this result is as good as anthropomorphism winning the day. (49)

Such a position left Huxley exposed to attack from various quarters, and not only from conservative-minded traditionalists. The Unitarian Christian William Carpenter, for instance, though a major physiologist himself, was horrified at the perspectives of human automatism which Huxley here and elsewhere opened, and which Huxley aggressively described in a series of essays in the 'seventies. (50)

This, then, was the general context of argument in which the new, psychology was developed. It was seen as a reductionist, anti-humanistic materialism with awful spiritual as well as political implications. Opponents argued for the abolition of all categories of material conditioning, whether of a physiological or socio-historical kind, and privileged man over brute, mental faculty over biological function, and higher faculty over lower. Meanwhile, attempts to found a basis for a science of mind ran into physiological and philosophical complexities. Starting with Comte, we have noted the persistence of implicit or explicit philosophic dualisms despite, or even because of, the extension of physiological investigations. In Mill we have seen

(49) Huxley, 'Scientific Aspects of Positivism', 664.

(50) See Jacyna, 'The Physiology of Mind, the Unity of Nature, and the Moral Order', 124, and Roger Smith, 'The Human Significance of Biology: Carpenter, Darwin and the vera causa', in Nature and the Victorian Imagination, ed. Knoepfmacher and Tennyson, pp. 216-30. For Huxley's 'automatism' pieces see 'On the Hypothesis that Animals are Automata, and its History' (1874) and 'On Sensation and the Sensiferous Organs' (1879). Both are collected in Science and Culture and Other Essays. The former explores some of the epistemological ground indicated above. The language of the latter is very striking: minds are like factories, steam engines, watches, clocks, a musical box wound up; with as many tunes as there are sensations.' (p. 269)
the rehearsing of old associationist approaches. In Huxley we have seen a philosophic naturalism severe enough to verge on epistemological scepticism.

Between these various outposts of the argument, however, there was much ground to be explored. Subsequent chapters will examine work by three leading writers who developed the arguments in different directions, though in the same public context and under the same intellectual, cultural and political pressures. But before moving to a more detailed account of Bain, Spencer and Lewes it is necessary to specify and qualify this account a little, lest, in concentrating on the antagonistic features of the general argument and the more celebrated participants in it, a sense of the important middle-ground of psychological theory is lost. We have hitherto described a polarised situation. On the one hand we have a dynamic, innovatory group of thinkers concerned with the development of new theories. On the other hand we have an entrenched opposition, conservative and religious in character, and stubbornly reactionary in politics and intellectual culture. This picture gives a sense of the intellectual and ideological stakes for which the new psychologists were playing, and there is no doubt that they fought some obstinate opponents. But the real dynamics of the intellectual culture of mid-Victorian Britain were neither so opposed nor so entrenched, and there were many open-minded students of psychology who were informed of the newer ideas but as sceptical of their conclusions as they were reluctant to fall back on the older and - for them - discredited notions which continued to frustrate research. In their popularising and polemicist efforts, writers such as Bain, Spencer, Lewes were appealing to this middle ground, and it is necessary to understand something of it
before proceeding. The following section, therefore, will offer an account of one such respected 'moderate'.
II. Henry Holland: An Example of Centre Opinion

Sir Henry Holland (1788 - 1873) was a leading mid-century medical figure. He was one of Victoria and Albert's doctors and numbered six Prime Ministers among his patients. He was a Fellow of the Royal College of Physicians and his career stretched from the 'thirties to the 'sixties - thus covering an important transitional point in the history of the developments traced in this thesis. He wrote widely and authoritatively on medical and psychological topics from the late 'thirties onwards. According to L. S. Hearnshaw, he was one of a number of eminent medics interested in psychological theory who formed an informal grouping with W. B. Carpenter at their head. This group included, in addition to Carpenter and Holland: Sir Benjamin Brodie (1783-1862), court surgeon to George IV and William IV, Professor of Comparative Anatomy and Physiology at the Royal College of Surgeons, President of the Royal Society from 1858 to 1861, and author of Psychological Inquiries: in a Series of Essays intended to Illustrate the Mutual Relations of the Physical Organisation and the Mental Faculties (1854); Thomas Laycock (1812 - 1876), Professor of the Practice of Physic at Edinburgh from 1855 and author of Mind and Brain (1859); Robert Dunn (1799 - 1877), author of An Essay on Physiological Psychology (1858), and Daniel Noble (1810 - 1885), author of The Brain and its Physiology (1846), Elements of Psychological Medicine: An Introduction to the Practical Study of Insanity (1855), and The Human Mind in its Relation with the Brain (1858). Dunn and Noble were attached to hospitals in London and Manchester respectively, and the group formed a significant, and representative, body of medical opinion.(51)
Holland, like his colleagues, was interested in the newer medical theories and practices and was informed and serious about the new biological ideas, especially, in the manner of a much more successful Tertius Lydgate, the innovatory neurological and histological theory. Like Eliot's fictional doctor, and like W. B. Carpenter, Holland was Edinburgh-trained, and Edinburgh was perceived as the British centre for new, excellent medical practice and teaching. At the same time Holland was an opponent of too-hasty speculation on the physiological basis of psychology. He was a vigorous opponent of phrenology in the lively Edinburgh debates in the early part of the century, and this is indicative of the general range of his opinions, which were

(51) L. S. Hearnshaw, *A Short History of British Psychology 1840-1940* (London, Methuen, 1964), pp. 19-20. G. H. Lewes's review of Brodie's *Psychological Inquiries* is suggestive of the relations between the group and the new, younger psycho-physiologists. Of Brodie's book, Lewes says, it 'fall[s] in with the current opinions of the day' but was, in fact, rather behind current, advanced theory both in physiology and psychology. It was also contradictory, admitting both the physiological basis and the non-materiality of mind in much the same way as Holland. The style of the whole was agreeable, and the book pleasant, but there 'is no headache in these pages'. Despite his criticisms Lewes's review is not of the contemptuously dismissive kind he sometimes wrote in this period. See [G. H. Lewes], 'Brodie's Psychological Inquiries', Saturday Review, 1 (1856), 422-23. Lewes's perception that Brodie's work leaned both ways was shared by his much less radical friend William Smith. (See [William Henry Smith], 'Psychological Inquiries', Blackwood’s Edinburgh Magazine, 77 (1855), 402-20.) On the other hand it appealed to Samuel Smiles, an opponent of the new psychology. (See Samuel Smiles, *Self-Help: with illustrations of Conduct and Perseverance*, 2nd edn. (London, John Murray, 1866), p. 314). Smiles's views will be discussed more fully shortly. Either way there is little doubt that the book was widely-read and discussed. Smith's review begins: 'By this time everybody has read Sir Benjamin Brodie's interesting little book. Everybody at least should read it. There are no professional terms to embarrass, and no crabbed style to repel, the reader. It may lie with as much propriety on a lady's table as on a student's desk. It can weary no one, it will instruct most, it will suggest something to all.' The book was twice reprinted between 1854 and 1856.

based upon an opposition to mere theoretical speculation in medical matters and a faith in the free, autonomous activity of the higher human faculties, particularly the will.

Holland was especially interested in psycho-somatic phenomena, in the psychological action of alcohol and narcotics, and in the therapies which might become available from such investigation for a practising doctor. His belief in the reality and power of psychosomatic illness set him aside as a thoughtfully 'advanced' medical man for his period. In Chapters in Mental Physiology (1852), which includes both new and old essays dating back to the late thirties, he states in the 'Preface' that the book is an investigation into the 'reciprocal actions and relations of mental and bodily phenomena, as they make up the totality of life', (54) and in particular he is interested in what bearings mental action has upon 'morbid disease' either 'directly or indirectly - as cause or as effect'. He writes as a practising physician concerned only with the possible and the existing state of knowledge. He is not interested in theoretical speculation, but, in the book at large, he shows himself to be well-versed in some of the latest physiological and biological literature, both British and French, and makes reference to, for example, Carpenter, Hall, Laycock, Flourens and Bernard.

Physiology, therefore, is necessary, but it is not sufficient for investigating phenomena of mind. This is a repeated refrain in the book. In discussing the physiology of automatic action, for instance,


(54) Holland, Chapters in Mental Physiology, p. v.
in which the most spectacular 'hard' progress had been made in research, Holland is careful to say that 'it is still a knowledge of the instruments only that we have obtained'. (55) This way of putting it suggests there is some other force wielding these instruments. Likewise, in his general assessment of the state of this research in its bearings on the study of psychological questions, he makes the sensible and accurate point that 'in truth, both anatomy and physiology are still engaged in settling points of structure far below those of the ultimate organisation of the brain', (56) and he speaks of the 'undiscovered and impassible space that lies beyond it'. Therefore the 'highest attainment is that which can best define the boundary of research, and labour for truth and knowledge within it.' (57) This is responsible caution in a physician (and the language of un-crossable boundaries is frequent in the book), but it also suggests an intelligence which is perhaps overly so; one which is resistant to the conclusions which more daring thinkers like Lewes or Huxley or Spencer were drawing. In some respects, then, like J. S. Mill and, as we shall see, Bain, there is a backward-looking aspect to some of Holland's thought. For instance he claims that in the investigation of the higher phenomena of consciousness only introspection will serve methodologically: 'The faculty, or principle, described under this name, can alone furnish us with those elementary facts which lie at the bottom of all mental phenomena, under whatever name propounded.' (58)

(55) Holland, *Chapters in Mental Physiology*, p. 218.
(56) Holland, *Chapters in Mental Physiology*, p. 266.
(57) Holland, *Chapters in Mental Physiology*, p. 241.
(58) Holland, *Chapters in Mental Physiology*, p. 47.
Holland's work was well-known to Lewes and George Eliot, not least because he was also their doctor. Lewes refers to the Chapters in Problems of Life and Mind, and Eliot read the book too. It is mentioned in an informed - though passing - way in one of her notebooks for Middlemarch,(59) and we can assume it formed a part of her research for Lydgate, as well as her more general thinking. More widely Holland held views whose general tenor would have been compatible in some major respects with those of both Lewes and Eliot - especially perhaps Eliot, for she was not so rigorously tied to the close exploration of disputed and demandingly technical sets of ideas, and would not have been so troubled by Holland's conservatism in physiology.

It would be a large claim on slender evidence, that Holland's work exerted any considerable influence on George Eliot. But there are some striking connections between it and some features of Middlemarch. The metaphors which Holland uses to describe the operations of the mind - blending currents and merging streams, for instance, or the twining together of thread - are shared by her, but they were not uncommon in the science and literature of the period. Nevertheless there is a recognisable similarity of thinking both in the description of certain detailed features of the mental operations, and the formulation of some general problems concerning moral behaviour.

In his account of the mind Holland is interested in the intersections of different states of consciousness which were often, in the prevailing taxonomic method of the time, described as discrete

and separate. Holland has in mind such everyday phenomena as the blurring that can occur between dream and fully-attentive wakefulness. But he also has in view larger questions such as the difficult-to-define distinction between sanity and madness. (I will return to this shortly.) Similar ambiguous and complex states of mind are found widely and carefully described in George Eliot's fiction, and both she and Holland are interested, in a very fundamental way, in states of reverie when memory, desire and perception become twisted together, and perception is coloured by subjectivity. Holland states that:

past images and memories rise up unbidden to perplex both sensations and acts by mingling with them, without control or direction of the rational will. (60)

He gives as an example of this the way we perceive those known to us in a daguerrotype representation. In 'normal' perception we match a memory with the silhouette image, but this (partial) image can also summon up other associated mental traces and our apparently secure perception can become tangled. (61) Holland therefore is alert to the potential instability in mental life even in its most mundane and taken-for-granted operations, and this is of a piece with the general mood of the book. For instance, he is concerned with the treatment of the insane, and is conscious - partly through personal experience to which he touchingly alludes (62) - that mental trouble is not peculiar to a small and segregable section of the population: 'how slight the line is, if line there be, which separates the healthy actions of mind from those of a morbid nature'. (63) He takes sensitive account of the

(60) Holland, Chapters in Mental Physiology, p. 29.
(61) Holland, Chapters in Mental Physiology, p. 23.
(62) Holland, Chapters in Mental Physiology, p. 144.
problems of stress, depression, neurological dysfunction, illness and circumstances. More widely he is aware of the potential instability of all character, even in those who appear most firm, stable and purposive. (64)

The force of this argument is best understood in context, for it is made at a time of wide-ranging popular discourses on 'character' which exploited and celebrated the ideological potential of the idea. Samuel Smiles wrote the best-known of these - Character - in 1871. But books of popular instruction on character, or fictional versions of them (often featuring that robust achiever Robinson Crusoe), were widely distributed, often through church organisations like the Sunday Schools, and utilitarian-backed organisations like the Mechanics' Institutes. They formed a powerful body of ideological pre-conception in mid-century British culture. Holland's guarded remarks on the possible complex instability of character thus have a relevant social context. Popular accounts of character conflated product and agency: what could be seen as a result of the interaction between individual potential and environmental life-chances was, instead, offered as motive, role model and moral desideratum. Smiles's account in Self-Help (1859) emphasises this very clearly. The book concludes with chapters on 'Example - Models' (chapter 12) and 'Character - The True Gentleman' (chapter 13) in which it is proposed that:

Character is human nature in its best form. It is moral order embodied in the individual. Men of character are not only the conscience of society, but in every well-governed State they are its best motive power; for it is moral qualities which rule the world. Even in war, Napoleon said that the moral is to the physical as ten to one. The strength, the industry, the civilisation of nations - all depend upon individual character; and the very foundations

(63) Holland, Chapters in Mental Physiology, p. 126.

(64) Holland, Chapters in Mental Physiology, pp. 139-40.
of civil security seat upon it. Laws and institutions are but its outgrowth. In the just balance of nature, individuals, nations, and races will obtain just as much as they observe, and no more. And as effect finds its cause, so surely does quality of character among a people produce its befitting results. (65)

The perceived social and political context of theories of individual character are here very plain, and constitute another version of that political and ideological alarm which dogged psychology's footsteps in the mid-century. Smiles exhorts morally ('The crown and glory of life is Character.' (66)) while offering both reward and threat in political and material terms. It is therefore significant that 'character' was a key term in the business of assessing social reputation (as Smiles's association of it with the idea of the gentleman suggests), and, probably more importantly, the conduct of employer-employee relations through the 'character reference'.

Holland then, like his more declaredly radical contemporaries, was writing within an ideological climate which was in important ways hostile to some of his leading ideas. We should not, though, over-estimate his radicalism. He was a man of his time and there are limits to his psychiatric and psychological liberalism. He retains for instance the special category of 'moral insanity', a disease whose symptoms consist of behaviours which offend the consensual codes of moral and social behaviour and whose origin is to be found, he very typically says, largely in a depraved, vicious and perverted prior life. (67) In other words the cause is in terms given by the diagnosis. As Elaine Showalter clarifies, the diagnosis of 'moral insanity' was

(65) Smiles, Self-Help, p. 383.
(67) Holland, Chapters in Mental Physiology, pp. 137-38.
often used to control what was perceived as abnormal or disruptive behaviour, especially by women. (68) But by and large Holland puts a good case for regarding the mental life as restless and complicated, and not as so fixed and stable as some might wish. For Holland, one's vision of a daguerrotype is a complex matter.

Let us turn now to a related moment in George Eliot. In chapter 28 of *Middlemarch* Dorothea's sensations of 'moral imprisonment' at Lowick on her return from her honeymoon in Rome is insistently conveyed by images of disordered perception. This continues an idea begun in the famous passage in chapter 20 which describes Dorothea's response to Rome in which the city appears 'like a disease of the retina'. (69) In her sitting room at Lowick she suffers from semi-hallucination. The world outside becomes a reflection of the decoration of her room; it is shrunken, inert, ghostly and pale. 'Each remembered thing in the room was disenchanted, was deadened as an unlit transparency' and her eyes wander to a group of minatures on the wall, particularly a picture of Casaubon's aunt Julia, Will Ladislaw's grandmother. She finds it companionable for '[h]ere was a woman who had known some difficulty about marriage.' The passage goes on:

Nay, the colours deepened, the lips and chin seemed to get larger, the hair and eyes seemed to be sending out light, the face was masculine and beamed on her with full gaze


which tells her on whom it falls that she is too interesting for the slightest movement of her eyelid to pass unnoticed or uninterpreted. The vivid presentation came like a pleasant glow to Dorothea: she felt herself smiling, and turning from the miniature sat down and looked up as if she were again talking to a figure in front of her. (70)

The passage works by organising a series of contrasts to convey meaning. It contrasts light against dimness, warmth against pallor, pleasure against unhappiness, animation against ennui, and finally—and ironically—clear-sightedness against drabness. This last is ironic because it is only in hallucination that Dorothea perceives reality. Below her consciousness is hidden her desire for Will, and her subjective desires engulf perception and threaten, though do not engulf (and this is crucial), her sense of her moral duty and the life this sense of duty has offered her in the consequences of her choice of Casaubon for a husband. This is a central area of enquiry in the novel (it is reflected in the conflict between Lydgate and Rosamond), which details with superb acuity the intangible psychological tensions at work in the making of such choices where will, desire, perception, ambition and habit are blurred. And it is very typical of George Eliot's practice—and that of the intellectual circle in which she moved—that she should choose topical and relevant metaphors from the psychology and science of the day to convey these issues. The imagery of perception which dominates the account of Dorothea's dilemmas is closely related to that deployed by Sir Henry Holland to discuss the same kinds of notions in his psychological inquiries.

Similarly, Lydgate's case is conveyed by an equally apt scientific metaphor as he trembles on the edge of his proposal to Rosamond in chapter 31. Rosamond spills two tears.

(70) Middlemarch, p. 308.
That moment of naturalness was the crystalizing feathertouch; it shook flirtation into love. Remember that the ambitious man who was looking at those Forget-me-nots under the water was very warm-hearted and rash. He did not know where the chain went; an idea had thrilled through the recesses within him which had a miraculous effect in raising the power of passionate love lying buried there in no sealed sepulchre, but under the lightest, easily pierced mould. His words were quite abrupt and awkward; but the tone made them sound like an ardent, appealing avowal. (71)

Once more, and characteristically, the meanings and effects of this are gained by a virtuoso organisation of contrasting metaphor and image which carries a foreboding irony, but the passage is even more complexly organised than that from chapter 28. The implied reference to Christ, or the raising of Lazarus, brings death close to this scene of love — in Book 4 entitled 'Waiting for Death' — but the offered, though unstated, prospect of redemption is undercut by what we know the fate of these lovers will be, and by the stressed materiality of the language and reference: the heavy 'sealed sepulchre' and the top dressing of leaf mould, the importance of which for the regeneration and fertility of the soil, along with the action of worms, was just becoming understood.

But the ironies reach further. Lydgate is a man ever peering into a microscope at micro-phenomena including those of pond life and the actions of water. In the opening two sentences we have two related images: first the formation of crystal in a supersaturated saline solution at the touch of a needle (Lewes also uses the image in Problems of Life and Mind) — a phenomenon only usually observed under the microscope; and then, secondly, there is a kind of sentimental parody of this — the blue of Rosamond's eyes are the botanical specimens (Forget-me-nots) examined under the lens of her tears. This

(71) Middlemarch, p. 335.
second image is sentimental in mood and language, and reflects Lydgate's ornamental (and sexist) expectations of what is fitting in a woman and a wife. This in turn is undercut by the gothic language of graves and decomposition which follows, and the scientific register associated with the microscope. The scientific language carries a further irony. It is as a comprehending scientist that Lydgate wishes to think of himself, but here he 'did not know where the chain went' and eventually his ambition and prospects are broken. He cannot see what he should see, and when, fifty pages later, Farebrother visits him he finds Lydgate's 'tableful of apparatus and specimens in confusion'.

Lydgate is unable to resolve with happiness the quarrel between will and desire; Dorothea only manages to do so by the fortunate death of Casaubon. This benign event resolves a dilemma which, under the prevailing moral and literary standards of the period, could not have been settled otherwise. It is inconceivable that Eliot might have portrayed a scandalous liaison outside marriage for Dorothea and Will such as the one she and Lewes enjoyed. But her understanding of the problem and the situation, and her careful and telling deployment of images and ideas used in the scientific, psychological and medical worlds to render moments of crisis in these dilemmas, illustrates something of the significance of the kinds of arguments about the will and the exercise of the higher mental faculties which psychologists in the mid-century were making. In formulating theories about psychological categories such as the will these writers were coming very close to questions of conduct and ethics, and many of them were alert to the fact that a too-rigorous investigation of such matters

(72) Middlemarch, p. 383.
under a medical or physiological light might well compromise values
and approved behaviours in a far-reaching way.

Henry Holland, for instance, realised the implications of his
belief in the close relationship between mind and body, subjectivity
and perception, and is quick to close the doors when it looks as
though a too-frisky ideological horse may bolt. More than once he
calls-off discussion by raising the spectre of dangerous metaphysics.
The daguerrotype analogy is scared away with the comment that the
subject is 'very obscure, and blends itself with the most abstruse
points of metaphysical inquiry'.(73) Likewise, later, he says that
'the influence of the mental passions and emotions on the bodily
economy' is a question far too wide to admit a helpful treatment and
moves on.(74) In other words the discussion is truncated at a point at
which it might throw categories into question which elsewhere form a
cornerstone of his beliefs. This tactic is rather revealingly typical
of the intellectual procedure of the book as a whole. Alongside the
fair-minded, informed, scientific caution, and the helpful scepticism
about a too-exorbitant theorisation of the newer physiological
findings, there runs a deep conventional understanding of the special
place of the higher human faculties in man's destiny in relation both
to his own progress and to God.

Holland's conception of the will is of a free-acting autonomous
agency which is independent of neurology and has no material
basis.(75) He is concerned to separate the will from other mental

(73) Holland, Chapters in Mental Physiology, p. 23.

(74) Holland, Chapters in Mental Physiology, p. 45.

(75) Roger Smith, 'Physiological Psychology and the Philosophy of
Nature in Mid-Nineteenth-Century Britain' (Diss., Cambridge,
entities which might be related to it such as instinct or habit. Habit is morally fickle, for habits are as liable to be bad as good. Morality cannot be generated from habit, and thus Holland opposes the cruder kinds of utilitarian thinking on such topics as education. This, too, is a position he shared with George Eliot and Lewes. Of habits he says:

some minister directly to the power and integrity of intellect, or to the moral discipline of the mind. Others are faulty and injurious associations, which by repetition become almost compulsory on their nature, and usurp the place and prerogative of reason. (76)

Of education Holland concludes that forcing children too severely merely wrecks 'the condition and culture of every faculty of body and mind.' Children should be allowed to develop in a way which is congenial to their temperament and abilities and not to a pattern. (77) This seems to have been George Eliot's belief in the late 'fifties also, to judge from the account of Tom and Maggie Tulliver's education in The Mill on the Floss.

It is noticeable that both these accounts, of habit and of education, juxtapose mental acquisition to mental endowment, and that priority is given to the latter over the former. The passage on habit suggests that habit needs to be controlled by the superior mental powers of intellect and reason which should have a natural prerogative. Likewise it is these abilities which educational practice should develop. This is, of course, a perfectly sane and sensible position. Theorists of environmentally-derived mental abilities - such as the stricter utilitarians - have severe and

(76) Holland, Chapters in Mental Physiology, p. 223. Note again the political analogy implied in the notion of prerogative.

(77) Holland, Chapters in Mental Physiology, p. 157-58.
compromising difficulties when they come to explain the active exercise and functioning of these abilities. There is a problem, however, on the other side of the argument, when the status and origin of these abilities comes to be theorised in accounts, like Holland's, which favour the nature rather than the nurture pole of the argument. This is because Holland is keen to exempt these higher abilities from the conditioning of their material means; that is, the state of the nervous organism in contact with the environment. At best Holland is prepared to grant that faculties like the intellect and the will, and the power of attention (which renders possible the first two), have the status of instincts. But these instincts, Holland suggests, are 'derived from higher power', that is God, and he traces in support similar arguments in Bacon, Newton, Descartes and Locke. (78) In other words, they have no formally-specified relationship to the physiological circumstances of the individual, and can in no real sense be thought of as instincts in any biological sense.

However Holland is not really satisfied with such a view which is at odds with the scientific cast of his profession and general outlook, and the tone of this discussion is subdued and rather half-hearted. For this aspect of his work finds itself in a contradiction whose consequences can be only postponed - by not allowing the two sides into detailed dialogue - and not resolved. In one manner Holland can speak as a pious natural theologian of his period, sketching-out a blandly benign view of the divine harmony of nature. Thus he wishes to insist that moral and physical causes are identical because both spring from God. The evidence of God's work in nature, indeed, is the exercise of those higher faculties which

(78) Holland, Chapters in Mental Physiology, p. 207-09.
perceive His existence. The argument is charmingly circular:

In pursuing science along this path (the happiest exercise of man's divination), we obtain certainty of an intelligent cause from a source hardly separable from the consciousness of our own intellectual existence. And in thus making the highest efforts of the human faculty the interpreters of the principle of divine causation, we bring our conception of moral cause into closest relation with the physical, and acquire not only elevation, but distinctness and stability in all our views on the subject. (79)

Holland's argument is structured by such separations. In the absence of proof positive and absolute of the material foundations of the higher mental activities, consideration of the material determinants of mind should be kept clear of the question, therefore allowing the higher faculties free reign to be considered as independent entities. There is thus the characteristic language of gulfs, lines or boundaries which separate the two spheres of research on which we have already remarked. The brain is a 'double organ' (the title of chapter 8), an assembly of functions which nevertheless are not, and cannot be, equal to the capacity of mind as a whole. Consciousness, will, reason, intellect, all the higher faculties are more than this. A line or boundary 'separates material organisation and actions from the proper attributes of mind - the instruments of voluntary power from the will itself.' He continues a little later:

Our existence may be said to lie on each side this boundary; yet with a chasm between, so profound and obscure, that, though perpetually traversing it in all the functions of life, we have no eye to penetrate its depths. (80)

'Materialistic' explanation cannot be considered, because priority must be given to the 'intellectual existence, of which consciousness and personal identity are the simplest expressions, but which spreads

(79) Holland, *Chapters in Mental Physiology*, p. 173n.
(80) Holland, *Chapters in Mental Physiology*, p. 171.
itself out into the endless varieties of thought and feeling'. (81)

Nevertheless, Holland is quick to say, those who argue 'for an immaterial principle' do not do their case much justice because it is a hopeless task to simply deny 'the close and constant action of matter upon mind' which is everywhere evident. (82) Instead Holland wishes to reconceive the problem. The will and the other higher faculties may have their origin in matter (though this is subject always to God's ordinance). But they quickly liberate themselves from this to become self-acting entities. Holland thus has the best of both explanatory worlds and can picture drastically alternative scenarios for describing the operations of nature. On the one hand, as we have said, he posits a bland harmony in the arrangement of things to which praises are from time to time sung in the book. But, on the other hand, these higher faculties are also pictured in struggle and difficulty: people go mad, their perceptions and beliefs are uncertain, the organism on which they rely is subject to disease and dysfunction. There is 'an unceasing conflict between the will and the material conditions which surround it'. (83) The juxtaposition of these two scenarios is sometimes quite extraordinary:

The struggle, for such it may often be termed, between voluntary and involuntary acts - between the intellectual and the automatic functions - is, in truth, a dominant fact in the mental constitution of man; one upon which all the phenomena, both of mind and body, closely depend at every instant of life. In using the term struggle however let it be added that there is no provision of our nature which better illustrates the wisdom and prescience to which we owe our being. Man might have been created with larger powers than he has - but under the limitation manifestly designed by his Creator, we must ever admire that wonderful adaptation, by which faculties, different in nature, and

(81) Holland, *Chapters in Mental Physiology*, p. 172.

(82) Holland, *Chapters in Mental Physiology*, p. 173.

(83) Holland, *Chapters in Mental Physiology*, p. 65.
often opposed in action, do yet concur and harmonise in
general results; giving order and stability to all the
complex functions of life, and admitting of increase of
power to those of the highest kind by their due and
sufficient exercise. We might have been constituted, so as
to regulate by will those actions which are now automatic or
instinctive. Were these functions suddenly committed to us,
disorder and death would speedily ensue. (84)

The contradiction in this passage between the language of struggle and
the language of harmony is representative. Holland mixes the
propositions of the older natural theology with a newer vocabulary
which toys with evolutionary language, hence the hypothesis of the
evolution from willed to automatic mental functions, and the notion of
intra-organic struggle. (We will discuss the former, quasi-Lamarckian
idea of the inheritance of habitualised functions - it is not the only
reference to it in the Chapters (85) - in much more detail in chapter
three.) The tenor of the passage is to posit a teeming unwilled life
going on beneath our consciousness which, once more, unites Holland
with the adventurous scientific minds of his period, and, for that
matter, once again, with George Eliot and Middlemarch.

I have briefly called attention to the famous chapter 20 in Rome
and pointed to the way Dorothea’s mental confusion is related to
bodily processes and even to organic dysfunction ('a disease of the
retina'). There is another famous image in these marvellous
paragraphs:

That element of tragedy which lies in the very fact of
frequency, has not yet wrought itself into the coarse
emotion of mankind; and perhaps our frames could hardly bear
much of it. If we had a keen vision and feeling of all
ordinary human life, it would be like hearing the grass grow
and the squirrel’s heart beat, and we should die of that
roar which lies on the other side of silence. As it is the

(84) Holland, Chapters in Mental Physiology, p. 27.

(85) See also p. 224, where the apparent tendency for habit to be
transmitted in domestic animals is noted.
quickest of us walk about well wadded with stupidity. (86)

There are several propositions at work here which are worth serious consideration in the light of the passage from Henry Holland. There is the same quasi-Lamarckian idea that emotion can with frequency work its way into the emotional habits of the race (though George Eliot’s attitude to this seems equivocal); and there is the idea of an abounding life going on beneath our ken and beyond our capacity to respond. Our conscious life is here understood to be limited by the very structure of consciousness itself and its customary modes of comprehension (‘stupidity’). This is not an absolute limitation in an extremist phenomenological sense (for one can break from isolated, habitual subjectivity in moments when emotion claims our comprehending sympathy). Nor is it a Freudian proposition which would imply that our being is structured by the shape of the repressions which form our unconscious being. It is, rather, a powerfully historicised view of consciousness of a kind profoundly unpopular in the late twentieth-century obsessed as we are with Freudian puzzles and irrationalist modes of understanding our culture and other subjectivities.

This argument of George Eliot’s - one sustained throughout *Middlemarch* - is deeply impressive, and it is one towards which the most exciting of the mid-to-late Victorian psychologies were reaching. (It is the task to which Lewes dedicated himself in *Problems of Life and Mind*.) The argument is this. Our subjectivities are historically, culturally and temperamentally limited. We are limited by our biological beings, and by the era and location of our birth. Our culture feeds us with obstinacies, blindesses, and prejudices of many kinds. But by emotions which excite us beyond ourselves

(86) *Middlemarch*, p. 225.
('sympathy')(87), and by acts of historical comparison and comprehension, the limitations of our own understandings can be overcome sufficiently. And because understanding can become sufficient, we can begin to understand beyond ourselves. Cultural, national, social, sexual and historical differences (all of which feature in Middlemarch) do not necessarily mean relativism, or cognitive scepticism. They mean that at the heart of our being, in the organism, and at the heart of our morals, politics and cognitions, we can comprehend, make effort and thus enable ‘the growing good of the world’. The whole effort of Middlemarch, and of George Eliot’s other work, and of the most closely-related psychology of the period, was towards this kind of comprehension. Middlemarch (like The Mill on the Floss or Adam Bede or Scenes of Clerical Life) says: we need to understand those people and that culture of 40 years ago, in a remote provincial town, and thus come to understand ourselves, for that past is part of our identity as well as part of our difference as we are here, in 1872 - or in 1990.

Both George Eliot and Henry Holland, for all their emphasis on the will, are profoundly opposed to the simple-minded ideological appropriations of the idea of the will. In Self-Help Smiles writes that:

Whatever theoretical conclusions logicians may have formed as to the freedom of the will, each individual feels that practically he is free to choose between good and evil - that he is not as a mere straw thrown upon the water to mark

(87) This idea is present in several works by psychologists in Eliot’s circle - Lewes most obviously, but see also Alexander Bain: ‘Distinct from the gift of reading accurately what is passing in the mind of a fellow-being, is the susceptibility to take on the precise excitement that actuates a second person, and follow out, and cherish, that strain of excitement to the suppression of our own separate feelings at the time. This last is the true meaning of sympathy.” The Emotions and the Will, (London, John W. Parker & Son, 1859), p. 109.
the direction of the current, but that he has within him the power of a good swimmer, and is capable of striking out for himself .... There is no absolute constraint upon our volitions, and we feel and know that we are not bound, as by a spell, with reference to our actions. It would paralyze all desire of excellence were we to think otherwise. The entire business and conduct of life, with its domestic rules, its social arrangements, and its public institutions, proceed upon the practical conviction that the will is free. Without this where would be responsibility? - and what the advantage of teaching, advising, preaching, reproof, and correction? What were the use of laws, were it not the universal belief ... that men obey them or not, very much as they individually determine?(88)

Smiles's exhortation is designed to encourage under-confident entrepreneurs. But as a mode of comprehending a culture, and the various participants in that culture, it is, in its individualism and refusal to think of variation in time, circumstance and temperament, wholly inadequate. But it draws upon a powerful mode in the psychological discourse of the period.

We have examined the work of Sir Henry Holland as a representative of the middle-ground of informed psychological opinion in the mid-century. Alert to the newer findings in psycho-physiology and to the arguments launched from them, Holland nevertheless does not wish to abandon the older modes and categories of analysis handed down to him. In the absence of firm proof to the contrary, he maintains faith in the old categories of special human faculties whose activities cannot be otherwise than autonomous - even though that may contradict other elements of his beliefs. Perhaps in this situation we can detect another legacy of his Scottish education: both an advanced medical man's inductivist scepticism, and the heritage of Scottish 'common-sense' faculty psychology. Whatever the reasons, Holland's work tells us something of the situation that confronted the

new generation of psychologists whose work began to appear in the 1850s. Holland's is a way of thinking that resists, ultimately, all the forms of exclusive psychological explanation available at the beginning of the decade. At various points he has harsh words for vitalism, for materialism, for the arguments made by analogy and the arguments made from anatomy (phrenology). He applies only a limited and constrained associationist terminology and method, and, though informed of its findings, wishes to be circumspect in his applications of physiology. His refusal of commitment, though, leaves him with a typology of the mental functions which has some unhelpful ideological neighbours, and a bland assurance of the triumph of the will, of divine causation and purpose, and of the unity of the mental functions in the sensorium commune (a concept still used by him. [89]) Given the impossibility of closing the gap between mind and body because of the state of our knowledge, he concludes, it is perhaps best not to try. Such conclusions again courted dualism and were unappetising for the writers whose work we will now examine more thoroughly.

[89] Holland, Chapters in Mental Physiology, p. 264 for example.
CHAPTER TWO

ALEXANDER BAIN AND THE NEW PSYCHOLOGY OF THE HIGHER FACULTIES

I. The Reception of the Work, especially in its social and cultural context

By consensus the work of Alexander Bain is judged to come at an important juncture in the history of British psychology. Both modern scholars and Bain's immediate reviewers agree in this. His contemporaries saw him as at once both within the older traditions, and at the end and culmination of them. Modern writers place him similarly. Hearnshaw begins his History of British Psychology with Bain, but is careful, in his opening pages, to point out that he resumes many of the concerns of the previous 200 years. Nevertheless 'first, the scope of the psychology has been much more clearly defined; secondly, the physiological foundations of psychology are beginning to be accurately laid; and thirdly, the requirements of scientific method are better understood.' (1) In this assessment the qualifications and hesitations are perhaps as significant as the substance: 'much more clearly', 'beginning to be ...', 'better understood'. Hearnshaw's views are echoed elsewhere. G. S. Brett places Bain in the associationist camp, but regards him as initiating consideration of a psychology in which body and mind are regarded as a whole organism with appropriate biological functions and the capacity for self-generating activity. (2) Similarly, Edwin G. Boring places him

(1) Hearnshaw, History of British Psychology, p. 2.

at the end of the tradition of empirical associationism, but thinks, too, that in some ways he looks forward to the experimentalism emerging more prominently in the late nineteenth and early twentieth centuries.(3)

The placing of Bain at both the beginning of one tradition, and the end of another, continues through the scholarly literature. For W. S. O'Neil, Bain was the last of the associationists.(4) David Murray echoes O'Neil's assessment, and also notes that Bain inaugurated the modern psychological textbook.(5) For Thomas Leahey Bain was the first to turn associationism into a theory of human action, and the first to organise his books in a recognisably modern way by beginning with the simplest of physical and psycho-physical phenomena.(6) More lengthy and considered accounts do not substantially alter these synoptic assessments. D. B. Klein, again, sees Bain as the highest development of the old tradition, and a promoter of a recognisably modern psychology, though he was not an experimentalist or a psycho-physiologist whose work has any lasting value.(7) Klein's account is a thoughtful coverage of the physiological elements in Bain's work, but he reads Bain too much in the light of mainstream twentieth-century psychology's experimentalist


preoccupations. Nonetheless, Robert Young's more carefully historicised chapter on Bain in *Mind, Brain and Adaptation* concurs in its judgement. Young compares Bain with Spencer (a common ploy in the 1850s and 60s also) and concludes that, though of a similar age, they came from different intellectual and scientific generations. Whilst Bain worked patiently and innovatively within the associationist tradition, Spencer's outlook was that of an evolutionary biologist through-and-through; and whereas Spencer began from this perspective, the physiological elements, and those of a putative evolutionary biology, which were later added to Bain's 'system' (to use the characteristic, philosophically-derived word of the period), were added to a structure of empirical associationism already immovably in place. (8)

This pattern of response and judgement was also a leading feature of the reception Bain's work received when it first appeared in the 1850s, and, whether enthusiastic or hostile, Bain's reviewers were agreed that his work was both innovative and representative. There was of course the customary dismissive hostility on grounds one would anticipate from the prevailing hostility in the intellectual and cultural climate described in the previous chapter. Bain's psychology was shunned on religious and political grounds alike. Though the case could be put with care and intelligence, frequently it was merely polemical. The Unitarian William MacCall (1812 - 1888) is representative of this manner. His pieces on Bain - 'Morbid Psychology' and 'On The Study of Character' (both dating from the early sixties) - deploy a characteristic register of language and idea widely used by those embracing a spiritualist/idealist position at the

(8) Young, *Mind, Brain and Adaptation*, pp. 150 and 182.
time. (I introduce these terms as used by MacCall; that is, indiscriminately.) Bain's work lacks 'charm' in the face of the 'mystery of the universe'. Instead of seeking 'self-oblivion in nature', or the 'grand', 'great' or 'infinite' experiences of religion, it is morbidly introspective in its 'hideous self-anatomy', or cockily assertive in its 'Liliputian' antics. The 'microscopic intelligencies' and 'barren gaze of logicians and psychologists' are 'boundlessly breaking what is already too much of a fragment already'.

The notion of proper boundaries, which order nature and, more importantly, the proper parameters of human enquiry, is of course a key one in the psychological debates of the period as we have seen. In MacCall's essays this idea is given an interestingly social twist, for his metaphors have an distinctively snobbish edge to them. Bain's psychology is like a tailor watching a strutting bantam cock, or an old woman unpacking rubbish from a cupboard. Similarly, Lewes's and Harriet Martineau's expositions of Comte are 'potations of Cockney caudle and Ambleside small-beer'.

We will come back to the class context of these remarks shortly. In the meantime MacCall's rhetoric is, more widely, indicative of an interesting component of English culture generally in this period; that is the distinctively literary nature of the objections to the new

---

(9) William MacCall, The Newest Materialism: Sundry Papers on the Books of Mill, Comte, Bain, Spencer, Atkinson and Feuerbach (London, Farrah, 1873). This volume reprints MacCall's essays and reviews over a decade or so. Quotations are taken from pp. 78-87. The grouping of writers discussed is interesting, particularly the inclusion of Feuerbach - the piece on whom is a review of George Eliot's translation of 1854 - among the scientists and radicals. He is held to unpleasantly 'materialise' religion. MacCall takes the opportunity of his review to attack women intellectuals whose 'disgusting excesses' are turning the 'homes of our countrywomen into casinos of blasphemy' (p. 120).

(10) MacCall, Newest Materialism, p. 70.
psychology, for the attitudes behind MacCall's representative polemic
are strongly reminiscent of certain features of the heritage of
English literary Romanticism as interpreted by the Victorians. I have
particularly in mind the emphasis placed on the hostility of certain
leading English poets - especially Wordsworth - to science and
strenuous 'intellectual' enquiry generally. The attitudes represented
by Wordsworth's famous lines on the 'meddling intellect' were widely
shared, and the lines themselves were often quoted. The abuse of the
intellect, Wordsworth wrote,

Misshapes the beauteous forms of things;
    - We murder to dissect.

Enough of science and of art;
Close up these barren leaves;
Come forth, and bring with you a heart
That watches and receives.(11)

Wordsworth's comments are of course contradictory (they too are
contained in 'leaves', and leaves cannot be fertile). Nevertheless
such attitudes exerted a powerful pressure which became progressively
more organised and vocal, particularly in the educational world.(12)
Literary intellectuals, of course, frequently pictured science as
directly antagonistic to humane and spiritual values - and not just in
the mournful way of Tennyson, perhaps the best-known of this kind of
literary reaction to science. Other responses were more militant,
such as that of the Tory High Anglican W. H. Mallock. In Mallock's

(11) 'The Tables Turned' (1798) in Wordsworth and Coleridge: Lyrical
(12) For an overview, see Chris Baldick, The Social Mission of
note of these developments, incidentally, helps place the
distinctiveness of George Eliot's literary achievement; for in a
literary climate where such attitudes were widespread her
interest in, and use of, science is both brave and
significant.
The *New Republic* (1877) the ludicrous, scientific Mr Saunders (probably a portrait of W. K. Clifford) proclaims the death of both religion and 'that most treacherous handmaiden of priestcraft, poetry,'

which, professing to heighten the lights of life, did, in reality, only deepen its shadows, will delude him no longer - she will be gone - gone for ever. Science the liberator of humanity, will have cast its light upon her; and the lying vision will vanish. But why do I talk of poetry? Is not that, and every other evil - reverence, faith, mysticism, humility, and all the other unclean company - comprised in this one word, Religion? (13)

Literature and religion are indissolubly associated in the minds of both Mr Saunders and his satirist. Matthew Arnold, of course, became the leading voice in the championship of an anti-scientific, anti-technological literary culture, but Arnold, despite the mood of much of his poetry, was not a solitary voice, and the reception of the psychology of Alexander Bain and others in the 1850s and 60s is representative of attitudes which went very deep.

As a matter of rhetorical habit, opponents deployed a belittling imagery and turn of phrase. We have taken note of MacCall on Lilliputian antics and rummaging in cupboards, but this kind of polemic was very common. The Catholic literary critic and Shakespeare scholar Richard Simpson pictured the new psychology as attempting to 'weigh worth by avoirdupois pounds, to measure humanity by the imperial quart, and to reduce all virtue to statistical tabulation and numerical values. It is, after all, only a genteel way of denying the existence of heaven and any future life.' (14) J. C. Shairp, a future

---


Oxford Professor of Poetry, whose work we shall examine more closely shortly, scornfully echoed Wordsworth’s famous remarks from ‘A Poet’s Epitaph’ which describe the natural philosopher as

... a fingering slave
One that would peep and botanize
Upon his mother’s grave(15)

For Shairp, the psychologist’s error is to attempt to ‘botanize’ the human personality.(16) Similarly, a Westminster reviewer of James Garth Wilkinson’s The Human Body and its Connexion with Man (1852), while recognising the book’s eccentricity - it mixes Swedenborgian mysticism and a theologised physiology quirkyly derived from Schelling’s Naturphilosoplie, with astrology among other things - nevertheless paid tribute to a work that measures the inadequacy of ‘chemical formulae’ against the ‘empire of the soul’. Despite its absurdities, the

deadly fetters of chemical formulae are here shaken off with scornful indignation, and we confess to some rejoicing that the aggressive powers of the ‘natural sciences’ should meet a repulse, and that the empire of the soul should be so violently contended for.(17)

Finally, James Martineau, the Unitarian divine, whose work we will examine more closely later, found a startling and telling image which


(16) [J. C. Shairp], ‘Moral Theories and Christian Ethics’, North British Review, 8ns (1867), 10.

(17) Anon., ‘Notice of The Human Body and its Connexion with Man by James Garth Wilkinson (London, Chapman and Hall, 1852)’, Westminster Review, 1 ns (1852), 275-79. Not only is the review indicative of the hostile attitudes to some aspects of scientific enquiry, but Wilkinson’s book is also testimony to the wide-spread interest in these kinds of questions in the mid-century. This thesis for the most part concentrates on the most distinguished of the psychologists of the day, but I suspect there is a large undergrowth of such books as Wilkinson’s which could tell an interesting history of their own.
relates psychology to the reverent appreciation of art, and the recognition of the significance of religion. The reduction of human experience to the psychologist’s law-making, he says, is like painting a Madonna with the skin off. Bain’s psychological method destroys the texture and significance of human experience, and Martineau echoes Wordsworth once more: Bain’s analysis of our ideas is ‘a cruel operation, - a cold-blooded dissecting of them to death.’(19)

The attitudes found here were brought to bear on Bain’s work in J. C. Shairp’s essay-review. Shairp (1819 – 1885) was then - 1867 - Professor of Latin at St Andrews (he became Oxford Professor of Poetry in 1877). He reviewed Bain with Arnold’s Essays in Criticism (1865), and works by two other writers: James Martineau’s Essays of 1866, and two works by J. S. Mill. The review of this apparently oddly-assorted group appeared in the conservative and traditionally-minded (though officially Whig of the old school) Scottish Free Church North British Review, (20) which we have already encountered in the previous chapter as markedly hostile to the new psychology. The Bain book under review was - rather belatedly - the first edition of The Emotions and the Will of 1859, and this was not the only book reviewed so late. The two books by Mill under scrutiny were On Liberty (also from 1859), and Utilitarianism, which had been first published, in parts, in Fraser’s Magazine in 1861 and appeared between single covers two years later. The review thus interestingly groups some very disparate texts, and,

(18) [James Martineau], 'Cerebral Psychology: Bain', National Review, 10 (1860), 506.
(19) Martineau, 'Cerebral Psychology', 511.
because of the dysymmetry of the dates of publication, we can assume that he chose to group them so rather than obeying the schedules or instructions of publishers or editors. The decision to link Bain and Mill was definitely no accident. Mill had forcefully championed Bain's psychology in a long article in the prestigious Edinburgh Review in 1859. The two were associated in many minds, and were considered to be on the radical liberal side politically. (I will have more to say on this topic, and on Mill's important essay, as we go on.)

The political context of the new psychology was more wide-ranging than any individual intellectual dispute would allow, as we have demonstrated in the previous chapter, and several pressing public issues gave shape to the atmosphere in which Shairp's review would have been read. The debate over the Second Reform Bill is perhaps the most obvious of these, but equally important are the 'culture and anarchy' arguments which Arnold launched, and other matters of public concern including the 'Governor Eyre' controversy of 1864-66 which had sharply divided British intellectual opinion. (Eyre, as Governor of Jamaica, had suppressed an uprising with extraordinary brutality.) On the one side, against Eyre, were grouped progressive and liberal intellectuals, among whom were many of the leading scientific psychologists and evolutionists of the day including Darwin, Huxley, Lewes, Spencer, Bain and Lyell. These leagued themselves with prominent radicals, dissenters and positivists like Mill and the Leweses' friend Frederic Harrison. Mill (who was still an M.P.), with Harrison and others, took a leading part in the 'Jamaica Committee' formed to lobby for the prosecution of Eyre for murder, and the controversy ranged widely in the press. Lewes, for instance, as
editor of The Fortnightly Review pitched in, and placed the new journal behind the anti-Eyre lobby in its first issue in 1865. Thus, in the mind of the public at large, and not just among intellectuals, many of the leading supporters of the new psychology were firmly identified with the liberal side of a celebrated political cause. (At the height of the agitation Mill was receiving death threats about once a week.)

On the other side, in defence of Eyre, were, interestingly, grouped a number of prominent literary intellectuals including Kingsley, Carlyle, Ruskin, Tennyson and (surprisingly perhaps) Dickens. Not all literary intellectuals of course ranged themselves on the pro-Eyre side: George Eliot didn’t for instance, and nor did Trollope. The Eyre incident, indeed, forms a significant context for Eliot’s Daniel Deronda, which is set in the mid-sixties. As Sally Shuttleworth comments, Grandcourt’s brutal attitudes to the Jamaican negro - ‘a beastly sort of baptist Caliban’ - connects the attitudes of a complacently-authoritarian British ruling class with the exercise of colonial power and white supremicism in racial theory. In terms of the quarrels over science, negroes were associated with monkeys - or sub-humans like Caliban - and therefore the Eyre arguments touched scientific controversy too in the context of the evolutionary debates. This connection was not lost on, for

---


instance, Herbert Spencer whose anti-Eyre views were formed from an amalgam of liberal politics, life-long opposition to imperialism, and a pro-science outlook. (23) The Eyre incident, then, was another instance of the parting of intellectual opinion between, very broadly, the 'literary' wing of British intellectual opinion, and (just as broadly) the 'scientific' wing. As we have seen, the split between these two bodies of opinion loomed very large in the public mind in the 1860s, and incidents such as the Eyre controversy gave it a recognisably political edge, and readers of Shairp's essay in The North British Review of 1867 would have had this context in mind.

Shairp's review begins with an attack tout court on physical science which is contrasted unfavourably with the endeavours of modern literature. Physical science has 'drained off' ethical thought and threatens to bankrupt man's spiritual being. Modern materialist philosophers are pre-occupied by 'a cut-and-dried conventional psychology' which is thin and repetitious and fails to uplift or absorb like more conventional metaphysical enquiry. By contrast modern literature is pre-occupied with uplifting spiritual topics, and because of this the contemporary literary and religious 'giants' (his word) who emphasise their spiritual struggles, are in a position to act as better guides. Shairp cites Wordsworth, Coleridge, Carlyle, Newman, and the eclectic Broad-Church divine and literary critic (especially of Tennyson) Frederick Robertson as evidence for his case. (24)


(24) Shairp, 'Moral Theories', 1-3.
For Shairp both Mill and Bain are representative of the shrivelled morality and spirituality of utilitarianism which lies at the heart of contemporary, science-led moral enquiry. Utilitarian theory has a reduced conception of human possibility. It posits self-interest as the sole motive for self-government, and ignores the equally-human instincts for generous or philanthropic action. Likewise utilitarian thinkers posit punishment as the only source of conscience. The activities of the human will are thus reduced, even negated, in this account, and man is rendered incapable of self-generating moral activity. Shairp attacks Mill particularly. Mill's language is without style (thus speaks the future Professor of Poetry); it is poor and muddled in expression and thought alike, and full of special pleading. Special cases are exaggerated into general cases, and the run and texture of general human experience is ignored. In philosophical terms Shairp offers himself as a follower of Plato (and other a priori thinkers like Kant or Bishop Butler) who are the most 'dynamic' of philosophers in contrast to the inert passivity of utilitarian conceptions. The Platonic doctrine of the 'Essential Form or Idea of the Good' gives men the glimpse of something better (the virtue of love, for instance) and thus provides them with a vital moral and spiritual centre. Shairp attaches this meta-ethical idea to other elements. He posits an 'irradicable craving for a Power behind all phenomena ... a craving which no form of Comtian philosophy will ever exorcise'.

(27) Shairp, 'Moral Theories', 29. The reference to 'Comtian [sic] philosophy' is gratuitous; both because it is not argued through in the essay, and because Comtean philosophy attempted no such thing.
power finds its expression in several forms: in the 'dynamic or motive power in moral life';(28) in the ruling, compelling belief of a special or vital power (the Creator himself) operating behind and through nature; and in the special imaginative apprehension of this to be found in literature of the highest quality. The psychological mechanism by which these moral, ontological and spiritual certainties are gained cannot be explained. They are grasped by instinct, by sudden stunning perception, and can only be accepted. There is, as Shairp acknowledges, no mere argument that can validate them, though Shairp finds support for his view in Coleridge particularly. They are 'instinctive perceptions', and they follow from a proudly anthropomorphic view of nature,(29) for in that anthropomorphism we find a regularity in the order of things best expressed by Shakespeare's Ulysses in Troilus and Cressida.(30) The essay is generous in literary allusion and quotation and ends enlisting Arnold to the cause of its philosophical and religious idealism. Arnold's attacks on philistinism and the machine-age are enthusiastically embraced. Shairp merely wishes that, in addition, Arnold would give greater prominence to religion in Culture, for Culture is the Will of God.

So the essay opposes literary culture to science's alarmingly empty view of nature. In terms of the discipline of psychology he favours the older methods of introspection, and observation of the behaviour of others. The new psychology, though, in contrast to the rich human experience revealed by these methods, produces only stale

(28) Shairp, 'Moral Theories', 11.
tabulation, and the reduced repetitions of scientific law. Bain, he grants, has gathered some new mental facts, though only, as it were, by historical accident. His observations come 'partly from the more subtle and varied shades of feeling, partly from the wider survey of human history, and the deepened human experience which our present civilisation has opened up'. That said, however, his work is vitiated by flawed procedure and presupposition. While modern scholars have noted that Bain's work prefigures the modern psychological text-book in its arrangement, for Shairp it is this which best represents Bain's failure: he starts from the wrong end. Psychology should begin with 'moral psychology' and engage with 'the fundamental ideas which underlie [human experiences]; that is, [psychology] will land us in theology or religion.' (31)

Shairp's psychology, by refusing to allow that the big capacities have smaller origins, is thus idealist through and through. It resists the tactics of analytic decomposition favoured by the associationist tradition, and does not, even, deal with the traditional separate faculties of the Scottish school. It posits, in the manner of the German idealist thinkers rejected by Comte and others, the centrality of the 'mysterious conscious "I", the fully formed personal will', which is 'the centre, the core of man's being'. Moral science deals with character, and character is defined as 'a completely fashioned will'. The utility of psychology is to enable the achievement of this state of the will, and to bring it into harmony with the spiritual needs of man. Psychology should emphasise the desireability of such states, and to that end trace 'the historical growth of the individual as well as the race'; that is the

(31) Shairp, 'Moral Theories', 7.
progress from primitive instincts and desires to the civilised will. The will is created from the frustration of desire and thereby the acquisition of prudence. From selfishness and egoism we develop the 'spiritual order' of the 'higher consciousness'. From acknowledgement of others, and the restraint of our own desires, we come to acknowledge God. Shairp, in a characteristic nineteenth-century way, marks this progress in stages: from the 'emotional' to the 'prudential' to the 'moral'. At the close there is a cultured, religious, unified personality, and (following from this individual achievement) an ordered stable social vision is in prospect, the one indeed offered by Shakespeare's Ulysses. (32)

The connection between this view and the wider, ideological context of psychological argument is clear. For Shairp's prudentialist ethics are, socially, a recommendation for the status quo, for social discipline and restraint (among Jamaican negroes for instance). Shairp, like Samuel Smiles or Carlyle, recommends the study and celebration of character for moral improvement, and, again, this was common among the opponents of the new psychology in the mid-century. Protesting against subversive materialist politics in the wake of the 1848 revolutions, Richard Simpson recommended the study of the lives of heroic soldiers, matyrs and priests. The current obsession with 'literary and scientific persons' was vain idolatry. Culture was a power game, and science was winning, he feared, in the self-applauding philosophic coteries. In the wake of the revolutions, Simpson cried for strong measures, and spoke (in the manner of one later voice of Arnold's and a regular one of Carlyle's (33)) of the need for authority to settle the cultural

(32) This is a summary of the argument between pp. 6-13, from where the quotations are taken.
decline, just as soldiers and strong government were needed to settle the rebellions. (34) The appeal to a disinterested cultural élite in Arnold, to heroes and aristocracy in Carlyle, and to Shairp's culture of poetry and the will, are reflections of this same demand made in alarmed political circumstances. It is against this that the stress on liberty placed by Mill and Bain should be understood.

Mill's championship of Bain was absolute and forthright. His Edinburgh Review essay of 1859, 'Bain's Psychology', begins unequivocally. After some years of decline 'the sceptre of psychology' has returned to England, the home of the 'experience' or 'a posteriori' tradition, and Bain's work (though by a Scot) 'deserves to take rank as the foremost of its class, and as marking the most advanced point which the a posteriori psychology has reached.' (35) This judgement appears less startling now, when Bain's reputation is secure, than it would have done in 1859. We have only to glance at the company in which Bain is mentioned in the opening pages - Hobbes,

(33) Raymond Williams has called attention to the origins of Culture and Anarchy in Arnold's alarmed and draconian response to the Hyde Park riots of 1866: 'I remember my father... As for rioting, the old Roman way of dealing with that is always the right one; flog the rank and file, and fling the ringleaders from the Tarpeian Rock! And this opinion we can never forsake, however our liberal friends may think a little rioting, and what they call popular demonstrations, useful to their own interests and to the interests of the valuable practical operations they have in hand.' Quoted from the initial 'Culture and Anarchy' lectures by Williams in 'A Hundred Years of Culture and Anarchy', Problems in Materialism and Culture: Selected Essays (London, Verso, 1980), pp. 6-7. Carlyle, of course, also fulminated against 'Swarmeries' in this period and the collapse of social and cultural discipline, as, for example, in 'Shooting Niagara: And After?' (1867), one of the subjects of which was the Jamaica controversy.

(34) Simpson, 'The Morals and Politics of Materialism'.

Locke, Hartley, James Mill (on the a posteriori side), Descartes, the
German idealists, Reid, Stewart, Brown, and Hamilton (on the a priori
side) - to begin to wonder a little. For Bain had no substantial
reputation in 1859. He had written some twenty or so essays - though
only a handful of these were in prestigious, or widely-circulating,
journals like the Westminster and Fraser's. He had also published his
two large, though rather dry, psychology books, and three educational
instructors on popular scientific topics, though none of these were
widely known. The Senses and the Intellect was widely reviewed, but
its sales had been small - so small, indeed, that the publisher
insisted that the long-planned companion volume, The Emotions and the
Will, be financially underwritten (by Mill and George Grote, in fact)
before proceeding with publication. As it turned out - and partly
because of Mill's championship - the sales of The Emotions and the
Will were good, and Mill's guar antee against the publisher's losses
proved unnecessary; the reception of the book even stimulated sales of
The Senses and the Intellect. (36)

Why, then, was Mill so concerned to boost Bain's career and make
these heady claims for his work? By 1859 the two had known each other
for nearly 20 years after Bain had contacted Mill through John
Robertson (an acquaintance of Mill's and one of Bain's early mentors in
Aberdeen) when he was beginning his intellectual career in the early
1840s. Bain had taken an early interest in psychological questions
and Mill sent him a copy of his father's Analysis in 1841. (37) Mill
also encouraged him to write for the Westminster which he did for the

1904), p. 251. Most details of Bain's early career come from
the Autobiography.

(37) Bain, Autobiography, p. 112.
first time that year. In turn Bain helped Mill with the famous *Logic*
which appeared in 1843. Bain indeed was the only person Mill
mentioned in the *Autobiography* as helping with the book. (38) But of
course the reasons for Mill’s championship of Bain were more than
personal. In fact Bain’s psychological programme was what Mill’s
needed intellectually in the late 1850s; that is, a psychological
theory securely within the associationist (*experience/a posteriori*)
tradition which took some account of the new physiological psychology,
but did not hand the discipline entirely over to it. (39) Bain’s was a
psychological theory which took the weight of the standard critique of
associationism (best put, for Mill, by Coleridge (40)), that
associationism was too passive in its theorisations of the human
personality, and attempted to remodel it without losing touch with
founding principles. As we have noted in the previous chapter, Mill
insisted throughout his career on the viability and necessity of the
old introspective and observational methods in psychology. He also
leaned a long way, in some respects, towards the ‘literary’ critique
of the new scientific proposals. He too (as is well-known from the
*Autobiography*) in some important moods, and because of the rigours of
his early upbringing, relished the culture of the feelings and that
construction of the natural world best represented for his generation
by Wordsworth and Coleridge. Though he of course realised very
clearly the importance of the new findings and ideas, at the same time
he was reluctant to grant them the kind of priority that others of a
slightly younger generation would over the next decade. Bain, who was


(40) Mill, ‘Bain’s Psychology’, 354; also Mill on Bentham and
Coleridge, ed. F. R. Lêavis (London, Chatto and Windus, 1950),
esp. pp. 115ff.
to become a professor of English as well as Philosophy, seemed attractive because he could both rescue and advance the (specifically) associationist psychology.

In his essay on Bain, Mill offers a footnote to explain why he chose Bain not Spencer (a thinker of 'kindred merit') for his essay on the state of the discipline. Whereas Bain thinks within the accepted traditions, Mill says, Spencer does not. He is 'less sober', though more original; and he is therefore 'likely to obtain a much less unqualified adhesion from the best minds trained in the same general mode of thought'.(41) The comment illustrates the bias of Mill's mind towards the psychology in which he was trained and of which Bain's work was the latest and - modern scholars agree - culminating representative. But there is also in this comment the voice of the propagandist, shrewdly alert to his cause. For Mill is quite right. In 1859 Spencer was, indeed, a maverick in psychological theory as far as the popular conception of the discipline went. Spencer's Principles of Psychology, as we will see, looked a very odd book indeed compared to the work of his contemporaries at the time of its first appearance; and it would have seemed both intellectually and politically eccentric for Mill to pin his colours to it. So it was Bain, for personal, intellectual and political reasons, whom Mill chose, quite consciously, to promote. In the Autobiography he is clear about this: he wished, as 'a duty particularly incumbent upon me', to make Bain's work better known. (42) He hoped that 'my father's great Analysis of the Mind, my own Logic, and Professor Bain's great treatise' (43) would form a trio of books to combat the prevailing

mid-century philosophical orthodoxies represented in their most sophisticated form for Mill by the work of Sir William Hamilton. As well as the essay on Bain, Mill’s much longer, more thorough and more carefully worked-out *An Examination of Sir William Hamilton’s Philosophy* (1865) emerged from this context.

The *Examination* has much in it which is relevant to the discussion of psychological theory but does not differ substantially from what has already been said about Mill’s views. So instead I want to highlight the political context of these writings before closing this section with some information about Bain’s own political opinions which have rarely, if ever, been discussed.

Mill is frank about the political bearing of all this work. He says, again in the *Autobiography*, that he wished his work, and that of James Mill and Bain, to combat a philosophy which is addicted to holding up favourite doctrines as intuitive truths, and deems intuition to be the voice of Nature and of God, speaking with an authority higher than our reason. In particular, I have long felt that the prevailing tendency to regard all the marked distinctions of human character as innate, and in the main indelible, and to ignore the irresistible proofs that by far the greater part of those differences, whether between individuals, races, or sexes, are such as not only might but naturally would be produced by differences in circumstances, is one of the chief hindrances to the rational treatment of great social questions, and one of the great stumbling blocks to human improvement. This tendency has its source in the intuitional metaphysics which characterised the reaction of the nineteenth century against the eighteenth, and it is a tendency so agreeable to human indolence, as well as to conservative interests generally, that unless it is attacked at the very root, it is sure to be carried to even a greater length than is really justified by the more moderate forms of intuitional philosophy. That philosophy, not always in its moderate forms, had ruled the thought of Europe for the greater part of a century.(44)

He then goes on to speak of the trio of works previously mentioned.

There is much here worthy of comment, for this is the associationist’s case put at its best. We can note Mill’s shrewd sense of how the idea of God – or the philosophy of Nature – is used to confiscate argument; of how, too, these arguments about intuition in cognition are related to those which think of human character as innate; of how, again, these theories of innate character are used to buttress theories of the status quo and the protection of ‘conservative interests generally’; of how even moderate forms of intuitionist argument need to be scrutinised carefully because they have the weight of tradition and interest behind them; and we can finally note that Mill is quite specific in his understanding of the origins of this orthodoxy – it dates from Romanticism (‘the reaction of the nineteenth century against the eighteenth’) or, rather, that conservatively-coloured version of Romanticism stemming from German idealist philosophy which was actively promoted for the right in Britain by such thinkers as Coleridge and Carlyle. (45) The political bearing of these psychological arguments, then, is very plain, and the analysis is one that would have appealed to Alexander Bain for reasons that have received little comment in the secondary literature.

Bain was born in 1818, the son of a farmer on a small tennancy outside Aberdeen. The family, though, lost the farm during the post-war depression and Bain’s father joined the army. Subsequently he became a weaver at a time when weaving was one of the most politically vocal of trades in the post-war world. (46) Bain himself became an apprentice weaver at the age of 13 in 1831 when, he says in

his Autobiography, 'the Reform agitation [was] at its crisis', and this moment, when he joined the Reform demonstrations, marked the beginnings of 'Reform sympathies, which, in the shape of liberalism in general politics, stuck with me through life.' (47) Bain's intellectual career began in the local Mechanics' Institute and he was a product of a working-class, largely auto-didact ('Mutual Instruction') educational community. (His particular friends in this circle were the local blacksmith's sons, who introduced him to psychological theory through their heated discussions of Thomas Reid. It was through Bain's dislike of Reid that he was led to read Berkeley, Hume and the sceptics.) By 1835 he was taking classes at the Institute, and in 1836 he gave up full-time work to attend Marischal College, Aberdeen - though he continued to work as a weaver in the vacations.

Everything in Bain's early social experience then, as well as the intellectual outlook he quickly and readily adopted, was conducive to a radical political position. His first published piece of work, in 1836 for the Aberdeen Herald, was 'On Civil and Religious Liberty' and was originally a political speech given in the city. Sixty years later, in 1894, he was writing in the Aberdeen Free Press against the hereditary principle in the House of Lords and contemplating the 'ultimate extinction' of that body if it persisted in its present form. (48)

The Autobiography has plenty of information about Bain's political opinions, about which he was quite open. He followed the progress of Chartism carefully in the forties and notes with horror


(47) Bain, Autobiography, p. 15.
(and a wry sense of the ridiculous in retrospect) that, in April 1848, clerical workers at the Board of Health (where he was working for Chadwick’s Metropolitan Sanitary Commission) and other civil-service departments were issued with weapons and instructed to barricade their buildings. He made many speeches on public issues and was invited, in March 1885, to stand as an MP in the Radical interest in Sheffield in the General Election caused by the dissolution of Parliament over Gladstone’s Home Rule measures. Bain declined, but, he says, on the grounds of age (he was then 67) and not ‘from difficulties as to party allegiance’. (49) He had decided views on the Irish question and delivered a speech at a demonstration against the Irish Crimes Bill in August 1888 which was reprinted in the Aberdeen Free Press. (50) He did not believe that political trouble could be solved by draconian legislation or violent suppression, a position he had maintained at the time of the Jamaica incident also.

Despite all these things, though, Bain remained an intellectual and an academic. He was not an activist in the manner of J. S. Mill, or even a political journalist like Lewes in his early years. It was in his (in the end successful) academic career that he involved

(48) William L. Davidson, ‘Supplementary Chapter 1890-1903’ to Bain’s Autobiography, p. 416. Bain wrote the bulk of his Autobiography - which is rather a flat, unengaging narrative - at a leisurely pace between 1890 and 1897. He ended the story in 1890. Davidson added this last chapter after Bain’s death. He was an ex-pupil of Bain’s and succeeded him as Professor of Logic at Aberdeen. He was also one of Bain’s literary executors and wrote an interesting appreciation of him in Mind which stressed especially the far-reaching practical effects of his work, particularly in education. Bain’s ‘philosophy’ was not mere speculation as far as many were concerned. See ‘Professor Bain’s Philosophy’, Mind, 13 ns (1904), 79-161. As Davidson says, Bain held his political opinions until his death in 1904.

(49) Bain, Autobiography, p. 377.

(50) Bain, Autobiography, p. 434.
himself most in matters of policy as they touched educational issues, including those of curricula development and teaching methods. He was a tireless expositor in his writing, and a lively seeker after new opportunities to widen the constituency for his - and therefore psychology’s - ideas. Whether in Chambers’s Papers for the People in the fifties, or in Chambers’s Encyclopaedia in the sixties, or in writing English grammars and other textbooks in the seventies, or through the founding and managing of Mind, or in digesting his two large psychological tomes (which he also continued to update and revise) as Mental and Moral Science: a Compendium of Psychology and Ethics (1868: revised and divided into two 1872) to serve as a university-level text book (where it was used until the turn of the century), Bain continued to try to find a large audience for his work and beliefs. According to one commentator, Gardner Murphy, who was fairly close to Bain’s legacy, ‘never had a psychologist been so widely read in his own day’. Murphy compared Bain’s influence in psychological theory to that of Mill in political economy. ‘Associationism became through him almost "popular".’(51) However this career was not untroubled. Throughout he was dogged by political opposition and, from time to time, particularly in his early career, political discrimination. He was, for one thing, militantly anti-religious.

In his diary of June 1866 (that is, just prior to Shairp’s attack on the religious outlook of the school with which Bain associated himself), G. H. Lewes records Bain engaging in an ‘antiChristian [sic] onslaught’ whilst dining with the Leweses. There is no

indication from the tone of Lewes's remarks or reactions that this tirade was either shocking or unusual, (52) for Bain had very early rejected the Calvinism in which he was reared. He comments in the Autobiography that listening while still a child (that is under the age of 13 when he went into full-time work) to adults talking about religious matters, and noting the contradictions, 'made me a ready listener to sceptical criticism' (53), and, in the long run, this prepared the way for his acceptance of utilitarian and psychological theory. Just as his politics never wavered, nor did his views on religion. Bain remained opposed to it on principle. Whilst never actually declaring himself an atheist (this would have been out of the question for a man pursuing an academic career), he nevertheless clearly identified himself with non-believers, and with ideas and intellectual groups which brought him into conflict with the authorities.

In the early 'forties on a visit to London, and partly through the influence of Mill and Lewes (whom he also met in 1841), Bain became interested in Comte. He recommenced study of Comte in Scotland with others including William Walker, who later wrote on Comte for Lewes's and Thornton Hunt's radical The Leader, and whose work was used by Lewes in his book on Comte in 1853. Bain recalls the atmosphere of the time in the Autobiography:

Such studies had, no doubt, the effect of marring the orthodoxy of all concerned, and had to be kept in great measure secret, although it was impossible to avoid giving indications that in those days were calculated to bring the individual students into trouble. Nevertheless, the society [that is, an informal Aberdeen reading- group to which Bain belonged] allowed itself to be mentioned by Mill to Comte as one of the centres of Positivism. (54)

(52) G. H. Lewes, Diary, 1-7 June 1866. Letters, IV, 266.
This, and other incidents, did indeed 'mar his orthodoxy', and gaining an academic appointment was always therefore a problem for him.

Seeking a job in 1845-46 he was told he would need to become a 'licentiate of the Church' to become eligible for any chair of moral philosophy in Scotland. (55) In 1851 he was refused appointment at Aberdeen because he was 'obnoxious to the Church party'. (56) In 1860 he failed to gain a chair at St Andrews because of his 'desolating' philosophy and lack of religious orthodoxy. (57) The Principal at St Andrews was John Tulloch, whose hostile reviews of Lewes's work we encountered in the previous chapter. Tulloch was sharply hostile to Mill and therefore also to Bain. His *Movements of Religious Thought in Britain During the Nineteenth Century* (1885) contains a chapter-long attack on 'John Stuart Mill and his School' which unfavourably contrasts Mill with Carlyle, partly in terms of Mill's - and particularly his father's - default from the Scots heritage from which, Tulloch feels, Carlyle gained such spiritual resource. (58)

Again, in 1860, Bain was a candidate for the Aberdeen chair in

---

(58) John Tulloch, *Movements of Religious Thought in Britain During the Nineteenth Century* (Leicester, Leicester University Press, 1971), p. 240. Tulloch's arguments against Mill are familiar ones: he fails to account for the free exercise of the higher faculties, he eliminates conscience, moral responsibility and the religious instincts, and he offers a contradictory account of the growth of self-consciousness. But the chapter also seems to contain a hidden attack on Bain's ideas. It attacks the 'analogy between mental force and other forms of force' in the materialist account of the Will, a position which, as we shall see, Bain had made distinctively his own by the time this was written.
logic. His principal rival was an opponent of the new psychology, James McCosh, whose history of the Scottish school of philosophy took a strongly conservative line. McCosh had the support of the Scottish Free Church and the Established church members of the University, and Bain was publically described as an 'infidel'. The decision however went in Bain's favour, though as a political appointment. The then Liberal Home Secretary, Sir George Cornewall Lewis, used his influence on Bain's behalf despite the view that it would cost the government votes and four seats in Scotland. Bain comments that there 'was always a lurking dissatisfaction with the appointment, but it was seldom shown openly'.(59) The consequences of Bain's views on politics and religion dogged him throughout his career. He tried to postpone his resignation from his Aberdeen chair in 1880, though ill, because he knew the appointment would then fall 'into the hands of the Tory government'.(60) In 1890 he was excluded from the Scottish Universities Commission, 'by political prejudice' notes William Davidson.(61)

This, then, is the context in which Bain developed his career and ideas. Of all the leading members of the circle of new psychologists at work in the mid-to-late nineteenth century, Bain was the only one to pursue a mainstream academic career. Though Huxley (who had strong views on the faults of the British higher education system, especially its neglect of science) held a lectureship at the Royal School of Mines, he saw himself as an outsider, opposed to the mainstream system. (He turned down the offer of a new Oxford chair in physiology

(60) Bain, Autobiography, p. 344.
and the Mastership of University College in 1877. This, I think, is significant, for a newly-emerging discipline needs new career structures to enable it. Bain made his way in the academic world, but James and J. S. Mill, Spencer and Lewes - to name a handful of the most eminent - remained very much outside it. It is also significant that in their social origins, none of these men (except perhaps J. S. Mill, in his odd way) were born to the intellectual purple or to any significant social rank. Bain, as we have seen, was the son of a weaver; James Mill was the son of a Kincardinshire shoemaker; Spencer’s father was a free-lance local teacher in Derby; Lewes came from an eccentric lower middle-class family in London. (Both his grandfather and father were, like Lewes himself, actors at one time or another, and his grandfather was a hosier and part-time messenger. The family had some connections, by prudent marriage, to a wealthier world, but Lewes’s father died when he was two and his mother married a retired army captain.) Clearly, to be sustained, speculation about the relationship between social origin and choice of intellectual career and interests would need much more detailed specification and argument - rather in the way perhaps that Richard Altick has described the sociology of literary authorship in this period - but it does seem possible to speculate that the enthusiastic development of the new psychology is related to these kinds of facts. The new psychologists chose a new discipline, relatively free from established interests, with an unformed career structure, to pursue their enquiries. This


lack of both social and intellectual establishment goes some way perhaps to explain the social sneering which sometimes enters the polemics of men like William MacCall, for it is indeed likely that Alexander Bain would - though a weaver rather than a tailor - have watched bantam cocks, or the rubbish being emptied from cupboards. From consideration of this perspective, however, it is now time to turn from the social and ideological contexts of Bain’s work to its place within the intellectual development of mid-nineteenth-century psychological theory overall.
II. The Place of Bain's Work in the Development of Psychological Theory

As we have seen, contemporary commentators were keen to place Bain's work within the heritage of British psychology. We have noticed J. S. Mill's comments on this in the previous section, but David Masson, J. D. Morell, G. H. Lewes and James Martineau, from their different perspectives, also put Bain's work in the context of the rival English and Scottish traditions of psychological theory. Masson (another Scot who, like Bain, had been something of a protégé of Mill's) reviewed *The Senses and the Intellect* in the liberal *Fraser's Magazine* in 1856, and began by contrasting Bain with the early-century Scots philosopher Thomas Brown. The basis of the contrast is political: Brown is the old Whig (like Lord John Russell), whereas the new psychology is Radical. (Masson is very alert to the political bearing of the various psychological theories. He notes, too, Hamilton's rejuvenated conservatism based on the tradition of 'Scoto-German' transcendentalism.\(^{64}\) Compared to Brown's incisive, rapid thinking and bright extemporizing manner, the tone of Bain's work is patiently accumulative, indeed rather plodding. The book is remarkable, says Masson, for its cautious auto-didacticism, and the evident restraint it shows from polemic or explicit controversy. Though it is clearly in the manner of 'thorough-going English Sensationalism', Masson does not feel that its originality depends upon 'the fundamental metaphysical doctrine with which it is associated', that is, the strict utilitarianism of James Mill.\(^{65}\)


\(^{65}\) Masson, 'Bain on The Senses and the Intellect, 214.
So, Bain's work participates in, but does not slavishly follow, that of his predecessors. Other reviewers placed Bain similarly. J. D. Morell, an ex-pupil of Hamilton's and a shrewd, German-educated thinker. (He was the author of the highly-regarded *Elements of Psychology* (1853) and, later, became inspector of schools in the non-conformist interest.) Morrell's review, like Masson's is fair-minded and perceptive. He again notes that Bain's work draws upon the tradition of English empiricism. (66) This point was made, too, by Lewes reviewing the second editions of both *The Senses and the Intellect* and *The Emotions and the Will* in 1866. Lewes placed Bain in 'the inductive experimental school of Locke' and felt that Bain's was the 'most advanced inductive psychology of our day'. (67) This perception of Bain's intellectual allegiances was endorsed by James Martineau, though Martineau, an out-and-out enemy of the new psychology, interpreted it very differently. Bain, Martineau claimed, like James Mill, unsoundly jettisoned the 'claims of the native Scottish philosophy', caught 'the infection of our [English] scepticism' and injudiciously strayed from the tried and tested methods of Scotland. (68)

Bain had indeed rejected traditional Scottish philosophy very early. On his own account he had done so by the time he was 21,


(67) [G. H. Lewes], critical notice of *The Senses and the Intellect and the Emotions and the Will* by Alexander Bain, *Fortnightly Review*, 4 (1866), 767. Lewes distinguished between 'Inductive' psychology (about which he had reservations) and the kind of physiological psychology in which he himself was most interested in the 1860s. (The inductive approach, coloured by associationist introspection, was not exacting enough in empirical method, nor sufficiently physiological for his taste.)

(68) James Martineau, 'Cerebral Psychology: Bain', 500.
following his reading in the sceptics at the Mechanics’ Institute. The attack on Reid’s work he developed there formed a part of his mature psychology. Reid had argued that even everyday activities like eating were innate instincts; but Bain pointed out that even very basic activities need in some part to be learnt. Motor-uncoordinated infants, for instance, need to learn certain procedures to find satisfaction, and it was ludicrous to claim that all activity was spontaneous: ‘Dr Reid might just as well assert that the movements of a ballet-dancer are instinctive’. (69) Bain, as a good associationist, is resolutely opposed to all a priori assumptions about the mind’s innate faculties. His intellectual interests at Marischal College, as we have seen, were ‘advanced’ and thus, for some, suspect; and he continued to provide himself with a thorough grounding in the philosophical forebears and allies of the new psychology, especially Hartley (whom he read avidly in 1837) and the radical moderns like Comte. (70) He was also interested in phrenology (on which he had taught classes at the Mechanics’ Institute as early as 1835 when phrenology was still hotly controversial(71)), and Robert Young

(69) Alexander Bain, The Senses and the Intellect (London, Parker and Son, 1855), p. 293. All subsequent references are to this edition unless otherwise noted.

convincingly argues that phrenology exerted a powerful, constructive pressure on Bain to move his ideas from a more conventional associationism towards a more physiologically-grounded theory.\(^{(72)}\)

Bain remained interested in phrenology long after many of his leading contemporaries had abandoned interest in it. His book of 1861, for instance, On The Study of Character, makes a (largely unsuccessful) effort to argue against the ideological use of the idea of character by basing an account of the formation of personality on phrenological theory; that is, he argues that character is in part physiologically-derived and not merely a matter of moral effort or failure.\(^{(73)}\) The book does not succeed as a defense of this position because its physiology is simply too crude and reductive, and because (as we will see) Bain himself was rather limited in his understanding of the idea of character. But the former point could be made about many a more scientifically-promising theory in the mid-century, and the principle was an important step, and a central point of doctrine, for Bain. He, like Spencer, was concerned, as Roger Smith argues, with the substitution of physical for moral causal mechanisms throughout his psychological programme:

Bain and Spencer provided non-mentalist theories of efficacious human activity and thereby hoped to reconcile common sense with traditional sensationalism. They took 'effort' from its purely moral context and redescribed it in physiological terms of motor discharge or in biological terms of interaction between organism and environment. They argued that their contribution was to describe humans as active centres of learning and behaviour in a manner compatible with a scientific and non-mentalist physiology.\(^{(74)}\)

\(^{(71)}\) Bain, Autobiography, p. 27.

\(^{(72)}\) Young, Mind, Brain, and Adaptation, ch. 3.

\(^{(73)}\) Alexander Bain, On the Study of Character including an Estimate of Phrenology (London, Parker, Son, and Bourn, 1861).
In addition, in his mature theory, Bain was concerned to follow his early interest in J. S. Mill's ethological programme which Mill had outlined in his *System of Logic* and had discussed with Bain in 1843 and again in 1844. (75) Indeed, there are traces of Mill's ethological ideas in *The Senses and the Intellect* and *The Emotions and the Will*. In the latter Bain argues that character is formed by the interaction of 'natural impulses' and acquired habits. (76)

Bain's psychology, then, is a strongly relational theory. This is clear from the simple titles of his books: both *The Senses and the Intellect* and *The Emotions and the Will* relate one of the higher faculties - intellect and will - to what would at the time have been regarded as junior mental phenomena, sensations and emotions. In *The Senses and the Intellect* Bain is at pains to insist that sense is not, because of these old classificatory habits, to be seen as inferior to the supposedly 'higher' forms of mental life. Bain takes issue with Reid, Stewart, Brown and James Mill on the question of appetite and instinct. These writers classed appetite and instinct with the phenomena of sensation. Bain separates them, however, on the grounds of the active/passive distinction which is central to his psychology. (77) The argument may appear taxonomically arcane, but it is central. Not only is Bain beginning to disrupt settled categories, he is also taking-up some key issues of theory. For example, he wants to insist that the mind is capable of initiatory

(74) Smith, 'Background to Physiological Psychology', 95.


(76) Alexander Bain, *The Emotions and the Will* (London, John W. Parker and Son, 1859), p. 521. All subsequent references are to this edition unless otherwise noted.

action in its dealings with the world, but James Mill's orthodox utilitarian associationism had portrayed the mind as fundamentally passive. Mill portrayed the appetites and instincts as formed from habitualised stimulae. They were reactive phenomena, whereas for Bain they are actively initiatory. On the other hand, the Scottish School theorists wanted to preserve the special character of the higher human faculties which were not to be contaminated by connection with the lower functions. Thus sensation, appetite, and instinct were to be classed together, beyond the pale of the special human capacities.

This disruption of the standard classificatory systems is very deliberate and sustained in Bain. In The Emotions and the Will he once more very quickly alters our perception of how the mental phenomena are to grouped. Emotion, he says, is

here used to comprehend all that is understood by feelings, states of feelings, pleasures, pains, passions, sentiments, affections. Consciousness, and conscious states also for the most part denote modes of emotion, although there is such a thing as the Intellectual consciousness. (78)

As we have seen the special quality of consciousness was a key issue for the opponents of the new psychology, and here it is seen as a less than privileged entity. Likewise Bain's list of emotions is interesting because it includes both rudimentary feelings and appetites and emotions such as the moral sentiments and the gentle affections which had such a special place in the Victorian language of love and the family, as can be seen from many a novel of the period. As time went on, and Bain developed his ideas, this classificatory pattern altered from edition to edition of The Emotions and the Will, but the principle remained the same, and the process was, if anything, made more radical.

(78) The Emotions and the Will, p. 3.
In the first edition Bain discriminated between those emotions which were based directly on sensational components (terror, say, or surprise), and those which were remote from sensation like love or aesthetic responses. Bain indeed discovered eleven discrete families of emotions. (79) In the second edition of 1865, however, though these family groupings were preserved, the classificatory principles were altered. They were now either based on the decomposition of the emotions into their constituent elements such as sensation, ideas or objects; or they were based on categorising the psychological mechanisms of which they make use, like transfer, coalition, aggregation, or compounding. These changes naturally have the effect of making the 'higher' emotions more clearly resemble the 'lower', (80) and almost certainly came about as a result of Spencer's critique of Bain's work in his review of The Emotions and the Will in 1860. Spencer had objected that Bain's classification tended to blur the specificity of the component parts of these mental phenomena, and proposed an overall class of 'Feelings', to be sub-divided into 'Emotions' and 'Sensations'. (81) In the third edition of 1875, the notion of families or 'Natural Orders' of emotions is dropped altogether, and a less mechanical classification is offered based on more sophisticated associationist principles. These new groupings are, for example, 'Emotions of Relativity', 'Ideal Emotions', 'Tender Emotions' (which includes feelings of sexual desire), and so on. (82)

(79) The Emotions and the Will, ch. 2.
In breaking from standard taxonomies Bain is not of course proclaiming an identity between the 'lower' and the 'higher' phenomena as his polemically-minded opponents would have it. He is very clear that the attributes of mind function hierarchically. (He retains a vocabulary of 'primitive' and 'cultivated' in The Senses and the Intellect for instance.) The 'higher' attributes are built from, but nevertheless supersede, the 'lower'. But at the same time he insists that one cannot understand them without understanding their 'lower' antecedents. This principle is basic to nineteenth-century associationism, and indeed to much twentieth-century descriptive psychology also. Bain is not interested in ideas which segregate the 'lower' from the 'higher', and then group the latter as self-acting entities (under the will of God), remote from the body and ordinary experience. He is antagonistic to the idea of a sensorium commune for instance: 'We must discard forever the notion of a sensorium commune, the cerebral closet, as a central seat of mind, or receptical of sensation and imagery.' (83) Likewise he insists on the relationship between body and mind throughout the nervous system: 'our present insight enables us to say with great probability, no [nervous] currents, no mind', and the transmission of nervous impulses 'is the very essence of cerebral action'. (84)

These pages have an excited, combative tone quite unlike the

(82) The Emotions and the Will, 3rd edn., (Longmans, Green, and Co., 1875), ch. 2.

(83) The Senses and the Intellect, p. 61. This attack on the sensorium commune was particularly welcomed by Lewes. Bain, Lewes wrote, thereby placed himself 'at the true physiological point of view'. 'It is the man who thinks; not the brain only; not an entity having a shadowy residence somewhere in the brain.' [G. H. Lewes], 'Bain on The Senses and the Intellect', The Leader, 6 (1855), 771.

(84) The Senses and the Intellect, pp. 61-2.
rather dry, expository manner of much of the book. Bain is discovering new ways of conceiving of the mind and knows himself to be at the edge of new work:

we may be very far from comprehending the full and exact character of nerve force, but the knowledge we have gained is sufficient to destroy what has until lately prevailed as to the material processes of perception. (85)

He hypothesises that memory, for instance, is the revived action of the whole system, and not merely that of some central, receptive, storage system. It is likely that a brain cut from its spinal cord and nerves would lose 'even thought, reminiscence, or the emotions of the past and absence' he speculates (erroneously, as it turns out). Thus it is only partly true to say, as Robert Young does, that Bain was unwilling to accept sensory-motor analysis of the nervous system any further up the neuraxis than the sub-cortical structures. (86)

Though Bain distinguishes in 1855 between, on the one hand, the spinal cord and the medulla oblongata (where actions - for example digestion and respiration - are performed without feeling or consciousness) and, on the other, the cerebral hemispheres where the mind properly can be said to belong, (87) he was, in his early years, very willing to believe that the higher functions involved the whole nervous system. It was only as time went on, and physiological findings outstripped his own (associationist-based) modes of analysis, that he became resistant to it and wished to retain something of the autonomy of the higher faculties. The pressure to do so was primarily methodological, not descriptive.

(85) The Senses and the Intellect, p. 61.
(86) Young, Mind, Brain and Adaptation, pp. 112-14.
(87) The Senses and the Intellect, p. 47.
In the third edition of *The Senses and the Intellect*, when the excited lustre of this new work had gone, and many of its general propositions had been accepted, and Bain was becoming more worried about the threat such advanced analysis represented to the fundamental ideas of the association psychology, the vigorous tone of the early work disappears, and the whole is put more soberly and briefly. (88) Yet he never relinquished the fundamental propositions, and the attitudes on which these speculations were originally based. The third edition formulates a law, called the Law of Relativity, in which he insists that it is only by seeing things relationally that we can come to understand anything at all. This applies both in terms of a general theory of cognition and epistemology ("change of impression is an indispensible condition of our being conscious, or of being mentally alive either to feeling or to thought", and this "applies to everything we are capable of knowing") (89), and to the terms in which we see the functioning of the mind itself, which cannot be understood apart from its physiological relations. Both these positions - the epistemological and the psycho-physiological - had become standard among the new theorists by the mid-seventies.

In both the 'Preface' to the first edition of *The Senses and the Intellect*, and in the *Autobiography*, Bain makes it clear that the argument of *The Senses* was prompted in part by his reading in contemporary physiology, a programme of which he had set himself in 1851. (90) The reading undertaken that year provided the physiological details for his early psychological work, and *The Senses and the Intellect*, 3rd edn., pp. 52-53.


(90) *The Senses and the Intellect*, p. v; *Autobiography*, pp. 227-34. See also Cardno, "Bain and Physiological Psychology".
Intellect was begun a year later and written over the next three. The physiological components of the book struck its first reviewers as the most evidently innovative feature of it, whether, like those examined in section one of this chapter, they were opposed to it, or they found it desirable and welcome. John Mill, one of the latter of course, praised the book's impressively full exposition of the 'necessary material substratum' (91), and David Masson thought that not only did the book's originality lie in its physiology, but it was also the 'best resumé of that topic yet offered to the psychologist.' (92) Similarly, Théodule Ribot, as late as 1877, regarded Bain's work as 'the most complete repository in existence of exact and positive psychology, placed au courant with recent discoveries.' (93) Lewes thought something of this kind in 1855, though by the time he came to review the second edition in 1866, he felt that the physiological element had lost its expository edge a little and needed a more deft popular touch. (Such, perhaps, as that for which Lewes himself was so well-known.) (94) Whilst other sympathetic readers had reservations - most notably Spencer as we shall see - the book was broadly and warmly welcomed by those on the side of the new psychology. J. D. Morrel, for instance, praised Bain's efforts, though he did think them a little too inhibited by the classificatory apparatus and the book's traditional concern with the taxonomy of the human faculties. Bain made 'no attempt at any generalization between organic life as existing in mind or nature'. (95) Morrel's early reservation was to

(91) Mill, 'Bain's Psychology', 352.
(94) Lewes, 'Bain on The Senses and the Intellect'; and Critical Notice, 767.
become a more common charge as time went on, and, as we shall see, it was Spencer, in his *Principles of Psychology*, and not Bain, who broke more decisively from the older ways of conceiving of a psychological theory, and who offered these bolder generalisations.

The detailed physiology in *The Senses and the Intellect* does not seem very startling in retrospect. The descriptions of the physiological processes which Bain offers closely follow standard textbooks - Quain, Todd and Bowman, Carpenter, Muller, and Bell - which are freely acknowledged, and Bain did not, unlike Lewes or Huxley, undertake any experimental work of his own on structure or morphology. Nor did he speculate much about the details of the working of the nervous system, though he was intensely interested in the general principles of its mode of operation. The main burden of the physiological component of his work is to support the contention that the system is a dynamic and transformative one. It is an energy system, he argues, which relays 'nerve force' (the precise character of which is undetermined) from point to point in the body. This is transformed (in ways yet to be determined) into information, feeling and the other mental elements in the cerebral hemispheres. This kind of description - of the psycho-physiological system as an energy system - became very common among leading psychologists in this period, and Bain gives a picture of it in terms of up-to-the-minute technology. It is like 'the course of a railway train' by the side of which run telegraph wires. The individual wires cannot be said to run the whole length of the country (or the body), but they form a network which does.(96) As telegraph wires run from station to station, so the

(95) Morrel, 'Modern English Psychology', 359.
nerves run from 'nerve centre' to 'nerve centre'. The nerves - like the wires - originate nothing, they merely conduct. Each nerve has only one function (either sensory or motor), and the endogenous (efferent) and exogenous (afferent) systems are entirely separate.(97) The 'nerve centres' - like the stations on the railway line - have the property of 'sending out motor power', especially the spinal chord which is regarded as one big centre.(98)

In The Emotions and the Will Bain uses a similar analogy. The organism as a whole is the important fact: 'The transformations of the food and tissue are the sine qua non, the consciousness is the accidental part.'(99) But from whence comes the energy which is thus transformed? Bain claims this is understandable on the analogy of the steam-engine, where active chemical combinations give birth to moving force, through the medium of a certain mechanism. Physiologists are pretty well agreed on this point.(100)

The argument behind Bain's analogy here comes from the law in physics of the transformation and correlation of physical force; that is, as Bain puts it, the 'interchangeability of the natural powers - Heat, Electricity, Chemical Affinity, Mechanical Force.'(101) The same idea is suggested in The Senses and the Intellect. There, 'nerve force' is said to be analogous to electricity or magnetism, though it is not the

(97) The Senses and the Intellect, pp. 36-38.
(98) The Senses and the Intellect, p. 46.
(99) The Emotions and the Will, p. 476.
(100) The Emotions and the Will, pp. 477-78.
(101) The Emotions and the Will, p. 478. This passage was preserved in the second edition, but removed from the third and used almost verbatim in Bain's Mind and Body: The Theories of Their Relation (London, H. S. King and Co., 1873), which deals with this idea at greater length.
same as these. (102) Something like 'nerve force', I suppose, is indeed now recognised to be electrical and chemical - though not in any way Bain could have imagined.

This doctrine - ostensibly based on a proven physical law, and illustrated by clear instances of that law at work in the modern world - was a powerful influence in developing both Bain's reputation and the shape of his psychological theory. It was an idea which - to risk the pun - became current, and George Eliot's use of electrical imagery in Middlemarch, for instance, perhaps owes something to it in range of reference and suggestion. Middlemarch deploys metaphors of electric currents and galvanic batteries to describe the action of human sensibilities, particularly that of Dorothea. But it should be said that Bain's idea is not original - as he says, 'physiologists are pretty well agreed' - and Sally Shuttleworth finds other plausible - and not only physiological - sources for her use of these ideas. (103)

More widely, the idea of the mutual convertability of physiological and psychological force was one which a number of Bain's contemporaries also espoused. Spencer uses it in The Principles of Psychology, as does Lewes in The Physiology of Common Life (1869-60). As Shuttleworth demonstrates, George Eliot also uses the idea in Adam Bede (1859), which argues for organic transformation at the parallel levels of society, history, morality, and individual psychological development. (104)

(102) The Senses and the Intellect, pp. 57-8.


(104) Shuttleworth, George Eliot and Nineteenth-Century Science, ch. 2. See esp. pp. 39ff. for a discussion of physiological psychology, though she does not discuss Bain's work.
One of the important original ideas in Bain's *The Senses and the Intellect*, and one which enthusiastic reviewers like Masson, Lewes and Mill applauded (105), was directly connected with these speculations. In contrast to traditional associationism, Bain conceives of the psychological system as *active*; that is, it is a system which has spontaneous resources of energy at its disposal. There is a structure with dynamic resources in place before the encroachments of culture, though that structure is neutral as regards a preferred form of cultural expression or manipulation. For Mill, Masson and Lewes (in 1855) this was the key to psychology's advance. As Masson put it it was 'one of the germs of a new psychology which make the present volume so interesting.' (106) Bain posits a system subject to waves of spontaneous internal energy.

The nervous system may be compared to an organ with bellows constantly charged, and ready to be let off in any direction, according to the particular keys that are touched. The stimulus of our sensations and feelings, instead of supplying the inward power, merely determines the manner and place of the discharge. (107)

Bain suggests that the operation of this energy discharge follows the 'Law of Diffusion'. There is 'a freely diffused current of nervous activity, tending to produce movements, gesture, expression, and all the other effects described in the course of the next few pages.' These, as it were unconsidered, actions provide an important clue to

---


(107) *The Senses and the Intellect*, p. 291. Bain often uses musical metaphors in these contexts, for instance in his discussion of sexuality he says that, after puberty, the 'nervous waves diffused from the cerebrum, alters the whole tone of the mind, like the addition of a new range of pipes to a wind instrument.' (p. 281)
the functioning of the mind (a principle Freud, of course, developed and extended). They are 'a constituent part of the complex fact of consciousness in every form and variety' and 'little attention has been paid to them in the scientific consideration of the mind.' (109)

Bain's idea was not new. Arguments about the existence or nature of some kind of nerve force stretch back to Hartley, or even to Locke, and it was still a lively topic of debate in the mid-nineteenth century, though resistance to it had waned. There is an interesting discussion which relates to Bain's proposal in Henry Holland, who argues, in his leisurely, cautious way, that 'regarding the separate existence and attributes of the nervous power':

Whatever censure has been thrown, justly or unjustly, upon this term, it is certain that we cannot dispense with some phrase equivalent to it, in reasoning on the phenomena of animal life. At every step we are obliged to admit the conception of the fact thus expressed; and however inadequate our present means to determine its nature, and relations to the mental and physical parts of our being, we can no more deny reality to such a power, than we can to the effects of which it is the obvious source. Other terms - energy, agency, element, principle, and force - have on the same grounds, been applied to denote it; all readily lending themselves to any relation with physical agents which may hereafter be ascertained; but liable in common to the preliminary objection of designating one principle or element, that which we do not know to be really such. For the inquiry brings us at once to the most essential of the questions regarding the nervous power, viz., its unity: - whether it be actually one and the same agent, producing diversity of effect from the manner of its transmission, or from the various fabric and vitality of the parts on which it acts; - or whether there are two or more powers coming under this common appellation as acting through nervous structure, but really different in nature, and thence producing different effects in the economy of life. (110)

Holland identifies the crucial point. Materialists would argue that


(110) Holland, Chapters on Mental Physiology, pp. 241-42.
there can be only one type of nerve force which is functionally different depending its place in the 'economy of life'. On the other hand those opposed to this idea would want to defend the notion of more than one such force to account for the moral or spiritual life without reducing it to 'mere' material effects. As we have seen the notion of 'special human vitalism' (an independent power superadded to any primitive material force) was a frequent response to the materialist case.

It will be clear that Bain's theory belongs in the former camp. He takes the common idea of nerve force and gives it a width of application which is strikingly new. In itself the idea was not original, but no one had attempted to explore it with the same level of seriousness or thoroughness. And it gave Bain the possibility not just of uniform, material explanation of the mind, but also the opportunity to reinterpret the association psychology - to give it a 'material substratum' (in J. S. Mill's words) it had missed since Hartley, and an intellectual flexibility to explain human purpose, potential and agency, something it so bleakly lacked in James Mill's classical utilitarianism. Even a couple of decades later Bain's theories of the spontaneity, conservation, and retention of energy were perceived to be a helpful way of short-circuiting what were seen as fruitless metaphysical arguments about the freedom of human agency - fruitless, that is, from the point of view of a developing scientific psychology. (111) As Edwin Boring pointed out à propos Bain's achievement, it became impossible to think subsequently of the transfer of activity without the transfer of energy; hence it was necessary to find an equivalence in energy terms between cause and

(111) For example Ribot, English Psychology, pp. 252-53; Davidson, 'Bain's Philosophy', 172.
effect. What happened at one end of the causal sequence, as it were, must also apply in the account rendered of the result. (112) This became the norm of scientific explanation in psychology, and as time went on was only residually thought to compromise ideas of human agency. In the meantime, however, Bain’s ideas did not go unchallenged.

There were two sorts of objection. One came from the scientific community, the other from the religious. Both types, though, raised a common problem, that of the transference in conceptual terms from descriptive accounts of the physical world to those of the phenomena of the mind and consciousness. And this problem was to beset all psychologists in the period. Though Bain kept insisting that one should regard consciousness as an effect of the material processes of the organic system, religious thinkers, on the one side, refused to grant this, and scientific thinkers, on the other, were concerned at the analogous nature of the argument. It was all very well to talk about steam engines and telegraph wires in a way that impressed non-scientists like David Masson (who was particularly taken with the helpfulness of the latter metaphor (113)), but, in the end, the organism was not a steam engine, and the nervous system was not a line of telegraph poles. As Roger Smith notes, both Bain and Spencer ‘argued with professional physicists over the nature of physical force and refused to accept force as merely a mathematical function devised by physicists to aid understanding of matter in motion’. (114)


particular, Bain’s ideas were challenged directly by the mathematician, lawyer and classical scholar (and future author of *The Doctrine of Energy* (1874)), D. D. Heath who took issue with Bain’s lectures at the Royal Institution in 1866-67, ‘On the Correlation of Force and its Bearing on the Mind’.(115)

Heath argued that Bain, simply, failed in ‘those departments of science in which the precision of the mathematician and the experimentalist is required.’(116) In the absence of a detailed knowledge of the mode of operation of the nervous system, substitutes from the explanations of other phenomena in the material world would not do. Bain’s analogies betrayed him into scientific nonsense because analogy was treated as fact.

Professor Bain, in ‘The Senses and the Intellect,’ has an odd notion that this ‘undying endurance of an electric wire’ - that is, the fact that its electric state, while chemical actions and reactions are going on, is temporary - is owing to the wire being a ‘compact, resisting and sluggish mass;’ which seems like saying that an elastic ball is more sluggish than a lump of putty.... [the doctrine of the correlation of force] teaches us that there is a certain condition of equivalence in all changes, but it does not tell us what kind of changes will take place under any given circumstances. In what direction the parts of a machine will begin to move, what the reactions will be in a mass of chemical materials, and so forth, are questions to be answered by the engineer or the chemist.(117)

Processes from the organic world cannot be simply extrapolated to the organic, and Heath also points to the uncertain state of physiological research. Despite Bain’s confidence:

physiologists are apparently not yet agreed whether there is


---

(115) Bain’s essay of the same title, which drew on the lectures, was published in *Macmillan’s Magazine*, 16 (1867), 372-83.


any special 'nerve force,' or agent requiring a name; that is, any special condition of the matter of the active brain and nerves apart from its state of motion, temperature, electric and chemical energy, analogous to the electric tension of a galvanic pile or frictional electrical machine, the production of which abstracts, for the time being, a definite quantity of physical energy from other forms, to restore it again, in heat or some equivalent, when 'nervous excitement' abates. Professor Huxley, lecturing in 1857, maintained the affirmative: whereas Professor Du Bois Raymond, in another lecture, inclined to think that 'what we have termed the nervous agent is some internal motion, perhaps even some chemical change, of the substance contained in the nerve-tubes,' which he conceives as the result of a special arrangement of 'minute centres of chemical action, acting upon each other electrically, and controlling their mutual deviations from their position of equilibrium.'(118)

Du Bois Raymond’s theory sounds like some rocky seventeenth or eighteenth-century speculation of the kind entertained by Locke or Hartley, and it is presumably deliberately chosen by Heath for this reason because the essay has a consistent, though subdued, mocking tone. But Heath’s point is real. Theories like Bain’s though they have a cogency in principle, are difficult to sustain in detail, and he asks some hard questions of Bain. For instance he points out that Bain’s ‘false physics and equivocal terminology’ does not distinguish between ‘stimulus, moving force, and energy’, and the proper discriminations are blurred.(119) Bain simply fineses the problem of criteria for measurement for instance, and Heath issues a hard experimentalist’s challenge: It is fit that the psychologist should give us some hint how he would have us proceed. What is the proportion, as matter of pure consciousness, between a sound, a colour, a touch, and an emotion of surprise or grief, that Mr. Bain should tell us[;] the truth of his theory depends on these proportions being found to be the same as those of their respective physical supports.(120)

(118) Heath, 'Bain on the Correlation of Force', 73.

I suppose that the answer to Heath's question would lie in the measurement of electrical 'evoke potentials' in the neurological 'wiring' of the brain, something which modern-day psycho-physiologists undertake, but his question was unanswerable in these or any other experimental terms in the 1860s. The issue, once again, raises that of the value of scientific theories which are now defunct. In positivist or experimentalist terms they are of historical interest (in its pejorative sense) only; yet they prevailed for a time, and therefore they were 'true', on some Popperian criteria of falsifiability for instance, for the disciplinary purposes for which they were devised. At the same time they also led to better theories and better findings. In this light it is interesting, once again, to consider the publishing circumstances and wider intellectual context of Heath's essay.

It was originally published in The Contemporary Review in 1868. The Contemporary Review was founded in 1866 as an Established Church response to the successful, pro-scientific and politically liberal Fortnightly Review edited by Lewes and, later, John Morley. Though it originated within the church camp, and was controlled by the Dean of Canterbury, it was un-dogmatic. The Dean banished 'all sectarian and class prejudices', and published writers with diverse views. Spencer had a long association with it, for instance, and the journal

(120) Heath, 'Bain on the Correlation of Force', 75.


welcomed contributions by Catholics also. There was no point, theeditors realised, in being dogmatic; the journal needed to be able to
put a respectable religious case in the context of serious-minded
scientific work. However, it is tempting to connect the editorial
outlook of The Contemporary with the intentions of Heath’s essay which
aimed to compromise the scientific credentials of the new psychology.
Again the context should be born in mind, for the doctrine of the
correlation of force became an issue of wider religious controversy.

The doctrine was attacked for instance by John Tulloch in his
influential Movements of Religious Thought (the remarks are part of a
general attack on John Mill’s religious views):

"...once suppose that there is more in heaven and earth than we
can gather from the knowledge of phenomena - that man is
more than matter - that mind is more than any combination of
matter, and all analogy between mental force and other forms
of force disappears. Does it not disappear when the facts
are looked at in themselves? All forms of material force
are obviously in themselves mere transformations. They
operate unconsciously; they are merely changes -
transferences. We recognise force in them because we have
experience of force in ourselves; but they do not themselves
yield the idea of force. We could never get the idea from
them; and therefore Comte ... would have the term disused
as misleading - as implying something of which we have no
knowledge. The idea of force is only given in the action of
the mind; it is the product of self-consciousness - of
nothing else. And does this not separate conscious Will
from all other facts of Nature? It is confessedly
untranslatable. No process of merely natural change can
generate it. Does it not, therefore, by its very character,
stand apart from the category of matter, and compel us to
recognise its distinction? Does not, in short, the purely
scientific view of mind, as something in experience
absolutely apart from all other motor forces in the world,
lead us up to the theological view that mind, as
self-conscious, is a singular power - an efflux from a
higher Source than matter?" (123)

This is an adroit, but eventually weak, argument. It is also, in the
history of these debates, an extraordinary one - for here the arsenal

(123) Tulloch, Movements in Religious Thought, pp. 239-40.
of sceptical argument is used to support, not attack, religious conviction. Because the grounds for belief in the materialist case for the relationship between mind and matter are dubious, then sceptical epistemology is turned against itself and doubt produces the invitation to certainty in religious conviction. The argument is poor because it invites belief in case A, merely because it preceded case B which is shown to be unverifiable. No effort is made to adjudicate the relative worth of the two cases, because the whole is written in the interested need to validate one of them. Whatever its worth, however, the kind of argument Tulloch offers here is historically significant in the context of the development of the realist epistemologies which would enable and ground the materialist programmes for a scientific psychology. These kind of epistemologies are in fact to be found in Spencer and Lewes.

In the context of these two kinds of argument, from science and from religion, how, then, did Bain resolve the conceptual difficulty of effecting the transition from matter to mind, from observable force to observing consciousness, from organic function to higher faculty? The answer was by what one commentator - Edwin Boring - has called a 'metaphysical makeshift'. (124) This was a version of the doctrine of 'psycho-physical parallelism'. This doctrine, sometimes known as 'double-aspect theory', was, for the new psychologists, a common way of reconciling the apparent hiatus between physical and mental phenomena. An extreme version of the argument would hold that mental and physical events are separate orders of phenomena with their own regularities and procedures of analysis. But an equally prevalent and strong version held that, though the two orders need discrete

modes of analysis to reveal the full specificity of each, there is a necessary, inevitable and determining connection between them, and they are in the end subject to the same laws. Mill, for instance, held this view. Such an argument of course still has purchase today, but in the mid-to-late nineteenth century its application was a matter of expediency forced by the state of research, the application of method (mentalist, associationist psychology married - not always happily - to physiology), and a hostile public context. As a result it remained, for some, tainted with metaphysical overtones. The result was, in a way, another version of the dualism we have characterised as the most common compromise response to the advance of psycho-physiology. Arguments therefore started about the degree to which the two spheres were to be separated. For the new psychologists the mental and physical planes were only two aspects of one phenomenon, and, as Bain argued so firmly, priority in terms of analysis and causality had to belong to the physical order. The higher faculties, even consciousness itself, were only effects and results of sensitive neurological processes. For others, however, they were utterly separate entities.

James Martineau was one who held the latter view. Responding to Bain, Martineau defined 'Mental Science as self-knowledge: Natural Science, the knowledge of something other than self.' This cognitive bifurcation runs through all our knowledge, Martineau argues. For example, vision is the inner, mental form of light, which is the outer, natural phenomenon; and these 'spheres are of necessity mutually exclusive'. They are 'twins in their birth but without

(125) Davidson, 'Bain's Philosophy', 163.
(126) Martineau, 'Cerebral Psychology: Bain', 502.
contact in their career', and one cannot be subordinated to the other in a deterministic relationship. The two modes are 'absolutely parallel and co-ordinate, and can never be transposed into subordination.' There is a 'necessary duality', and the sciences themselves form a 'dualistic grouping' not a 'monistic' one. 'Neither can question, not [sic] either may borrow, the language and methods of the other.'(127)

This is an extreme version of the 'parallelism' argument, which is used to make all the necessary separations that Martineau needs. Martineau claims that science and literature, for instance, represent separate kinds of mental event and types of inquiry. Whereas the former is arcane, speculative and uncertain, the latter possesses a 'community of nature between knower and known', a kind of self-validating self-evidence. Further, the inner, mental life is not a solipsistic reduction confined to introspection. We can match the evidences of our self-knowledge to the records of human history, politics, jurisprudence, philology and art, where the 'whole essence lies in the internal meaning of which they are the record and the sign, in the invisible and spiritual facts of which they compel the very elements to take charge'.(128) Thus Martineau's epistemological dualism sponsors two further dualisms: a dualism of kinds of discourses, and a dualism of kinds of reading. There are in the world different kinds of writing, and while one is trustworthy, the other is unfortunate. The physiological elements in Bain's psychology are thus 'foreign and intrusive'.(129) At the same time there are different

(127) Martineau, 'Cerebral Psychology: Bain', 502-03.
(128) Martineau, 'Cerebral Psychology: Bain', 504.
(129) Martineau, 'Cerebral psychology: Bain', 505.
ways of reading: the reading for 'essence' outlined above, and the reading of the texts of Natural Science, the nature of which is not specified by Martineau but does not look promising.

Even in itself this is is not a strong argument. For instance, we may wish to ask what happens to these absolute separations if the object of knowledge is itself the inner phenomenon? This, after all, is what the scientific psychologist is after - knowledge of the properties of vision, say. In which case either Martineau would have to acknowledge that these 'inner' modes become objects of knowledge in their own right. (In which case his argument collapses.) Or he is caught in an infinite epistemological slide whereby the terms of understanding anything whatsoever becomes either endlessly-circular discussion, or mere assertion. In this event the argument also collapses because the two sets of terms have anyway become contaminated and the argument rests upon their separation. The self-evidence of the 'natural' (scientific) pole can no longer be posited. Nevertheless, despite its weakness, this might be an effective argument. It is firmly and effectively written, for one thing, and it could command wide assent, from, for example, committed readers of literature. It became common for writers alarmed by the scale of science's advance, but who realised that scornful denial was no longer profitable, to dig themselves into this kind of dualism.

For instance, William Carpenter, as we have seen, resisted the force of the physiological analysis in which he was so eminent, and retained his belief in the essential independence of the higher faculties. Carpenter's position was taken up by the philanthropist, religious writer and early feminist Frances Cobbe in her interesting examination of Carpenter's theory of 'unconscious cerebration' in
1870. (Carpenter had advanced the helpful idea that the brain can work efficiently though unconsciously.) Cobbe, like Carpenter a Unitarian, outlines the extreme physiological case, and continues:

But if this possibility be accepted provisionally, and the possibility admitted of its future physiological demonstration, have we, with it, accepted also the Materialist's ordinary conclusion that we and our automatically thinking brains are one and indivisible? If the brain can work by itself, have we any reason to believe it ever works also under the guidance of something external to itself, which we may describe as the Conscious Self? It seems to me that ... there are two kinds of actions of the brain, the one automatic, and the other subject to the will of the Conscious Self; just as the actions of a horse are some of them spontaneous and some done under the compulsion of his rider. The first order of actions tend to indicate that the brain 'secretes thought;' the second order (contrasting with the first) show that, beside that automatically-working brain, there is another agency in the field under whose control the brain performs a wholly different class of labours.(130)

The argument is built upon a rigorous separation of the various 'orders' of mental life, and Cobbe's - and Carpenter's - concern in the late 1860s was partly excited by the extent to which Huxley, principally, but others too, were pushing the direction of the physiological argument at the end of the decade. It will be remembered that the terminus of the argument was felt to be the alarming prospect of human automatism, but forms of this defensive dualism were continuous from the mid-century.

For instance the 'so-what?' version of the dualistic argument was also available, and could be put by very sensitive and intelligent people, like Tennyson towards the close of In Memoriam (1850):

CXX
I trust I have not wasted breath:
I think we are not wholly brain,
Magnetic mockeries; not in vain,
Like Paul with beasts, I fought with Death;

Not only cunning casts in clay:
Let Science prove we are, and then
What matters Science unto men,  
At least to me? I would not stay. 

Let him, the wiser man who springs  
Hereafter, up from childhood shape  
His action like the greater ape,  
But I was born to other things.(131)

It is not to belittle the emotional and poetic power of the poem, nor the pressure of grief, anxiety and struggle recorded in it, to say that the argument vis-a-vis physiological psychology in this section amounts to little more than the turning of a back followed by the re-assertion of other beliefs. In terms of the larger structure and argument of the poem, this section gathers emotional weight and argumentative point from the renewed assertion of purpose, despite the alarming pre-history of ape-ish origins, or apparently spiritually-flattening theories of the material organisation of the brain. As a specific, detailed and contemporary argument, though, it gains its effect from the prestige of its literary form *per se*. By virtue of the fact of being poetry, one might say, it becomes invested with ideas of a fine caring for human values against the mutinous tinkering of psychology, as we have seen. Frances Cobbe also, like the writers examined in section one of this chapter, believed that literary works should continue to be properly literary and concern themselves with the spirit and fine feeling. Modern literature placed too much emphasis on the influence of environment, and Cobbe believed, like Henry James, that science had spoiled George Eliot’s work.(132)


(131) *The Poems of Tennyson*, ed. Christopher Ricks (London, Longman and Norton, 1969), pp. 970-71. Ricks notes that the reference in line three to the ‘magnetic mockeries’ contained in contemporary theories of the brain (which is reminiscent of Bain’s theories in *The Senses and the Intellect*) is thought to have been derived by Tennyson from a speculation in Robert Chambers’s *Vestiges of Creation* (1844).
As for the softer version of 'psycho-physical parallelism' - that deployed by Mill, Bain and, at this stage, Lewes too, (133) - it was a necessity of the times. As D. B. Klein argues, following Boring, Bain was an ontological monist, but perforce an epistemological dualist. (134) Bain tried to develop a psychological theory which was grounded in a thorough-going application of materialist explanation. But he also worked within the tradition of the association psychology, and Bain's amalgamation of associationism with theories from physiology (and Spencer's joining of it to a general biological theory) were regarded as the most advanced and successful of psychological theories in the nineteenth century. Ribot, in his assessment of English psychology in the 1870s, maintained that Bain's work - along with that of J. S. Mill and Spencer in England, Luys and Volpian in France, and Herbart and Muller in Germany - provided the major impetus towards the successful amalgamation of the association psychology with a physiological programme, and thus guaranteed a secure basis for subsequent research:

we cannot help believing that this law of association is destined to become preponderant in experimental psychology, to remain for some time at least the final mode of explanation of psychical phenomena; and thus it will take in the world of ideas a position analogous to that of attraction in the world of matter. (135)

Yet the marriage of associationism and physiology was not so smooth.


(133) See for example, [G. H. Lewes], 'Voluntary and Involuntary Actions', Blackwood's Edinburgh Magazine, 86 (1859), esp. 305-06 in which Lewes endorses Bain's view, though a little reluctantly. Later - in Problems of Life and Mind - Lewes rejected Bain's 'moderate' line and adopted a much more forceful inter-actionist position.

Associationist theory is prominent in *The Senses and the Intellect* and *The Emotions and the Will* in a number of ways. As a good associationist, and one who felt himself in the vanguard of the latest scientific psychology, Bain is very clear in his opposition to any conception of innate, specially-human faculties. Nevertheless he retains faith in some of the older methods and approaches. He founds many of his perceptions on introspection, or an appeal to common experience, or to the evidences of literature. For example he discusses depression (or as he calls it nervous exhaustion or fatigue) by reference to Tennyson’s poem ‘Mariana’ (1830) and makes an ‘appeal to each person’s experience for the perception of it’. In *The Emotions and the Will* he defends the use of introspection, and the casual observation of others, for the understanding and classification of the emotions. But he is cautious about the extrapolation of theories from remembered feelings, and so insists that we have to follow the physical evidence, in expressive gesture and other manifestation of strong feelings, as a check on the suspect evidence of memory. Though he understands the limitations of introspection and proposes the construction of controlled experiments to monitor the exercise of the will, much of this has the feel of makeshift. His clear-minded sense that complex emotional states are rarely ‘pure, detached, or isolated’, and that therefore all record of them is in


(137) *The Senses and the Intellect*, p. 124. He likewise discusses the perverted pleasures of power by reference to Dickens’s Quilp from *The Old Curiosity Shop* (1841).

(138) *The Emotions and the Will*, pp. 50-53.

some sense a reconstruction, and that such reconstructions are
times coloured by overbearing desire ('Impassioned or Exaggerated
ends') or other present emotion, does not lessen his recommendation of
introspection and unstructured observation. (140)

It would be wrong to suggest that Bain's deployment of
associationist theory is tired or reluctant. He was an enthusiast for
these methods, on which he had been intellectually reared, until the
end. Rather I am suggesting that, coming at the end of this
tradition, he has a lively sense of its limitations as well as its
strengths, and he sees the edges of it in ways which were, apparently,
invisible to James Mill for example. His perception of the writing of
history (a central concern of many who moved in the circle of the new
psychologists), is markedly different from that of James Mill, and the
difference in part follows from Bain's reservations about the accuracy
of memory, and brings into focus a larger difference in attitude to
the mind's operations. Mill's History of British India (1817)
doggedly tramps through a six-volume wasteland of arcana and
civil-service detail (an often bizarre jumble of exotica and
statistics) organised on lines which stress above all the
comprehensibility, even the easiness of understanding, of such complex
history. (One of his preferred forms of expressing it is the list or
catalogue.) It is not in the least self-conscious about its own scale
or ambition, nor aware of difficulties in method or presupposition.
By the time Bain, Spencer, Lewes or George Eliot came to consider
these problems they could not be so blithe about their assumptions.
Without relinquishing their faith in the reasoned understanding of the
past, the problem of history, and the writing of history, has for them

(140) The Emotions and the Will, pp. 452 and 455.
become a more complex, intellectually-taxing business. I will have more to say about this in discussion of Spencer and Lewes, who are more acutely aware - as they jettison associationism more and more - of these problems which are epistemological at bottom. But Bain is not unaware of them. He writes in *The Senses and the Intellect*:

> Human history at large is a grand ensemble of succession, which no mind can totally comprehend, and which consequently presents itself in innumerable aspects to the intellects of men. (141)

Bain's caveat appears in the context of a long discussion of the associationist Law of Similarity. (The connection between James Mill's lists and the associationist 'ensemble of succession' is easily grasped.)

The processes included under this law comes into being initially, Bain argues, by a reactivation of the sensory-nervous disposition acquired from a previous instance. The system, as it were, recognises a previous state of itself. Obviously this becomes more effective through repetition, and in cases of partial similarity, this law shares its effects with that of the Law of Contiguity. Bain's idea is not far removed from one of Hartley's and is therefore classical, but Bain also posits the formation of 'such a thing as an energetic power of recognising similarity in general'; (142) that is, not simply a passive, reactive mechanism, but possesses a power, almost, in its own right. Bain's wording is rather equivocal. He speaks frequently in phrases like 'the attractive force of similarity behaves to be very energetic', (143) which sounds portentous, but occludes the question of

(141) *The Senses and the Intellect*, p. 500.
(143) *The Senses and the Intellect*, p. 491.
agency. Is Bain saying that the perceiving subject is energetic in such a way? Or that his/her nervous system is energetic? Or that the sensational counterparts of objects-in-the-world eagerly seek out their fellows by means of some unacknowledged property of the nervous system? The point is an interesting one for Bain's conception of the functioning of the mind in general, his conception of the workings of associationist law, and for questions like the epistemological one raised by the writing of history. Bain's answer, though, is actually a finesse. He stampedes the point through in thirty pages of detailed example which look like classical associationist case-law, and therefore disguise a little the import of his proposal (for it could be a significant amendment to associationist theory). He talks rather unclearly and unhelpfully about the idea of history as repetition, but one cannot help feeling that the thrust of the argument has not been followed through. It is another indication, perhaps, that associationism is coming to its very edges. Bain does not declare himself a naive realist (like Hartley or James Mill, for example), but this is the implication.

Bain's detailed technical amendments to the various laws of association are thoroughly set out elsewhere, so I will not dwell on the details. In major respects he is close to the classics. His analyses of many of the 'higher faculties' - like the intellect - follow associationist lines for the most part. (Intellect is built up by the combined operation of the various laws of association on the exogenous stimulae.) He also widely and continuously applies the utilitarian pleasure/pain theory as a motor for psychological

(144) The most comprehensive and detailed account is given, as ever, by Warren, A History of the Association Psychology (New York, Charles Scribner's Sons, 1921), pp. 104-17.
development. (145) This idea is not peculiar to associationism (it is used in psychoanalysis for instance), but Bain’s ethical outlook is utilitarian through and through as his contemporaries realised. (146) He draws on James Mill’s Fragment on Mackintosh and holds that conscience, for instance, is ‘moulded upon external authority as a type’; it is not ‘a distinct attribute’ as Dugald Stewart and others of the Scottish school maintained. (147) He is alert to the strong case for this view (that conscience is culturally specific and not a universal, abstract entity, and that it may be coercive) and he argues this with confidence. (148) Finally, his physiological ideas are clearly constructed on associationist lines. The development of the embryonic nervous system into a functioning individual system sounds, in the description of the storage and discharge of energy, like the development of the mind by the laws of association, and this aspect of Bain’s work has already received commentary. (149) However, there are ways in which this is not like associationist thought, and Bain takes significant distance from it.

J. S. Mill highlighted the most important of these. As we have seen he seized on Bain’s psychology as a solution to the problem of activity and agency in associationism which had been highlighted by Coleridge and others. For Mill, Bain made two ‘great additions’ to

(145) See for example, in The Senses and the Intellect ch. 2, the discussion of the types of pleasure available from each of the senses, and, especially, the discussion of the formation of the will in The Emotions and the Will, ch. 6, esp. pp. 441-43.


(147) The Emotions and the Will, p. 313.


associationism: the physiological parts of his theory, and ‘the recognition of an active element, or spontaneity, in the mind itself’. (150) This active element follows from Bain’s physiological hypothesis of reserves of energy in the system which seek discharge and use. The system—which includes both mind and body—is capable of initiating, controlling and developing its own activity in significant moments in both its formation and mature constitution. Learning is possible, and the sensitive system has sophisticated mechanisms for this, particularly the muscle-sense, as Croom Robertson noted in 1877. Bain’s ‘discovery’, he wrote, ‘(for its hardly less) of the element of muscular activity in objective perception’ was of major importance, though Robertson was less happy about his overall account of knowledge. It was too ‘analytic’ and ‘formal’ in the manner of Hartley. (151)

Bain’s account of learning is subtle. Learning is not merely a matter of intellectual or conceptual understanding, but includes learning beyond ratiocination and even through feeling. (152) Bain’s ‘natural history of the feelings’ was widely approved, by Mill and


(151) George Croom Robertson, ‘How We Come By Our Knowlege’, Mind 1 (1877), 120. Bain’s account of the importance of the muscle sense in cognition is given in The Senses and the Intellect, pp. 73-111 and 362-404. The former describes mechanisms and inferences, while the latter discusses more generally the epistemological questions raised by it. Smith, ‘Physiological Psychology and the Philosophy of Nature in Mid-Nineteenth-Century Britain’ covers this topic widely, including Bain’s contribution.

(152) See Bain’s note to John Mill’s 1867 edition of James Mill’s Analysis of the Phenomena of the Human Mind, 2 vols. (New York, Augustus M. Kelley, 1967), I, 36. The note discusses the origin and growth of the ‘tender affections in human beings’ through initial contact with the mother. This enlarged sense of knowledge growth would have been understood and approved by George Eliot.
Lewes for instance. (153) It attempted to give a classification of the emotions on the model of the taxonomies used in the orthodox natural histories, (154) and hence give them a status they lacked in the mentalist bias of associationism and in classical utilitarianism (as, for example, in J. S. Mill's account of his upbringing in the *Autobiography*). Bain also described a psychological system which does not run in one uniform direction. The mind and the body are full of conflicting and, in the initial stages, unformed energies and impulses.

Perhaps the compliancy and conflicting impulses of the human frame are the cause of all this uncertainty and mistake [in the early years], rendering it necessary for us to resort to experience and science, and a higher volition than appetite, for the guidance of our daily life. (155)

This is an argument that would appeal to evolutionists, and it is one to which Bain is attached. He repeats it in *The Emotions and the Will*, for instance: it is frustration, pain and the 'cycle of annoyance' in the child that stimulates the acquisition of the higher faculties. (156) It is human inability that encourages the acquisition of ability; the human faculties are not derived passively from the world outside on a smooth learning curve, as classical utilitarianism held.

---

(153) Mill, 'Bain's Psychology', 361-64; Lewes, 'Bain on The Senses and the Intellect', 771. See also Davidson, 'Bain's Philosophy', 170. Ribot though, following Spencer's critique, is less happy. The coverage of the emotions, he concludes, is the weakest part of Bain's psychology. (English Psychology, pp. 222ff.) For details of Spencer's criticisms see the comments in section one of this chapter and chapter three.

(154) The 'natural history' method is described by Bain in *The Senses and the Intellect*, pp. 83ff., and *The Emotions and the Will*, 'Preface'.

(155) *The Senses and the Intellect*, p. 255.

(156) *The Emotions and the Will*, p. 352.
Theodore Mischel has claimed that John Mill misinterpreted Bain on the question of spontaneous activity. He argues that Mill illegitimately converted what is clearly a physiological concept into a psychological one and ignored the question of agency. How can a rudimentary power in the system be said to wield authority in the exercise of the higher faculties in the mind? Bain is thus not, as Mill thought, an answer to Coleridge. (157) However, though Mischel does identify a genuine conceptual problem, it is one that is settled in outline, if not in all physiological detail, by the shape and direction of Bain's theory. We have noted that he anticipates the modern psychological text-book in the arrangement of his material. (It develops from an account of the simplest of phenomena to the most complex.) Bain's is thus a genetic and dynamic account in both form and content. The adult mind comes from the complicated, relational interaction of diverse forces, some physiological, some social, some (eventually) the (relatively) free-acting forces of the higher faculties which can set goals, solve problems and control behaviour. Mischel's argument seems rather trapped in the mid-nineteenth-century dualism which Bain's theory was in part trying - not wholly successfully - to avoid, for Bain's relational psychology was a real step towards the resolution of the problem.

Bain was not an automatist; he did not believe that human beings acted in unwitting response to the promptings of physiological or environmental forces. The weight of his attention in both The Senses and the Intellect and The Emotions and the Will is all the other way, towards the analysis of very obviously sophisticated forms of adult behaviour in an advanced industrial culture. Indeed he was accused by

some of neglecting comparative psychological data from less apparently sophisticated subjects, children and 'primitive' races and cultures. (158) He specifically denied any accusation of offering an automatist theory in *The Senses and the Intellect* in 1855 and repeated and expanded this through subsequent editions of his work. In 1855 he thought the purchase of reflex analysis on mature human behaviour to be 'comparatively (not entirely) insignificant'. (159) He preferred to see humans as acting through complex emotional and intellectual sequences; thus in the response to art, for instance, an initial feeling of organic pleasure is only the beginning of a conscious, though no-less emotional, response. (160) In the third edition of 1868 - when the debates about automatism were again becoming furious as we have already noted - he expanded this section to make a more prominent and careful denial. (161) In fact Bain offers an interesting and original account of the higher faculties which never loses sight of their origins in the lower forms of organic and mental action.

To begin with he attempts to redefine consciousness. He takes issue with the standard definition of the time, that consciousness is only to be distinguished from sleep, death or other forms of insensibility. He lists twelve variants of this definition such as: responsiveness to pleasure and pain, capacity for acts of attention, discrimination, and so on. These however, says Bain, are simple subsidiary re-statements of the initial proposition in which consciousness is 'co-extensive with mental life'. (162) It is this

(158) By Spencer, for example, 'Bain on the Emotions and the Will', 252-53. Also Ribot, *English Psychology*, p. 249.

(159) *The Senses and the Intellect*, p. 260.


proposition which Bain wishes to challenge. Consciousness should not be defined so as to restrict it to inward-looking, passive contemplation. To so confine it to introspection damages mental science. (163) Instead Bain divides the phenomena of consciousness into two: emotional and intellectual consciousness. Emotional consciousness comprises feeling, overt mental excitement, and that apparently neutral state (vis-a-vis pleasure or pain) which is nevertheless a state of nervous excitement whose most common form is an act of attention. Intellectual consciousness includes all the standard forms of the activity of intelligence (discrimination, perception, sensitivity, and so on). Throughout Bain insists, however, that these groups in fact overlap: there is an intellectual component in feeling (for example in acts of attention), and an emotional component in the activity of the intellect (in the reception of sense data, for instance). Even apparently very simple mental events are in fact very complex and bring 'into play those very functions of the intellect that make its development and its glory in its highest manifestations.' (164) Above all what distinguishes consciousness from not-consciousness is the registration of change and difference. It is this - the discrimination between active and passive, inside and outside, self and other, and so on - that enables the mind to build and develop. Consciousness is not the mere state of not-being-dead. The new definition of consciousness as the perception of change was crucial in the development of psychology in the nineteenth century, as we shall see in the following chapters. It is at the core of scientific epistemologies, and was, as Bain's

(162) The Emotions and the Will, p. 605.

(163) The Emotions and the Will, p. 609.

(164) The Emotions and the Will, p. 631.
supporters realised, an important advance, because it conceived of the mind as actively developing and growing. (165)

This relational view of consciousness (that feeling and thought, simple and complex, even conscious and unconscious contents - that is, those things which, through habit, have ceased to be conscious - are mixed inextricably together) is a cornerstone of the new psychology, and it is, incidentally (but not accidentally) mirrored in the fictional procedure of George Eliot. Her novels - uniquely perhaps - deploy a striking range of intellectual reference and information with a detailed and sensitive rendering of human emotional situations and predicaments, such that the effect on the reader is to blur any conventional psychological categories he or she may wish to hold, for example the intellectual/emotional or mind/body distinctions. Thus her account of Lydgate's scientific research in chapter 16 of Middlemarch (which conveys so well the pleasures of this activity) is rendered almost entirely through description, vocabulary and imagery drawn from physical and emotional activities and states. Lydgate is 'enamoured' of 'arduous invention' (an emotional vocabulary to describe an intellectual venture).

As he threw down his book, stretched his legs towards the embers in the grate, and clasped his hands at the back of his head, in that agreeable after-glow of excitement when thought lapses from examination of a specific object into a suffusive sense of its connections with all the rest of our existence - seems, as it were, to throw itself on its back after vigorous swimming and float with the repose of unexhausted strength - Lydgate felt a triumphant delight in his studies, and something like pity for those less lucky men who were not in his profession. (166)

The mixture of emotion, thought, and physical (organic) feelings of

(165) Mill, "Bain's Psychology", 371-72; Davidson, "Bain's Philosophy", 166.

(166) Middlemarch, p. 194.
pleasure is very striking here.

Turning back to Bain we see that, as well as stressing the intertwining of thought and feeling, he is also continuously keen to alert the reader to the organic basis of it. We have quoted his statements to this effect earlier, but it should be understood how persistently he makes the point alongside the related one that complex intellectual achievements have their origins in simpler mental facts. So, the complex pleasures of expended effort - as here in the description of Lydgate's research, or in Bain's example of vigorous walking and vigorous thinking (note the pairing of a physical and a mental activity) - mingle the pleasurable expenditure of energy with the exercise of abilities (motor or mental) and the learning to be derived from effort, especially muscular effort. The organic factor, though, underlies all this:

Thus we derive another illustration of the accidental, temporary, and intermitted presence of the mental property, and the indispensable and perennial character of the corporeity in giving origin to moving power. (167)

It is 'organic energy' that is the 'general and fundamental fact.' Consciousness is just an adjunct of it, an 'occasional and accessory fact attached to it.' (168)

Bain, here, has not tried to develop a theory of the unconscious - save the account of what might be performed without attention through habit - and cannot be therefore thought to be in the line that reaches towards the 'Freudian Revolution'. His ideas are not in this respect as far-reaching or daring as some contemporaries such as Carpenter (with his notion of unconscious cerebration) or Spencer

(167) The Emotions and the Will, p. 479.
(168) The Emotions and the Will, p. 475.
(with his quasi-Lamarckian ideas about group - or race - memory) or Lewes (with his sophisticated sense of the 'stream of consciousness'). But Bain's examination of the question of consciousness does, in its theoretical trajectory, look towards this. Its best elements are concerned with a more complex and relational examination of the components of the higher faculties, and a consistent and coherent attempt to theorise them, first, in good associationist manner, in relation to the rudimentary facts of mental life (and hence he embraced a developmental perspective), and, second, in relation to organic functions and physiological processes. The latter is not, in detail or explanation, fully sustained, but the effort is made to re-conceptualise important psychological elements which were also central elements in public discussion and ideological argument in the period. Of these none was more crucial than the theory of the will, because the will was seen as the cornerstone of so many different buildings at once, like the factory and counting house, the churches and other ethical centres, the schools and the prisons and reformatories and the poor houses, and wherever it was that learning flourished in mid-nineteenth-century Britain (not often the universities). In all these places - in the recommended regimes of moral behaviour and religious duty, and the destinies of individual economic success - the fierce exercise of the will was paramount. I will therefore conclude discussion of Bain's psychology with a discussion of his theory of the will, thus again joining the psychological to the social context.
III. Bain’s Theory of the Will

The will was central to Victorian notions of economic performance and success in the Smilesian ideologies of the self-made man and postponed gratification. It was important to religious experience because of the stress placed on the effort to salvation through individual striving and worth, and because contemporary theological argument held that the will was the indication of special distinction that separated man from brutes. It was important in ethical argument because it justified ethical prescriptions and rewards. It was important in ontological arguments because it declared man to be more than the sum of his determining causes. It was important in epistemological arguments because it was deeply connected with theories of belief. It was important in arguments over social policy and education for a variety of these reasons, and finally it was important in psychological argument because psychology was at the junction of all these things, and because it appeared at the very top in most hierarchical taxonomies of the human faculties. If a new beginning could be made towards its explanation, then psychology could start to think of itself as on the road to an integrated scientific programme and a new way of conceiving of the human mind. How, then, did Alexander Bain theorise the human will?

In the Autobiography Bain records that the section on the will in The Senses and the Intellect gave him the most trouble. He had to draft and re-draft, and still remained dissatisfied.(169) Nevertheless, Lewes in his review in The Leader in 1855 recognised the importance of Bain’s idea and urged him to expand it, which Bain did (169) Bain, Autobiography, p. 234.
in *The Emotions and the Will*. (170) Lewes praised Bain for his analysis of the formation of the will from reflex action, as did Spencer. (171) Following the publication of *The Emotions and the Will* in 1859 Lewes commented that Bain had ‘furnished more suggestive and instructive contributions than any psychologist we are acquainted with, to the difficult and still unresolved problems of the Will.’ (172) His contribution was therefore distinctive for his fellow workers in the new psychology. A glimpse of the standard account of the role of the will - that against which Bain and Lewes were reacting - is given by J. A. Froude - friend and biographer of Carlyle, friend of Arnold, and strict churchman - in an essay on Spinoza in 1855. Spinoza, it is important to note, was regarded in the mid-50s by Lewes (and others - George Eliot translated him) as inaugurating the ‘First Crisis in Modern Philosophy’, the shift from ontological to psychological argument. (173) He was therefore a crucial figure. Froude’s article discusses the free-will (‘necessitarian’) question, and Spinoza is

(170) Lewes, ‘Bain on The Senses and the Intellect’, 772. Lewes felt that Bain did not persevere far enough with the ‘organic’ perspective. He repeated this criticism even after the publication of *The Emotions and the Will* five years later in ‘Voluntary and Involuntary Actions’, 304. These criticisms tell us something about the direction his own work was taking. He is impatient with Bain’s mentalist (associationist) emphases, despite his enthusiasm for Bain’s work as a whole. This view was echoed by Spencer also. It is noticeable that all three of Lewes’s pieces on Bain written in the ‘fifties are markedly more enthusiastic about those aspects of his work which have a more prominent physiological perspective, though the call for expansion of the section on the will in 1855 must have been in part an attempt to publicise future work for Bain when sales were low. Lewes, who had known him for 15 years, would have been well aware of his plans for a second volume.

(171) Spencer, ‘Bain on The Emotions and the Will’, 244.

(172) Lewes, ‘Voluntary and Involuntary Actions’, 299.

held, in effect, to argue against man's possession of free-will in the terms Froude would recognize. He concludes that if the free-will argument is accepted, then,

man is what he has been hitherto supposed to be - an exception in the order of nature, with a power not differing in degree but differing in kind from those of other creatures. Moral life, like all life, is a mystery, and as to dissect the body will not reveal the secret of animation, so with the actions of the moral man. The spiritual life, which alone gives them meaning and being, glides away before the logical dissecting knife, and leaves it but a corpse to work with.(174)

This is a style of argument with which we are acquainted: rhetorically belittling, anti-rational, and arguing for the end of argument. Its substance, too, is familiar: there are categorical differences between man and the rest of nature, between humans and animals, and between the moral and spiritual life. The will is the special preserve of the first terms in all of these pairings.

This view is also shared by James Martineau in his critique of Bain. Bain's theory (that the will emerges from the organism and not the mind alone) is null and delusive, because it 'comes out of nothing' psychologically-speaking. It is 'numb and foreign to us'. If Bain had placed the functions of the will 'within the limits of consciousness' then his problems over the higher functions would be over. Martineau denies that the muscle sense can play any part in the cognition of space and extension because mere sensation cannot render qualitative difference. Our perception of, say, length is an act of 'personal causation', and such cognitions are inseparable from the agencies of self and personal identity.(175) Bain's theories do


(175) Martineau, 'Cerebral Psychology: Bain', 507-10.
'nothing else than, in the very act of patronising experience, destroy its fundamental postulates, and open the way to every idealistic dream.'(176) Bain of course would deny all the principles on which Froude and Martineau base their arguments, but his supporters realised the need to tackle the problem. J. S. Mill thought it necessary to place Bain’s work in the context of ‘the Free-Will controversy’, and argued that Bain, rather than adopting a Necessitarian position, ‘adheres, in a unqualified manner, to the universality of Cause and Effect, or the uniformity of sequence in natural phenomena, to which he does not think the determinations of the will are in any manner an exception.’ Mill and Bain both believe that ‘the free-will question is emphatically one of law’. (177) Thus the bare-bones of the controversy are laid out: is the will a function or a special faculty?

A more interesting, moderate defence of a religious conception of the will than that given by either Martineau or Froude, and one which takes account of the ‘uniformity of sequence in natural phenomena’, is offered by the non-conformist J. D. Morrel in his composite review of psychology books in 1856. Morrel summarises the state of play in psychology in the ‘fifties very lucidly. After the advance in knowledge of the nervous system, the reflex mechanism ‘has begun to claim for itself the origination of many phenomena which were before attributed to the direct effort of the mind, or the will.’ So, ‘many actions are performed by us, and performed consciously, which are not in any way the result of purpose, forethought, desire, or adaptation,

(176) Martineau, ‘Cerebral Psychology: Bain’, 511. Martineau calls Bain’s theory ‘idealistic’ because it relinquishes any outside authority for cognition, ‘all externality disappears in the Ego’ (512). Martineau’s argument is a travesty of the epistemology of the new psychology.

and which therefore cannot be cited as any illustrations [sic] of our voluntary activity.' Further, the 'physical economy of our being' operates 'independently of anything connected with our own personal will or intelligence'. It harmonises 'a pre-arranged system of impulses' to perform certain functions, but the will can only operate through the nervous system. It has no extra-material being; and willed actions can even be unconscious, which establishes that the nervous system is 'really automatic'. There is a 'great automatic centre' (presumably located in the spinal column and lower brain) which is capable of executive action independent of consciously-willed activity and which can respond to exogenous stimuli (as exemplified by hypnotic states).

Morrel's interpretation of these findings is benign. The human organism, with its integrated functions and abilities, enacts the 'most beautiful and harmonious co-ordination' between thought, the organism, and 'the order of universal nature in the midst of which we are placed'.(178) This harmony is reflected in:

a constant tendency throughout all being to advance from the more material form of existence to the more immaterial; from the more instinctive regions of intelligence to the more rational; from the passive to the active; from the dependent to the independent; from complete identification with nature to the higher life of a self-determining individual.(179)

Morrel sees that 'the regions of physical law and moral order' must remain adjacent. If they are forced apart then disaster threatens. The 'old watch-cries of materialism and pantheism' must be abandoned by the traditionalists and co-operation with science must be sought by religious minds seriously interested in defending their faith. It is

(179) Morrel, 'Modern English Psychology', 356.
religion that must adjust to a new scientific age. (180) His account is an interesting mix of ideas. It is laudable in the sophistication of its information, and the independence of its outlook. It is also - from Bain's point of view - incoherent.

It is incoherent because its conclusions do not follow from its premises. Morrel was critical of Bain's *The Senses and the Intellect* because it failed to offer a significant 'generalization' of 'organic life'. (181) But Bain's theory did posit a relational model for the mind, and he does offer a graduated account of the ascension from the simple to the sophisticated in the formation of the adult consciousness. Both of these things are theoretically reconcilable with Morrel's teleologically-smooth account of the mind's progress. But Bain also posits a *conflictual* model which is not. Bain's underlying conception is that intelligence, will, and the other higher faculties are born from, and find their principle of growth and change in, turbulent difficulty. They grow by materially-dialectical, and not by ideally-teleological, activity. Bain is plain about this in his books, both in statement, and in rhetoric. He frequently uses images, metaphors and illustrations drawn from combat and battle, the invasions of destroying Vandals, the training of violent animals, the struggles of the entrepreneur, or the deeds of the fanatic or Irish terrorist (his example is Daniel O'Connell). These things, and the underlying conception which provokes them, cannot be smoothed into generalisation in the way Morrel would wish. Morrel argues that our faculties are organic in origin and process; but by the time he has come to his conclusion these things might as well never have been -

for instead there is as agreeable a prospect as any crusty high churchman would wish. From such a vantage science and religion could indeed gambol together freely.

Though an opponent like James Martineau could hold that Bain’s theory of the will was as mechanical and shrivelled as that of the classical utilitarian theorists, (182) in fact Bain took his distance from this position. He attacked the notion that personality and human agency are only reward-stimulated. (183) Bain, instead, offered an account of the origins and initial growth of the will which attempted to be wholly organic, spontaneous and developmental. In The Senses and the Intellect he posits an innate stimulus to volitional action, but this is not an innate mental faculty in the Scottish manner. Rather Bain finds his inspiration in the physiologist Muller, and it is a proposition about energy rather than entity. (184)

In The Emotions and the Will this idea is developed further. There it is argued that there is a spontaneous discharge of nervous energy (though it is impossible to specify the actual anatomical mechanism or physiological nature of this discharge at present). Gradually, through repetition and other factors (like environmental conditions) certain of these paths of discharge become facilitated and regularised, most particularly those related to certain organs or muscles. The will originates in the complex development of these neurological mechanisms. (185) Bain relates this to a number of

(182) Martineau, 'Cerebral Psychology: Bain', 507.
(183) The Senses and the Intellect, p. 80.
(184) The Senses and the Intellect, pp. 257 and 289.
(185) The Emotions and the Will, pp. 331-33. For the latter point see also p. 348.
observable features of the normal human constitution and regular human behaviour. For example, one of the will’s sources of origin lies in the action of the muscles, the ‘organic condition’ of which stimulates their exercise and the exploration of their powers. (186) Bain finds a related instance in the growth of appetites, which he defines as ‘a combination of instinct and education’. That is, renewed ‘primitive cravings’ demand regular satisfaction by action undertaken by the will. (187) Likewise, Bain notes the provocation of a restraining will by counterproductive displays of emotion. (188) And so on: the will is built up from complex sequences of such half-organic, half-mental developments.

The will is not, therefore, born fully-formed. The rules which govern its development are derived from associationist thought, and the prime mechanism which governs their operation is the pleasure/pain matrix. It is thus that feeling and action become linked:

The power of cohesion or association operates to join together the two facts thus brought into accidental embrace, and after a time, the pain can stimulate the precise action, without any spontaneous coincidence of the two. (189)

The linking together – by originally accidental association – of feeling and necessary action drives forward the development of a willing power to encourage or prevent certain events. Pleasure/pain is paramount:

Without some antecedent of pleasurable, or painful feeling, primary or derivative, the will cannot be stimulated. Throughout all the disguises that wrap up what we call motives, something or other of these two grand conditions

(186) The Senses and the Intellect, pp. 83ff.
(188) The Emotions and the Will, p. 34.
(189) The Emotions and the Will, p. 343.
can be detected. (190)

Though other auxiliary forces will come into play at a later date, such as imitation of approved or desired behaviours from the outside world, these 'acquired' abilities only encourage the development of a psychological force already in place and which has already been developed directly from the conditions of the organic system. (191)

Bain is very clear that the whole process is conflictual and difficult. There is nothing either inevitable or teleological in it.

The first steps in our volitional education are a jumble of spluttering, stumbling, and all but despairing hopelessness. Instead of a clear and distinct curriculum, we have to wait upon accidents, and improve them when they come. (192)

The will is, in a striking phrase, 'a machinery of detail' (193) in a process which emphasises development, change and growth. But that growth is opportunistic, even random, in essence. It is dialectical and evolutionary - allowing for all of that word's mid-Victorian weight - and not inevitably progressive. And Bain was conscious of the consequences of this theory. In an essay from 1871 on 'Darwinism and Religion', written as a contribution to the heated discussion of Darwin's Descent of Man, Bain argues for a conciliatory position between science and religion. In the end, evolutionary theory

neither shuts out God, degrades our conscience, checks our belief in the power of communion with the Divine mind as far as our faculties will permit, nor diminishes our hope of immortality, may we not then even while allowing the theory as probable, give rein to glorious conceptions and inspirations which flash upon us in happy moments of thought, and feel that all things are possible to us - that

\[\text{(190) The Emotions and the Will, p. 394.} \]
\[\text{(191) The Emotions and the Will, p. 381.} \]
\[\text{(192) The Emotions and the Will, p. 343.} \]
\[\text{(193) The Emotions and the Will, p. 381.} \]
we have a never-ending future, and a hope of drawing nearer and nearer to the Almighty Being from whom we derive all and hope for all. (194)

Given the vehemence of his own anti-religious convictions, this is a very elastic usage of 'our', but we can see what Bain is up to at a fraught moment. He is willing to trade-off public profession of orthodoxy against a potentially very damaging charge, public opinion being what it was. It may be thought that he makes compromises with conscience in doing so, but actually the weight of his attention and commitments in the essay as a whole are all towards the evolutionary side and his argument attempts to assert a basis for morality in an evolutionary age unmuddled by ideological distractions. Our descent may be from sources, and by a mechanism (natural selection), insulting to species-pride, but the miracle is we have our reason and intellect, and our will, and our morals, yet. In their content and their exercise nothing need change. Morality, he implies, need only become more human: 'Thus the good of the community becomes at last the end and aim of our moral nature.' (195) This is the end and aim of Bain's psychological work and his theory of the will also.

Bain was a man reacting to close historical events and tendencies, as we all are. But his conception of the will is not immune to some of the prevailing beliefs which may interestingly reflect his own social origins and his - difficult, though successful - career as an academic. After all, Bain thought himself as a utilitarian in ethical theory, though on the 'soft' side. The shape, details and effects of Bain's theory of the will do powerfully


(195) Bain, 'Darwinism and Religion', 51.
challenge traditional and accepted ideas, but the metaphors he chooses to illustrate its action are interesting. They are predominantly concerned with endurance, career advancement and accountancy. Sometimes, indeed, the psychological economy sounds like the running of a bank, or the general circulation of money, as in this discussion of mental concentration:

The fixing of a single feature has by diffusion a tendency to fix all the rest, and although these effects imply a certain draft upon the central brain, they are less costly than rapid alternations from one attitude to another. (196)

There are several descriptions of the circulation of energy in the economy of the will in similar terms. (197) Related to this are images of success offered in both books, like the making of fortunes, or the gaining of knowledge and learning when one's social background is unpromising for such an achievement. (198) The latter, at least, has a clear personal application.

Both The Senses and the Intellect and The Emotions and the Will have plentiful quantities of advice for their readers of a moral or 'self-help' kind, and it is useful to remember that Bain was also, like many of his period, a writer of books and essays to help the tyro intellectual or student, or the 'coming' and ambitious young man. The account referred to above, for instance, which sets out the psychological economy of attaining success - resolution, fortitude, prudence, endurance, and so on - is of a piece with the essays collected in the Practical Essays of 1884. (199) So, 'Intemperance,

(196) The Emotions and the Will, pp. 193-94.

(197) For example: 'The expenditure of power in the case has to be entered in the column of the accounts which is headed "Will", The Emotions and the Will, p. 415n, or the comparison of pleasure and pain to credit and debt. (p. 441).

(198) The Emotions and the Will, pp. 489-90.
indolence, prodigality, neglect of opportunities, giving offence to those that would assist us, and all sorts or reckless behaviour, are sins against prudence'. As failures of the will, they were examples of 'moral weakness'. (200) The too-close identification of morality with the exercise of the will is a problem in the argument here. At points like this it seems that the will is being stiffly offered, almost, as an end in itself.

As ever, though, Bain pictures the acquisition of 'The Moral Habits' as a struggle. They are here pictured as engaged in warfare:

It is necessary, above all things, in such a situation, if possible never to lose a battle. Every gain on the wrong side undoes the effect of several conquests on the right. It is therefore an essential precaution so to regulate the two opposing powers, that the one may have an uninterrupted success, until repetition has fortified it to such a degree as to cope with the opposition under any circumstances. This is the theoretically best career of moral progress, not often realized in practice. (201)

In its picture of the 'still small voice of daily duty' in battle with 'fleshly indulgences', (202) this sounds like 'Victorian' moralising at its most dour. But it is also a voice that is sometimes not very far away in some of George Eliot's writing for instance. Like her, Bain was a person of the time.

As a 'soft' utilitarian, Bain held some attitudes to human feeling and desire which, in the 1850s, were sharply attacked by

(199) Alexander Bain, Practical Essays (London, Longmans, Green, and Co., 1884). For example compare the essay on 'The Art of Study', which deals with methods of self-education, with the example of auto-didacticism from The Emotions and the Will. On the Study of Character (1861) sometimes strikes this note too.


(201) The Emotions and the Will, pp. 500-01.

(202) The Emotions and the Will, p. 503.
intellectuals and writers like Ruskin, Carlyle and Dickens (principally, of course, in *Hard Times*), and some features of Bain's psychology are open to the same kinds of objections as the ideas of Mr Gradgrind. For instance he has an alarmingly shrivelled sense of human desire. Bain characterises desire as an 'irritating, uneasy, distracted state, fretting the temper, and unfitting the mind for operations demanding a cool and concentrated attention.' It is an entirely negative state of mind, a mere absence of something that is probably not worth the having, a 'peculiar mode of pain'.(203) The will can restrain desire however. And though this produces a new pain, when that ceases pleasure is the result: a net gain in the psychological accounts. The process encourages the regulation of desire for industrious pursuits.(204) 'Too rampant appetites' and 'too roving desires' should be discouraged by the formation of new regulatory 'associating links'.(205) One enjoys thinking what William Blake or D. H. Lawrence (to name two writers from a similar social background to Bain's) would make of this.

Bain's psychology is an innovative, impressive development of the association psychology towards a more complex and sophisticated theorisation of the psychological system in relation to the physiological functioning of the organism. As we have said, he looks both forward (to the new biological and evolutionary perspectives in psychology) and backward (to the methods and traditions of psychology within philosophy). He continued to defend the validity of these older methods to the last, and by the end of his long career had begun

---

(203) *The Emotions and the Will*, p. 481.

(204) *The Emotions and the Will*, pp. 481-82.

(205) *The Emotions and the Will*, pp. 486-87n and 492.
to sound distinctly old-fashioned in method. In a piece for *Mind* in 1893 he assesses the state of the field, and one cannot help feeling that it is written as he faces the redundancy of his own methods and approaches as the bifocal elements in psychology's constitution begin violently to pull apart at the end of the century towards explicit idealism in philosophy, and laboratory experimentalism in psychology proper. Bain's essay concerns 'The Respective Spheres and Mutual Helps of Introspection and Psycho-Physical Experiment in Psychology', and he defends introspection as the 'alpha and omega of psychological inquiry; it is alone supreme, everything else subsidiary'. *(206)* 'Psycho-physics' has no purchase on 'grand Metaphysical issue [sic] - Thought and Reality, Knowing and Being'. *(207)* Introspection is needed for the analysis of the higher faculties 'almost exclusively'. Though he says that experiments have purchase on the analysis of sense and instinct, he does not consider experimental work able to correlate physiological findings with mental phenomena. What is odd about Bain's last arguments is the contradiction between them and some of those of the earlier work. He insists on the need to reconstruct the origins and development of individuals. *(It is perhaps not idle to recall he was writing his autobiography at the time.)* In this process the accounts of memory and the findings of introspection are crucial, yet in the earlier work he had been more cautious about such criteria.

'Respective Spheres and Mutual Helps' is indeed the work of a man who has been bypassed by the development of psychological work. But this moment in the 'nineties has its own context too, and there is a

*(206)* Alexander Bain, 'The Respective Spheres and Mutual Helps of Introspection and Psycho-Physical Experiment in Psychology', *Mind*, 2 ns (1893), 42.

*(208)* Bain, 'Respective Spheres', 43.
more positive way of putting things. As work in scientific psychology went on, the response, for very complex reasons, of idealist philosophy was very strong. This line of thought took issue with the philosophic grounds of the psychology of writers like Spencer and Lewes. Bain’s essay, therefore, can be understood as an assertion of the realist premises of the ‘new’ (now old) psychology. To the end he remained combatively committed to the ideas of the school he so profoundly helped develop. It is now time to consider the other facet of this school - the evolutionary psychology developed by Spencer and Lewes from the premises of general biology.
CHAPTER 3

HERBERT SPENCER AND THE BEGINNINGS OF EVOLUTIONARY PSYCHOLOGY

I. Introduction: Changes in Models for the Mind in the Second Half of the Nineteenth Century

Of all the shifts in opinion psychology in the mid-to-late nineteenth century the most far-reaching for the discipline's development was the remodeling of it in the light of evolutionary (or 'developmental') theories. The reasons for this are not difficult to grasp. The evolutionary paradigm placed the mind in the general analysis of nature and the biological functions. The increasingly sound findings, perceived relevance and intellectual prestige of physiology secured a hearing for views which only twenty years earlier would have seemed violent heresy. Meanwhile, a general loss of conviction in many opposing arguments partly resulted from, and partly encouraged, this process. Traditional religious arguments, for instance, began to seem a little tired in a rapidly-changing intellectual culture.

Thus, for leading writers psychology became a discipline which was biological (rather than 'mentalistic' or 'intellectualistic') in orientation, and 'scientific' (rather than 'philosophical') in method - notwithstanding the debate about this topic in Mind and elsewhere. It should, however, be understood that 'scientific' here does not mean that the leading psychologists of the day were experimentalists. Only Lewes conducted any laboratory research among the writers considered here. The paradigm shift that moved psychology into the laboratory
was yet some decades away. 'Scientific', therefore, means only that the dominant mode of explanation and analysis was conducted with reference to the principal general theories of scientific explanation of the period, of which evolutionary theory was the most important, but not the only one. As we have seen general physical theories concerning energy ('Force'), for instance, were also thought relevant.

However the new psychology continued to have neither secure intellectual nor institutional standing in the culture at large, and was opposed by intellectuals in the traditional institutions and with more traditional outlooks. This opposition, however, should not immediately be identified with a reactionary conservatism, even if criticism of this kind persisted. The new psychology was bitterly challenged by James Martineau and T. H. Green, but neither could be described as hailing from the conservative orthodoxy. Martineau we have already discussed in the previous chapter, and will do so again in this; while Green had a major impact on the reform of Oxford philosophy, and on the ideological outlook and public policy of the Liberal party in one of its reforming hey-days between 1880 and and 1914.(1) We are largely dealing with arguments within liberal intellectual culture, therefore, and not arguments between it and some reactionary and ill-informed traditionalism. The fact that some of these liberal opponents sound to modern ears like reactionary and ill-informed traditionalists is a difficulty for our retrospective cultural taxonomies.

This chapter and the next will examine the development of this 'materialist' psychological paradigm in the work of two of its leading writers Herbert Spencer and George Lewes. I will examine their work in detail and in context. Attention will be given to the re-armed 'idealist' reaction to it in the later part of the century, principally in the work of its most successful thinker, T. H. Green, whose epistemologically-based critiques of both Spencer and Lewes were the most formidable either received. The critiques of Green and his allies brought into focus several major areas for debate: the conditions for human knowledge and the sufficiency of 'scientific' explanations for the 'higher' faculties, the status and definition of the self and consciousness, especially in relation to the determinations of history, society and biology, and, finally, the question of the cultural role of these new fields of enquiry. Significantly, in 1870, when the success of a properly 'scientific' method for psychology seemed assured, Lewes looked, in a review in Nature (itself a new attempt to bring science closer to the 'intelligent public'), not just to a disciplinary success, but to a general alteration in cultural outlook:

The daily increasing recognition of the importance of Physiology as an element of liberal culture, no less than as a distinct branch of science, may be said to be intimately connected with the gradual displacement of the old vitalistic conception. The old conception of Life as something essentially mysterious and removed from out [sic] the circle of natural causes, has been set aside in favour of the conception of Life as something more complex, indeed, but not otherwise more mysterious than other natural phenomena, and dependent upon the physical and chemical agencies recognised in operation in other provinces of research. The consequence of this changed view has been to disclose the need of an incessant application to Physiology of those instruments and methods which have enlarged and given precision to our views of Nature; and a further consequence has been that the problems are found to be capable of popular exposition, that is to say, the great results of research can now be shown to an intelligent public, and thus made to form an element in general
culture. (2)

This comprehensive cultural project formed a leading feature of much of this work. It is to be found in Spencer's massive 'synthetic philosophy', George Eliot's fiction, and Lewes's and Bain's career-long efforts to see literature and philosophy, science and politics, original work and popular exposition as complementary, and not contradictory, intellectual practices.

As a result these chapters will examine not just the theoretical cogency of their arguments, but also the cultural opportunities and difficulties which shaped the work. For the immediate audience of any writing exerts pressures on meaning (including questions about its logical efficacy) in any period. What appeared a coherent account of the world to, say, a theologically-inclined thinker in 1850, appeared gratuitous and incoherent to an agnostic or 'practical atheist' in 1875, because the central term holding together the description of the operations of the physical world - that is, God himself - was no longer taken for granted. This is the most spectacular, and common, example but others proliferate at a more detailed level. For instance, the writers in this thesis illustrate an intellectual shift from static, entity-based accounts of the mind (the mental faculties, the phrenological brain), to dynamic, process-based conceptions embracing the whole of the neurological system and developmental considerations of growth. The negotiation from the one position to the other was continuous, and involved both massive shifts and piecemeal adjustments in the perceived criteria of logicality, relevance and accuracy in a battle for what was deemed 'mentionable'

or scandalous. The analysis of such a shift in opinion, when standards of 'truth' and validity were so volatile, therefore, needs to include an account of tone, language (including organising metaphors and rhetorical structures), manner of address and intended audience. Is this a popular or specialist work? In what kind of edition or periodical did it appear? Was its mode of publication by subscription, appeal to the general market, or through the backing or subsidy of other - usually religious - institutions? What this new, general intellectual world of the last third of the nineteenth century looked like for those interested in psychological theory (though not particularly involved with its creation) I will illustrate by two examples. The first is an article on 'The New Psychology' from 1879 in The Fortnightly Review by William Courtney. The second, once again, concerns Middlemarch. I will begin with Courtney's review.

William Leonard Courtney (1850-1928) was, like Bain, Spencer, Lewes and Eliot, a man of diverse interests. He wrote on politics and literature (especially drama), as well as having a professional interest in philosophy. Formerly a fellow and tutor in philosophy at Oxford, he was a staffer on the Daily Telegraph, editor of The Fortnightly Review between 1894 and 1924, and a contributing editor of the Dictionary of National Biography. He was thus on the liberal wing of intellectual opinion (the Telegraph was not then a Tory newspaper). He was not, though, an interventionist like, say, Spencer, Martineau or Green, and he was known as a safe, compromise choice as editor of The Fortnightly in the political battles between liberals and conservatives over its editorship in the nineties. (3) As a philosopher he favoured the empirical tradition best represented by John Stuart

(3) The Wellesley Index to Victorian Periodicals 1824-1900, II, 181-82.
Mill. He was sympathetic towards evolutionary psychology, but was not a partisan. His article is a kind of obituary tribute to Lewes, who had died the previous year, and whose two posthumous volumes of Problems of Life and Mind were published in 1879. (It is probable, given the range of arguments to which he refers, that Courtney has only the fourth, and less specialist volume, The Study of Psychology, in mind.) It should be said that Courtney’s essay is neither particularly distinguished nor original, but its moderation of tone and argument, as well as its careful identification of leading issues, makes it usefully representative in an area so governed by polemic, assertion and rebuke.

Courtney begins by identifying a ‘new order’ in psychological theory, and characterises this as the difference between Lewes’s newly-published volume and the sixth book of John Stuart Mill’s Logic ('On the Logic of the Moral Sciences' - a moderately libertarian adaptation of utilitarian associationism tuned to Mill’s interest in 'Ethology', the study of the social and cultural construction of character). The difference between Mill and Lewes, says Courtney, is as great as that between Hume and Kant; that is, the former stimulates the eventually very-different thought of the latter. The difference between Lewes’s intellectual generation (which includes Bain and Spencer also) and that of Mill ‘can be summed up in one word - the study of biology’. Lewes is ‘much more the disciple of Fechner, Lotze and Wundt, than he is of John Stuart Mill.’(4) The lack of biology in Mill’s work means not just an absence of important findings and conceptions, but a reduced sense of the relevant philosophical theories also. Courtney argues - like Everett Mendelsohn much more

recently(5) - that the critiques of naturalistic explanation offered by the German idealist tradition provided a powerful stimulus for biologists and psycho-physiologists in Germany. By contrast, Kant was 'a closed book' to Mill and he was thus unable to think through the deficiencies in classical sensationalist associationism. (Mill, of course, had in fact realised these problems quite early - in the essay on Coleridge for instance - but was unable to carry the point much further than an opposition of Coleridge to Bentham.) For Courtney, just as Kant could provide a way of thinking beyond passive, exclusively experience-based associationism, so biological thinking could significantly address a related problem in the older theory which had neglected questions of heredity and the 'organic antecedents' which determine an individual's lot. Courtney speculated that a joining of theories of hereditary transmission with Kantian ideas of 'forms of thought' would be the way forward. Cannot 'forms of thought' (basic perceptions of time, space, and so on) be transmitted, just as 'his inherited aptitudes, his temper, and his moral disposition' are passed from father to son? How otherwise can one explain the differences between Shakespeare and Aeschylus, Laplace and Democritus, Goethe and 'a Carib'? In this way idealist philosophy can join with biology to destroy crude sensationalist psychology.(6)

There are several features in Courtney's account which are significant for debates in the 'seventies and 'eighties. We might note the following: first, an interest in biological theories of inheritance and transmission based on the Lamarkian model (in


Courtney’s account they are probably derived from Spencer who made these notions his own). Second, a blurring of the difference between race and culture as, here, in the loose example of ‘a Carib’ - as though this racial category were as powerful and inevitable a disqualification as the passing of the ages from Aeschylus to Shakespeare.(7) Third, an increasingly lively recognition of the limitations of the sensationalist-associationist model for psychology and a renewed interest in Kantian and neo-Kantian philosophy. Courtney correctly indentifies the ‘forms of thought’ issue as central to these arguments and we shall see this in the various objections made to Spencer (particularly) and Lewes. Each of these three themes is repeated through the literature of the ‘seventies and ‘eighties.

Courtney wishes to give allowance to the innovative efforts of the new psychology, and to recognise that the ground rules of psychological argument have changed, but the essay is also marked by a note of regret, and a wish to recuperate these arguments for a more traditional form of philosophical enquiry. He notes the damaging absence of biology in Mill’s psychology, but his own essay pays only lip service to the science, and the bulk of the argument is directed towards the integration of German idealist philosophy into the mainstream of psychological enquiry. He pictures Lewes reading carefully in Kant and trying to steer a course between a reductive materialism and a ‘vague nebulous spiritualism’ (typified for Courtney in Lewes’s justified hostility to Victor Cousin). Though he misunderstands - or wilfully misreads - Lewes in this respect, and

(7) Courtney’s reductive argument is easily embarrassed: if race, or hereditary transmission generally, is so important then why were Shakespeare’s father, son or neighbour not great dramatists? (We might also wonder what happens to mothers and daughters.)
attempts to interpret his interest in the social factor in psychology as a version of the Hegelian 'General Mind' or 'Synthetic Consciousness', (8) he sees very clearly that 'the battle of the psychologies rages fiercest round the so-called Forms of Mind'. (9) But this already places the argument on a philosophical rather than a scientific ground and Spencer and Lewes had rather different ways of conceiving of these problems. Courtney salutes the 'new order' in psychological theory, but his essay ends a little wistfully. Lewes has set the agenda for 'the future speculation of English Psychology', and 'Science and Experience' will prevail over the religious arguments that once dominated objections to it. However, asks Courtney with regret, does this mean that truth will only be understood as culture, ethics only as psychology? (10) The closing note is anxious and neatly illustrates the climate of opinion, and the issues for argument, at the close of the decade.

The change in direction in psychological theory, then, in the 1870s was from static, faculty-orientated conceptions of the mind to process-orientated accounts. The decisive step was the effective abandonment of associationist theory in its 'pure', mentalist form. In its place were substituted a range of new emphases. First, theoretical models were orientated towards enlarged time scales and an increased perception of the relevance of organic processes within an evolutionary framework; second, individual psychology was seen as part of 'group' (or sometimes racial) psychology; and, third, an effort was made to account for man's active powers and potential, and not merely

the constitutative processes which left him passively formed in experience. (This last, of course, had been a persistent difficulty for associationism.) Though associationist theory remained alive, and in many ways strong, in the work of Bain, and in the vocabulary and sometimes technical analyses used by Spencer, Lewes and others to describe the mind’s contents, nonetheless it lost place as the dominant model for understanding the formation of the mind. New questions were asked instead. With what does the individual organism begin as a result of the biological history of its species? What power does it have to change or effect its inheritance? Is the means of transmission of this inheritance organic or cultural? To what extent is the mind only a phenomenon of consciousness and habit? What relative weight is to be given to the various descriptive languages and conceptual frameworks available to the informed psycho-physiologist? Is he to write in the registers of science or philosophy, of specialisation or of the wider culture? All of these problems mark the texts examined in this thesis, but they also enable their uniquely rich intellectual possibility.

To turn now to the second example, there is a well-known passage in chapter 11 of Middlemarch which illustrates neatly the changes in theoretical outlook I am describing.

Old provincial society had its share of this subtle movement: had not only its striking downfalls, its brilliant young professional dandies who ended by living up an entry with a drab and six children for their establishment, but also those less marked vicissitudes which are constantly shifting the boundaries of social intercourse, and begetting new consciousness of interdependence. Some slipped a little downward, some got higher footing: people denied aspirates, gained wealth, and fastidious gentleman stood for boroughs; some were caught in political currents, some in ecclesiastical, and perhaps found themselves surprisingly grouped in consequence; while a few personages of families that stood with rock firmness amid all this fluctuation, were slowly presenting new
aspects in spite of solidity, and altering with double change of self and beholder. Municipal town and rural parish gradually made fresh threads of connection—gradually, as the old stocking gave way to the savings bank, and the worship of the solar guinea became extinct, while squires and baronets, and even lords who had once lived blamelessly afar from the civic mind, gathered the faultiness of closer acquaintanceship. Settlers, too, came from distant countries, some with an alarming novelty of skill, others with an offensive advantage in cunning. In fact, much the same sort of movement and mixture went on in old England as we find in older Herodotus, who also, in telling what had been, thought it well to take a woman’s lot for his starting point; though Io, as a maiden apparently beguiled by attractive merchandise, was the reverse of Miss Brooke, and in this respect perhaps bore more resemblance to Rosamond Vincy... (11)

The language of this passage registers a world in process and motion. The syntax extends sentences to encompass the processes of decades, and the metaphors express a bewildering array of turbulent motion and different media. People slip and climb and topple down, get caught by currents of water and culture, gather and mix together, trek from afar, connections are made and broken. Lives, personalities, careers and viewpoints throng the passage, and there is a radical, and deliberate, instability of focus, as various narratives, perspectives, glimpses of histories, stories and ranges of reference briefly surface. The sense of the pace of life and action alters from abruptdownfalls to the patient weaving of threads. Above all, the timescales are shifted as the narrative stresses the need for a nimble historical understanding; perspectives are mobile, and engage the limits of the reader’s comprehension. All this information is piled up, but, with a deceiving irony, its apprehension seems light and easy: ‘old’ England (wryly made to seem so much further away for the self-consciously knowing and modern reader than its ‘real’ 40 years from 1871 to 1831), is a finished thing, as distant from our modernity

as the provinces from our sophistication. It is somewhere else, just like the vanished worlds of Herodotus, whose myths are, in another twist, somehow relevant to the Misses Brooke or Vincy. The reader is pushed towards a comfortable, but misleading, certainty, so that what is at stake is the reader's cognitive activity in trying to comprehend the different and remote. This is a common practice in Middlemarch which frequently dramatises the reader's too ready and confident (mis)understanding. It is the kind of failure of comprehension which, for instance, might turn a struggling tenant farm into picturesque landscape, or might motivate the self-flattering, semi-feudal fantasy of the landlord Mr Brooke on his visit to Dagley's farm at Freeman's End in search of votes.

This episode, from chapter 39, has recently, and influentially, been interpreted as an unselfconscious, naively-realist endorsement of the way things are. (12) But it is full of caution about the way we understand the different, and interpret it as the familiar — particularly the artistically familiar.

It is true that an observer, under that softening influence of the fine arts which makes other people's hardships picturesque, might have been delighted with this homestead called Freeman's End ... (13)

This is how the episode is introduced, and as it continues it is worked-through in the same searching, critical way, highlighting the epistemological (and moral) problems involved in trying to understand and represent, as a glance down the opening paragraph clearly reveals. The cognitive action of Middlemarch, that is to say, is not so naive, and nor is the epistemology of Eliot's 'realism'.


(13) Middlemarch, p. 429.
The passage describing Middlemarch's 'old provincial society' sets out the epistemological organisation of the novel. It is caught in a drama of understanding which emphasises change, difference and process: 'the double change of self and beholder' which stems from historical processes forever moving the field of vision. Both subject and object are in relative motion, and the novel seeks to understand the extent to which we can comprehend the world so conceived. It is a world which can look now like a comforting home, now like an alien and threatening trap, like the web which is home to the spider, but death to the fly. This epistemological problem is exactly that described and understood by the new psychologists who were writing as contemporaries. For these writers the world, and man's place in it, looked (in any ultimate sense) purposeless but lawful, contingent but meaningful. It seemed to be now full of the riches of human achievement and potential, now as empty as dust and atoms, now explicable as the acts of human agency and will, now to be only the result of the volitionless processes of evolutionary biology. What you understood, depended on where you stood. But this perspectivism did not disqualify knowledge, or throw the sciences of man into relativism and scepticism, or indeed a generalising ignorance of 'this particular lot'. The description of this world - which seeks to integrate the near and far, and particular and the general - and the justification for thinking about it in these ways, is one more of the tasks before psychologists in the mid-to-late nineteenth century.

Middlemarch is, profoundly, a novel written from the new evolutionary conception of the world, and this aspect of the novel has been discussed by Gillian Beer in her important recent book. She describes a mode of representation which foregrounds sequences of
connectives at a verbal level, and multiplies analogies at the level of plot. In short, it is a Darwinian narrative. (14) Beer’s account of the narrative practice of *Middlemarch* emphasises the diversity of narratives these new perceptions made available, and how this created a way of seeing the world which stresses the necessary multiplicity of narrative action. For the Darwinian world contains the need for both change and persistence, mutability and continuity, fecundity and extinction, conformity and variety, all of which are registered in action, theme, character and language.

Similarly, Sally Shuttleworth has pointed out that the conception and organisation of *Middlemarch* is very different from Eliot’s earlier work. In the earlier work she had written with the model of the natural historian in mind, now ‘the role of natural historian, passively transcribing a given order, will no longer suffice. George Eliot turns instead to the more dynamic methodology of experimental biology, a stance which receives paradigmatic expression in the novel in the research of Lydgate.’ (15) Shuttleworth draws out the ways in which the novel is structured as a series of interlocking portraits of ‘conditions’ and results, rather as a scientist of the day would construct hypotheses. These various ways of seeing the world’s change and development are not, though, self-cancelling. They are mutually enabling and ramifying portraits of different aspects of the same phenomena, exactly in the way the various features in the life of an

---


organism might be described in biology - or indeed other phenomena intellectuals in her circle considered analogous, like society itself, or the human mind.

Shuttleworth’s description of the transition in Eliot’s work from natural historian to evolutionary biologist mirrors the shift I have been seeking to identify in psychological theory. It is, as it were, the shift from the work of Alexander Bain, associationist natural historian of the feelings, to Herbert Spencer, evolutionary psychologist. However in making such demarcations in the history of a discourse one should not lose sight of the complexities of that history on the ground. For Eliot’s shift in analytical model from, say, Adam Bede to Middlemarch, does not crudely mirror an advance in theory from Bain to Spencer. Bain’s and Spencer’s psychological work was exactly contemporary. Both were available to Eliot in the ‘fifties and ‘sixties, and the influence of both is visible in Scenes of Clerical Life (1858) and Adam Bede (1859). To describe Middlemarch as ‘Spencerian’ then, can be misleading if that implies that the novel is written under the influence of Spencer’s theories. The real situation is more complicated and interesting. Eliot, Spencer, Bain and Lewes all participated in an intellectual culture which produced diverse, but overlapping, work. Each had different emphases and aims, and drew upon different sources. Putting things in this way reduces the risk of working only with ‘text’ and (relatively unimportant) ‘background’. It should also reduce the possibility of seeing one of this heterogeneous group as ‘greater’, or more ‘correct’, than others. All shared a common intellectual heritage,

all developed common methods and theories, all relished detail and sought the exhaustive anatomy of human consciousness. In considering the intellectual culture of psychological theory in the mid-nineteenth century we are dealing with a network, and not a hierarchy, just as psychologists themselves were seeking to understand the mind as 'threads of connection', and not as the exercise of presiding faculties.
II. Spencer's Psychology: From Associationism To An Evolutionary Theory

The careers of Spencer and Bain developed at much the same pace. Yet their peers, and more recent commentators, note that they belong to different intellectual generations. Spencer's new psychology, launched in 1855, was portrayed by both radicals (like Lewes or the secularist George Jacob Holyoake) and conservatives, as marking a fresh and strikingly original turn in the development of psychological theory. Lewes, described by George Eliot in 1855, as 'nailed to the book', (17) hailed its appearance in a three-part review in The Leader. It marked a new era in psychological thought, it struck a decisive blow against the faculty psychology, and, with Bain's The Senses and the Intellect, it staked out the ground for future investigation into the intersection between physiological and psychological studies. (18) Eliot herself also praised the book as forming a new epoch in psychological thought. A year before publication, she imagined a 'Biographical Dictionary for 1954' in which twentieth-century psychologists looked back to Spencer with gratitude for his 'great work XXX which gave a new impulse to psychology and has mainly contributed to the present advanced position of that science.' (19) Holyoake's response, in the radical weekly The Reasoner, was more immediately political: 'The greatest book of the year on the side of


(18) [G. H. Lewes], 'Herbert Spencer's Psychology', The Leader 6 (1855), 1012-13; 'History of Psychological Method', The Leader 6 (1855), 1036-37; 'Life and Mind', The Leader 6 (1855), 1062-63.

Freethought - the ablest and most important issued from the press for a long time, is unquestionably, Mr. Herbert Spencer’s "Principles of Psychology". Holyoake (who had not himself read the book at this stage) also quoted a juicily antagonistic review from The Spectator: The Principles of Psychology was ‘audaciously speculative, subversive of ordinary morality, and anti-Christian.’ (20)

These encomiums came in private or in declaredly radical publications. The overall situation was more complex. With a different audience in prospect Lewes, for one, could be more circumspect as he tried to recommend Spencer’s work to a less-obviously enthusiastic readership. He reviewed Spencer’s book a second time in The Saturday Review. Though no less alert to the originality and far-reaching theoretical implications of The Principles of Psychology, his tone is more guarded. He stresses the continuity of the book with earlier theory (it is not capricious), and pleads that readers make allowances for the manner (by which he really means the conclusions) on the grounds of the book’s path-breaking ambitions. He admits that Spencer ‘cannot hope for much acceptance from the English public’, but his review is adroitly calculated to intrigue cautious, liberal-minded opinion:

Whatever pain may be felt so remarkable an intellect on the

(20) G. J. Holyoake, ‘Current Literature’, The Reasoner, 2 (2 March 1856), 66. For an account of the context of Holyoake’s championship of Spencer’s book within the radical politics of the day see William Baker, "A Problematical Thinker" to a "Sagacious Philosopher": some unpublished George Henry Lewes - Herbert Spencer Correspondence’, English Studies, 56 (1975), 217-21. Holyoake was very active in the political arguments that surrounded Lamarckian theory, and had already been imprisoned in the early 1840s for blasphemous attacks on natural theology. (See Desmond, The Politics of Evolution, pp. 74 and 111.) The Reasoner carried a fuller, but equally laudatory, review at the end of the month: [F. B. Barton], "Spencer’s "Principles of Psychology"", The Reasoner, 13 (30 March 1856), 99.
side of opinions which most readers must regard as opposed to their most cherished convictions, there will be a counterbalancing pleasure and a high moral influence in the contact with a mind so thoroughly earnest and sincere in the search after truth as every page of this work shows Mr. Spencer's to be. (21)

This is a good illustration of Lewes's versatility and alert sense of the audience to be won.

Lewes was right about the atmosphere in which The Principles of Psychology would be received. Spencer's secretary, James Collier, recalled in 1874 that its:

publication in 1855 did not make a sensation. The persistent efforts of Mill had not yet succeeded in stemming the muddy tide of the prevailing scholasticism. The bastard Kantism of Hamil ton did duty for metaphysics, and the Common Sense philosophy of Reid, with the common sense left out, usurped the place of Experimental Psychology. Experimental Psychology was, as usual, busy with analysis, and had no eye for a synthetical effort. Mr. Spencer's work had accordingly a chill reception. Greeted by the aristocratic metaphysicians with a few words of courtly compliment, but treated practically with supercilious disregard, it was received by psychologists of the Association school with hardly more favour than the snarling approval with which a Constitutional Whig views the entry into the Cabinet of a Birmingham Radical. Mr. Spencer was ahead of his generation, and paid the penalty of his prescience in twenty years of neglect. But now the wheel is coming round. The bovine British public ... is at last awakening to the fact that the peer of Bacon and Newton is here. (22)

As the closing remarks indicate, this is a partisan account written by a disciple, but the parallel drawn between psychological debate and


(22) [James Collier], 'The Development of Psychology', Westminster Review, 45 ns, (1874), 400. This essay is unsigned, and unattributed in The Wellesley Index. Lewes, however, refers to it as by 'Mr. Collier' in Problems of Life and Mind (see The Study of Psychology (London, Trubner, 1879), p. 39), and in view of the fact that the essay closes with an exaggerated paean to Spencer, 'the greatest of psychologists', attribution of it to James Collier, who was Spencer's secretary and disciple, seems probable.
political in-fighting is neither wayward nor irresponsible. It does indicate something of the mood of the period, both in the lack of attention the book was initially given (Bain, a more traditional psychologist, was much more widely reviewed), and in some of the hostility it attracted. For it was accused of the usual sins: materialism, atheism and nihilism. (23)

Nevertheless Collier does exaggerate, and Spencer did receive more considered responses. Morrel’s careful, level-headed account in the specialist journal The Medico-Chirurgical Review, praised the book’s relentless search for first principles. Spencer had made ‘one of the most vigorous attempts which has yet been made in our country to place mental philosophy upon a broad and positive basis’. This had been achieved in a situation where ‘we cannot but see how the old landmarks of mental philosophy are breaking down and disappearing under the steady advance of physiological science; and yet how imperfectly we can complete ... that vast psychological structure, the foundations of which we see already laid out.’ (24) Spencer’s achievement was to find a new direction for psychology and his originality was readily appreciated, even if his conclusions were not always endorsed. Writers in the ‘sixties and ‘seventies, though they often had substantial reservations, credited his innovations. (25)

(23) By, for instance, [H. B. Wilson?], ‘Theology and Philosophy’, Westminster Review, 9ns (1856), 221-42, and [R. H. Hutton], ‘Atheism’, National Review, 2 (1856), 97-123. Hutton’s piece also attacked Holyoake, and The Reasoner in particular. Both the Unitarian Hutton (a pupil of James Martineau) and Wilson (a divine and Anglo-Saxon scholar) focused on the free-will problem, the sacrifice of moral agency, and the obliteration of distinctions between humans and other forms of life. Hutton’s piece was the first in a series of hostile responses to Spencer written over nearly twenty years to which we will return.

Spencer, not a man to undervalue himself, recognised his originality early, and knew where it lay. The central, 'Objective'

(25) See, for example, Anon., 'Mr. Herbert Spencer's First Principles', British Quarterly Review, 37 (1863), 84-121. For twentieth-century comment on the reception of Spencer's work and its originality in the 1850s, see Brett's History of Psychology; J. W. Burrow, Evolution and Society: A Study of Victorian Social Theory (Cambridge, CUP, 1966); George Bion Denton, 'Early Psychological Theories of Herbert Spencer', American Journal of Psychology, 32 (1921), 5-15; Hearshaw, History of British Psychology; Leahey, A History of Psychology; Murphy, Historical Introduction to Modern Psychology; Murray, A History of Western Psychology; Peet, Herbert Spencer; Robert J. Richards, Darwin and the Emergence of Evolutionary Theories of Mind and Behaviour (London, University of Chicago Press, 1987); Warren, History of the Association Psychology; Young, Mind, Brain and Adaptation. However, with the exception of Young and Richards, none of these attempts to recover the context of contemporary psychological debate in much detail. A number of historians think Spencer unduly over-rated. Edwin Boring (A History of Experimental Psychology, p. 240), for instance, sees no need to give much attention to either Spencer or Lewes because their version of physiological psychology led to nothing. Bain, on the other hand, is important because he ends an old tradition. (Incidentally, Boring is quite wrong to claim that the first edition of Spencer's Principles is 'simply another associational psychology', and that his evolutionary theory came in the second, 1870-72, edition.) For similar reasons, one imagines, Spencer and Lewes are omitted entirely from Klein's A History of Scientific Psychology and O'Neil's The Beginnings of Modern Psychology. In both Bain receives substantial attention. It is a neat illustration of the writing of history from a perspective which skews history towards the narrow summit of present practice. Spencer and Lewes, it is held, represent a wrong start for modern physiological psychology, whereas Bain is an honourable part of pre-history. Brett has a more interesting version of this. Spencer, he says, affected psychologists much, but psychology little (Brett's History of Psychology, p. 666), but, in these terms, in the long run the same could be said for virtually every figure studied in this thesis. More promisingly, in much the most interesting recent discussion of Spencer, C. U. M. Smith looks at Spencer's work in the light of modern neuro-psychological thinking and its attendant philosophical problems, and illuminatingly discusses it in relation to recent psychological interests such as brain-modeling, psycho-neural identity and Piagetian cognitive development. Spencer's work has been 'unjustly neglected' Smith concludes, despite the obsolescence of his empirical data. (See C. U. M. Smith, 'Evolution and the Problem of Mind: Part I. Herbert Spencer', Journal of the History of Biology, 15 (1982), 55-88.) Smith stresses how Spencer's work mattered very much to scientists like the neurologist John Hughlings Jackson, whose work is valued very highly by those who eliminate Spencer from their histories. (See C. U. M. Smith, 'Evolution and the Problem of Mind: Part II. John Hughlings Jackson', Journal of the History of Biology, 15 (1982), 241-62.) The influence of Spencer on figures like Jackson is also stressed by Robert Young. Young, Burrow, Peet and Richards are the best modern accounts of the general intellectual context of The Principles of Psychology.
(that is, the physiological and biological) portions of *The Principles of Psychology* were 'so little akin to those of preceding psychologists, that no extensive study of their writings was necessary' he states in his autobiography with characteristic loftiness. (26) His originality lay in the ability to conceive of a coherent theoretical framework, and to take as a starting point not (as Lewes and Collier saw) the 'Scholastic' questions of the philosophy of mind, nor the 'analytic' procedures of associationism, but the framework of general biology. In his review of Bain in the *Medico-Chirurgical Review* in 1860, Spencer lamented the current lack of theorising in an age given over to mere observation. It was now necessary to try to reshape conceptions of the mind's activity. Bain's work was 'characteristic of this transition' and of the 'inchoate state of psychology'. His book was a 'classified collection of materials' wanting an organising conception. Instead of the old methods of proceeding by correlating the 'objective' findings of observation and (where available) physiology, with the 'subjective' findings of introspection, Spencer saw the need to resolve mental components back to their simple, biological elements. In this way psychology could comprehend not just analysis, but *development*, and this would form (picking-up Bain's phrase) a more thorough 'natural history method'. (27)

Spencer is alert to the practical and theoretical difficulties, but insists that it is now necessary to see the human mind in a developmental perspective, not only in terms of the growth of the individual (which associationist psychology was capable of doing), but


also of the species and the race. This could only be done by a comparative psychology which studied ‘the evolution of the emotions up through the various grades of the animal kingdom’ taking cognisance of the differences between the ‘lower and higher human races’. (28) Thus, beginning with the study of rudimentary biological action, psychology could carry analysis forward to a specification of culture and society. Because emotional habits became ingrained, and were hereditarily transmissible, a biologised psychology could be used to ‘generalise ... the phenomena of habit, of national characteristics, of civilisation in its moral aspects.’ (29) What was necessary was a redrawing of the taxonomies of psychological theory so that one did not begin with the apparently stable (though in fact very complex) phenomena posited by the older traditions. Simply put, analytic, descriptive psychology began its account of the genesis of the human mental faculties historically too late. With a good eye for the contentious example, Spencer chose the Will, which, as we have seen, was of particular concern in the debate because it immediately engaged questions of human moral and spiritual agency. (30)

Spencer’s contention is that the will should be classified as a developed reflex. Volition is ‘a simple homogenous mental state, forming the link between feeling and action’. (31) The special category of ‘The Will’ should be dropped; it required no special explanation, (28) Spencer, ‘Bain on the Emotions and the Will’, 250.


(30) There is no doubt that Spencer would have been aware of his contentious choice. The problem of the will had already been singled out in reviews of The Principles of Psychology, and not just by opponents. Morrel and Lewes (in his Saturday Review piece) had both identified Spencer’s conception of the will as a controversial difficulty in the theory.

and should have no special taxonomic or theoretical status. This was also true of all the other traditional higher faculties such as reasoning, remembering or responding to beauty, which were usually used to distinguish men from animals. In the 600-plus pages of *The Principles of Psychology*, Spencer gave just nine to the problem of the will. The will becomes active, he says, when automatic action ceases and a selection needs to be made among competing, though nascent, motor changes. That is, the psychical state is 'imperfectly coherent' and needs to be organised. The higher forms of voluntary action develop from these states because of increasing complexity; the principle, though, remains the same.

Spencer recognised his radicalism and wrote: 'Long before reaching this point, readers will have perceived that the doctrines developed ... are quite at variance with the current tenets respecting the freedom of the Will.' The 'current illusion' proposes that 'the ego is something more than the composite state of consciousness which then exists', and that there is a separate faculty presiding over the self and its activities. The hypothesis of an independent Will is an understandable error, says Spencer, but an error nonetheless. (32) Spencer's supporters picked up the idea. Douglas Spalding, in a review of the second edition of *The Principles of Psychology* in *Nature* in 1873, argued that Spencer's new ideas rendered the old conceptions null, and that they were only being kept alive by disputatious 'veterans' anxious to preserve their achievements and laurels. Spencer's evolutionary conception of the will makes Bain's, for instance, seem 'only a highly ingenious account

of what does not happen'. Spencer's psychology means 'giving up much of what has hitherto passed for mental science.' (33)

Spencer's evolutionary theories, as articulated in The Principles of Psychology, have a number of aspects. For him evolution was progressive and purposive, that is, it was a process driven by the working-out of its own internal mechanisms. Though Spencer impatiently dismissed the teleologies of, for example, Erasmus Darwin or Robert Chambers, nevertheless his own conception of the process contained a directional element. He needed it as a moral mainstay in a world without traditional religious or teleological goals. (34)

According to Spencer, the process of evolution was governed by the working-out of laws embedded in the constitution of nature. These included two general, but very gradual, processes, and a number of enabling mechanisms. The two general processes are: the tendency for organisms to develop from homogeneity to heterogeneity, and the tendency of organisms to seek 'co-ordination of actions' among their heterogeneous parts in order to develop increasingly sophisticated and exact 'correspondences' between themselves and their environment. (The terms indicated by quotation marks are Spencer's own, and I have also tried to retain the voluntaristic cast of his account.)

'Co-ordination of actions' was, indeed, Spencer's definition of Life itself, just as the various parts of the human body are integrated to produce its vital activity. (35) Thus the guiding law of nature was division, but the goal was the establishment of


(34) Peel, Herbert Spencer, pp. 135-36.

'consensus'. Among the biological mechanisms which came into play in these processes were: first, the transmission of those acquired characteristics which enabled organisms to flourish (or, indeed, as a stick to that carrot, were encouraging them to become dysfunctional); and, second, the biological division of labour whereby the organism could maintain its responsiveness to the heterogeneity of stimuli, and the specialisation necessary to find finer and finer correspondence with the environment. These processes were the same at all levels of analysis, from the development of multi-cellular organisms, through the generation of consciousness, to the formulation of scientific theories, like Spencer's own, which recapitulated the integrational dynamics of nature itself. Scientific hypotheses, for Spencer, tend 'constantly towards larger and larger generalizations'. (36) The whole of 'Synthetic Philosophy' encompassing increasingly diverse information, has an 'organic' unity offering multiplicity within an integrated whole. Intelligence itself, as the highest of the vital phenomena, must display the most 'constant maintenance' so that 'the internal order shall be continually adjusted to the external order', life being impossible without this 'adaptation'. (37) This is the ground of Spencer's realist epistemology to which we will return.

The Principles of Psychology challenges the classificatory categories of associationist and faculty psychology alike, and Spencer does not tire of making this explicit. The 'divisions we make between the various mental processes have merely a superficial truth' he says, developing the point that the mind must be seen as a relational and

The organisation of The Principles of Psychology as a text reflects these concerns. It begins with large epistemological questions and sketches of evolutionary processes. It is only at the very end that Spencer settles to a more conventionally-arranged account of, as it were, the micro-psychology of the individual being, and then, as we have seen in the case of the will, Spencer gives this comparatively little attention.

So, though Spencer praised Bain's The Emotions and the Will as 'indispensable' for the establishment of a scientific psychology, his own work jettisoned the detailed analysis of mental contents which had been the task of associationists from James Mill to Bain. In response, Bain continued to defend associationist methods against the take-over of psychology by evolutionary biology. As late as 1881, in a review of the third edition of Spencer's Principles, he was pointing, rather sniffily, to the fact that evolution was not yet a validated theory. Though Bain agrees with Spencer's 'cardinal doctrines', Spencer was neglectful of the complexities of the mind's workings. His psychology, and in particular his residual associationism, was therefore too crude. (39) This anxiety about the

(38) The Principles of Psychology, p. 188.
reductiveness of Spencer's programme was also expressed in the 'fifties by sympathetic readers such as Morrel and Lewes, and by later commentators such as Howard Warren. In an effort to cut through existing practice and reformulate general principles, Spencer put sensitivity to individual differences and the variety of psychological process at risk. As we shall see, this feature of his psychology, and with it his epistemology, became a substantial difficulty for him later.

Yet despite Spencer's opposition to a psychology based on a traditional analysis of mental contents, his theory did make some use of associationism. This has been analysed by Warren and, especially, Robert Young in Mind, Brain and Adaptation. There was, after all, no other language available for describing the details of the mind's workings. Though Spencer, as many others interested in scientific psychological theory, flirted with phrenology early in his career, he rejected it for cogent reasons in The Principles of Psychology. Phrenology's fixed faculties could not be assimilated to Spencer's psychology of process and development. In reality there was no 'precise demarcation of the faculties', only an 'insensible shading-off' of the brain portion dedicated to particular functions. Associationism, though, did not suffer from this. Its

(40) Alexander Bain, 'Mr. Spencer's Psychological "Congruities"', Mind, 6 (1881), 266-70 and 394-406. In his autobiography, Spencer records that though his criticisms 'touched fundamentally on his method and his general conceptions', Bain took them in good part, 'philosophically', and their relationship developed to friendship. An Autobiography, II, 46.

(41) Young's chapter is the best account of this. Interestingly, George Eliot regretted the lack of attention to phrenology when the Principles appeared in 1855. See letter to Sarah Hennell, 16 October 1855, Letters, II, 219.

language, analysis and underlying assumptions were able to describe the genesis of mental functions and their development. Though Spencer objected to associationism's restriction of psychological analysis to that of ideas, at the expense of emotions and feelings, associationist language could offer an appropriate means for describing the processes Spencer was after.

In the second and third editions of *The Principles of Psychology* Spencer makes the point explicit: 'The congruity between the established laws of association and the several implications of the physical principle here laid down [on the coordination of the different structures of the brain], is conspicuous.' (44) Indeed, Howard Warren has claimed that in essence *The Principles of Psychology* is an associationist text, and that 'the transformation of the analysis brought about by the evolutionary view effects the details, the distribution of emphasis, and the terminology, without modifying any of the essential factors or laws of association. The principle of association remains an effective working hypothesis; its physiological meaning is practically unaltered.' (45) But this overstates a case. Spencer did make use of associationism, and he would probably have called himself an associationist, given the options available. But the broad direction and achievement of *The Principles of Psychology* lies elsewhere, and Spencer shifted the premises of psychology decisively as was recognised by many of his contemporaries. He was an

---

(43) 'The Feelings are not, scientifically considered, divisible from other phenomena of consciousness', *The Principles of Psychology*, p. 584.


associationist, it seems to me, rather in the way that George Eliot was an associationist. She, too, used associationist language from time to time because it was able to articulate processes and developments with sufficient complexity for her purposes. But this does not mean that she was an associationist psychologist committed, like Bain or John Mill for example, to that programme of analysis.

Spencer’s adaptation of associationism to evolutionary biology did, however, offer to solve some vexing associationist problems. By adapting associationism to a biological paradigm, Spencer shifted the nature of the proposed model. Instead of being static and passive, he made it dynamic and energetic. The mind was pictured as having powers at its disposal. The self could explore the limits of its own being through the experience of resistance and effort, especially through the quickly-developed muscle sense. Indeed the experience of resistance was the ‘primordial, the universal, the ever-present constituent of consciousness.’(46) In addition, the theory of the hereditary transmission of acquired characteristics could overcome the kind of problem identified by Coleridge, Hamilton and others; that is, that the mind, in the associationist model, started with too little and ended with too much. There was, they argued, a kind of developmental hiatus between the rudimentary and contingent development of associations from the tabula rasa at one end of the process, and the spectacular generation of highly-advanced human faculties at the other. The problem of how comparatively few individual repetitions of experiences can repeatedly build such sophisticated systems in the course of a single lifetime was a standard and powerful objection, as Spencer recognised:

Doubtless, the individual experiences furnish the concrete materials for all thought; doubtless, the organized and semi-organized arrangements existing among the cerebral nerves, can give no knowledge until there has been a presentation of the external relations to which they correspond; and doubtless, the child's daily observations and reasonings have the effect of facilitating and strengthening those involved nervous connections that are in the process of spontaneous evolution: just as its daily gambols aid the growth of its limbs. But this is a quite different thing from saying that its intelligence is wholly produced by its experiences. That is an utterly inadmissible doctrine - a doctrine which makes the presence of a brain meaningless - a doctrine which makes unaccountable [sic].(47)

As Young and Warren note, Spencer's emphasis on hereditary transmission offered to solve this problem by shifting the emphasis from the individual to the race. Spencer could thus account for the need for individual growth, and posit the progressive acquisition of better abilities because our ancestors had done most of our preliminary development for us. The basic postulates of the sensational and associationist psychologies could be maintained, but so too could ideas of continuity, evolution and progress. The idea of innate mental endowments was brought as a solution to a persistent associationist problem, but without conceding ground to the conservative argument for special, spiritualised faculties.(48)

Spencer's psychology, then, changed the old sensationalist-associationist model by shifting its leading principles into a different register of understanding, that of evolutionary biology, and by adding a new mechanism, that of the inheritance of acquired characteristics. These principles were developed by Spencer from the early 1850s, especially in the essay 'The Development Hypothesis'

(47) The Principles of Psychology, p. 582.

(first published in Lewes’s *The Leader* in 1852) and the first edition of *The Principles of Psychology*. They remained the leading ideas of his psychological and biological thought, and a keystone of his social and political ideas as well, which, partly as a consequence, were tainted by a not wholly untypical Victorian racism.

Like Bain, Lewes, Eliot and, in his rather different way, John Mill, Spencer was an autodidact. What formal training he had was in engineering, and he came to the subjects of his principal intellectual work independently, by working through some of the diverse intellectual currents of the period, as Peel and Burrow have described. His origins were in provincial dissenting radicalism, and he, like Bain and Lewes, was, in his early career, a political radical; a supporter of Chartism, for instance, and an enthusiast for Shelley. Later though, unlike Bain and Lewes, he became a spokesman for the ultras of ‘free-market’ liberalism. He was early, and continually, influenced by mainstream mid-century political economy and this is visible in his biological and social theories, most evidently in the concept of the survival of the fittest and the dark fears of racial degeneration (because of the swelling ranks of the poor) which haunt some of his later work. As Burrow has argued, evolution was for Spencer the justification for *laissez faire*

---

(49) See Michael D. Biddiss, ed., *Images of Race* (Leicester, Leicester University Press, 1979) and Nancy Stepan, *The Idea of Race in Science: Great Britain 1800-1960* (London, Macmillan, 1982). Biddiss (pp. 187-88) notes, as others have done (for example Peel, Burrow and Young), a contradiction in Spencer’s thought here. On the one hand he offers environmentalist explanations — human characteristics are derived through experience then hereditarily transmitted — but at other times (as for instance in the review of Bain) he speaks in terms of inevitably superior and inferior races, presumably irrespective of environmental considerations.

economics and social theory, but, at the same time, his conception of the evolutionary process was influenced by the same social theories which were then supposed to be legitimised by it. Biology thus served as both justification and model, and Spencer’s position involved more than one contradiction, for Spencer remained as resolutely individualist in his social beliefs as he was collectivist (or racial) in his biological theory.(51)

A version of this contradiction (which also lies at the heart of his racial views) compromises his social theory. A resolutely environmental determinist, who would not countenance the idea of a free-acting Will in psychology, Spencer nonetheless insisted, as a political economist, a pacifist and anti-colonialist, and a believer in altruism and the effects of human sympathy, that people were able to exert moral agency to make a difference to things.(52) These contradictions in social and political opinion are directly relevant to arguments in psychological theory. For the point concerns the degree of independence granted to individuals, and the emphasis to be given to the various determining factors acting on them.

In Spencer’s psychology the man-made environment of society and


(52) Peel, Herbert Spencer, pp. 158-65.
culture functions, to all intents and purposes, as an ersatz biological medium. That is, it operates in the same way as the raw biological world of nature, providing more or less favourable conditions for the individual who is more or less equipped to take advantage of them. Society does not significantly function by cooperation, and the transmission of skills and culture does not enable the individual to survive or significantly enrich the quality of existence. In *The Principles of Psychology* he only attends to society incidentally, and then only as an entity which offers the individual increased protection. (53) Spencer's views in this respect are unlike those of Lewes or George Eliot. As we shall see, Lewes is keen to distinguish categorically between biology and society. Spencer, in the end, is not, though, as Peter Medewar and others have pointed out, the analogising of biological evolution and psycho-social evolution is not sustainable for a variety of hard scientific reasons, including infringement of the second law of thermodynamics. (54) Nevertheless Spencer's *Autobiography*, for example, is written in accordance with these theoretical premises.

He remarks for instance, apropos education, that 'inherited constitution must ever be the chief factor in determining character'. (55) Thus he begins his 'natural history of myself' (the phrase used in the Preface and which, we recall from the review of Bain, Spencer interpreted in evolutionary terms) with an account of the 'ancestral traits' he has inherited. What many would regard as

(53) For example, *The Principles of Psychology*, p. 465.


the obvious result of growing-up in a non-conformist culture, Spencer attributes to biologically-transmitted characteristics. These include resistance to established authorities, prudence, self-restraint, late marriage, and the 'relinquishment of present satisfactions with the view to obtaining future satisfactions'. This is Samuel Smiles paddling in the gene pool. Members of his family are similarly portrayed; thus his mother's '[h]abits of thought and feeling continued for many years, had made organic in her the two dominant ideas of fulfilling domestic obligations and the ordinances of her creed'.(56) The key phrase is 'made organic'. Similarly, his own early life is described as a network of associations, habits and routines expressive of his hereditary inheritance, and of achievements which predict later successes as the seed does the plant. Volume two begins in the same pattern, with comments on his father's intellectual legacy which includes the tendency to enquire directly into 'natural necessities and probabilities', an innate ability which explains Spencer's lack of citation of other's work, he says.(57) In other parts of his work, Spencer could be more comprehensive in his account of the complexities of the educational process,(58) but the central drive of his psychological theory is to eliminate the social aspects of human mental development.

This type of evolutionary thinking was, however, neither self-evident nor self-validating to Spencer's contemporaries, and is not scientifically reputable today. In fact it had ceased to be so by

(56) *An Autobiography*, I, 3-12 and 58.


the middle of the 1880s and it is a feature of his work which has spoilt his reputation. For Spencer held to a 'Lamarckian' view of evolution as distinct from a 'Darwinian'. The difference is simple and devastating. Lamarckian theorists believed that traits acquired in a lifetime could become 'organic' (to use Spencer's word) and therefore were transmissible from generation to generation, each incrementally increasing the former's moral capital or debts (as it were). Thus the evolutionary process is directional, and is capable of some control by the individual whose moral or practical gains - or losses - need not end at death. Furthermore this more 'humanised' biological process did not necessarily entail the moral bankruptcy that was claimed for evolutionary theory by anxious commentators. Indeed, putting the Lamarckian argument in terms of monetary metaphors does reveal the theoretical homology between it and some distinctively nineteenth-century theories of banking and money-circulation and Smilesian ideas of social and economic advancement. Indeed Lamarckian theory had been consistently understood in Britain in political terms. As Adrian Desmond notes, '[a]mong the artisan atheists ... Lamarckism was ... used to legitimate a priest-free democratic republic' in the 1820s. It was consistently used by radicals thereafter, and by middle-class laissez-faire liberals like Spencer. Lamarck's ideas could be used in this way because they disturbed prevailing conceptions of an inevitable, hierarchical order. Those with ability could now be seen to 'develop' and prosper. It was the biological

(59) Desmond, The Politics of Evolution, p. 60. It should also be said that it would be wrong to conflate Lamarck's actual theories with these nineteenth-century appropriations. Indeed it has been convincingly argued that what we now think of as distinctively 'Lamarckian' - the theory sketched here - was in fact not original to him, and that its importance to his biology has been overestimated. This is argued, for instance, by L. J. Jordanova, Lamarck (Oxford, OUP, 1984).
equivalent of a free, mobile society. By contrast, opponents of evolutionary theory – and the new psychology – like James Martineau, tended towards rigidly hierarchical politics. (60)

The Darwinian account of the evolutionary process is quite different, and it is not readily available for the kind of theoretical and ideological appropriation indicated here. For Darwin, the evolutionary process is not driven by the hereditary transmission of acquired characteristics, but, first, by ‘natural selection’, and, second, by ‘sexual selection’. ‘Natural selection’ is the term given to indicate the success of species, and variations within species, in accommodating themselves to a given environment in order to survive and breed. ‘Sexual selection’ indicates the competition within a species for the attainment of sexual goals. By definition, the more successful – and those therefore best fitted, at this (biological) level of judgement, to continue the species – are those who do breed. Biologically-speaking, however, each generation inherits nothing from its parents that has been acquired during the parent’s lifetime. Evolution occurs at the sexual level through competition, and at the environmental level because of the chance success of variant forms. That is, it may turn out that a random mutation is better equipped for survival than ‘normal’ siblings. This strain will then prosper, perhaps at the expense of the ‘normal’ strain. But its success will not come from any ‘progressive’ or purposive feature of the process, nor from biological structure, nor from any particular moral accomplishments – other, of course, than those which mitigate the effects of environmental damage for any given generation. The ability to build shelters (say) is culturally, and not biologically,

transmitted. It is no wonder, then, that opponents were alarmed. Evolutionary theory in this form can easily be seen to threaten conceptions of the end and aims of man in a spiritual light, the special and particular distinctiveness of human beings as a species, the customary moral guarantees that continuity and perpetuation offer, and the gains in morale that even the illusion of perpetuity encourages.\(61\)

In scientific terms Spencer was wrong, and Darwin right.\(62\) However, this twentieth-century verdict should not blind us to the historical situation in the mid-to-late nineteenth century, for these two versions of 'the development hypothesis' existed side-by-side for at least a quarter of a century and their differences were frequently blurred by informed and intelligent commentators. It has been convincingly argued that George Eliot, for instance, did not fully appreciate the difference between the two theories when she read Darwin in 1859.\(63\) G. H. Lewes, who was as informed as anybody, also had difficulty in sorting out the issues as we shall see. Part of the reason for this was that the difference was not in fact immediately clear from the primary texts. As Robert Young and others have argued, Darwin's theory was complete except for the specification of a mechanism. Darwinian theorists could not call-upon the science of

\(61\) For a relevant nineteenth-century discussion of the question of the 'moralising' of the evolutionary process see T. H. Huxley, Evolution and Ethics and Other Essays (London, Macmillan, 1894). Huxley and Spencer fell out over this issue. For comment see Peel, Herbert Spencer, pp. 141-53; Irvine, Thomas Henry Huxley, pp. 32-34.

\(62\) For discussion of the differences in their conclusions and scientific careers, see Derek Freeman, 'The Evolutionary Theories of Charles Darwin and Herbert Spencer', Current Anthropology, 15 (1974), 211-37.

\(63\) See Beer, Darwin's Plots, p. 157. Beer's study contains a fine discussion of the differences between Lamarck and Darwin.
genetics. (Indeed the account of Darwin's theory given above is essentially Neo-Darwinian; that is, after the extrapolation made from the marriage of Darwin and Mendel in the 1930s.) As a result the language of The Origin of Species contains ambiguity at crucial points, and even falls back towards that of the natural theology Darwin had learnt at Cambridge.(64) Derek Freeman in an excellent account of the differences between Spencer and Darwin, notes that, in some respects, Darwin became painted with Spencer's political brush, and 'Social Darwinism' became the usual term for the biologisation of nineteenth-century political economy.(65) As Freeman makes clear, the differences between the two theories, and the errors of Spencer's, were not established currency even in scientific circles until the mid-1880s following the pathbreaking work of German cytologists.(66) Subsequently, Spencer conceded that he had been wrong to insist that 'the sole cause of organic evolution is the inheritance of functionally-produced modifications', (67) but he continued to search for a means of reconciling his neo-Lamarckian ideas with those of

(64) See Young, 'Darwin's Metaphor: Does Nature Select?' in Darwin's Metaphor, pp. 79-125. The other essays in this collection are all worth attention in relation to this problem. For detailed discussion of the language of The Origin see Beer, Darwin's Plots, part 1. The result of this 'language' problem was a confusion that has survived in certain forms until very recently. For a succinct account, see Antony Flew, Darwinian Evolution (London, Paladin, 1984).

(65) Freeman, 'Evolutionary Theories of Darwin and Spencer'. See also Raymond Williams, 'Social Darwinism' in Problems in Materialism and Culture, (London, Verso, 1980), pp. 86-102. There is regular comment on the origins of evolutionary theory in political economy and Malthus's population theories. See, in addition to these, Young, Darwin's Metaphor, Burrow, Evolution and Society, and Peel, Herbert Spencer.


Darwin. After all, the stakes were high. As Huxley realised, the overthrow of Lamarkianism meant the overthrow of much more. 'Spencer is bound to it a priori', he wrote in a letter in 1890, 'his psychology goes to pieces without it'.(68)

Spencer, though, was not alone in defending neo-Lamarkian ideas. They maintained a considerable presence in both scientific and extra-scientific circles into the twentieth century,(69) and were certainly regarded with great seriousness and respect in the period we are dealing with here, as is evident from the periodical literature. An article on Lamarck in the Westminster Review in 1874, for instance, is not at all defensive. Recognising the similarities between Spencer and Lamarck (Spencer as usual had not cited his sources), the writer commented on the 'somewhat peculiar' reception of Lamarckian ideas in Britain. Attacked in the 1810s and 20s by religious and metaphysical philosophers as materialistic, they had been attacked again by Darwinists and anti-Darwinists alike in the writer's own day. The writer thought that such attacks from both sides probably justified the middle ground, and noticed that a Lamarckian doctrine would solve the difficulty over the question of innate ideas. For surely 'innate ideas ... would almost seem a necessary consequence of his [Lamarck's] theories'. A neurological mechanism was even sketched: mental impressions are conveyed by the 'nervous fluid which traverses the hyper-cephalon, and engraves traces of its course on that organ.' This mental 'sculpture' is then transmitted from generation to generation and Man begins his spiritual ascent.(70)

(68) Quoted by Freeman, 'Evolutionary Theories of Darwin and Spencer', 217.

(69) Jordanova, Lamarck, ch. 10.

(70) Anon., 'Lamarck', Westminster Review, 46ns (1874), 197.
The metaphors, as well as the speculation, here remind one more of Hartley or Locke than the era of Darwinian biology, but such examples are not isolated. Lamarckian-type considerations recommended themselves to J. D. Morrel in his review of Spencer and Bain in 1856 because they appealed to his convictions about progress. (71) Gilbert Child, a practising doctor, also endorsed Lamarckian conceptions in the *Westminster* in 1868. Child took the occasion of a review of Henry Maudsley's *The Physiology and Pathology of the Mind* to examine the state of the whole field of 'Physiological Psychology'. It is a cautious, judicious, informed, and empirically-minded account of research by a man who, by temperament and profession, is sensitive to the hazards of speculation. Nonetheless, he concludes that the state of an infant's nervous system 'is the result of the combination of the two original constitutions of its parents, plus the effects of their life-experience upon them; life experience meaning the modifications effected in the original constitution by the whole circumstances of the whole existence of the individual.' His point has additional weight: he is summarising Maudsley, whose conclusions, on this question, 'can hardly be denied'. (72)

Two things, then, are apparent. Spencer had an ultimately mistaken conception of evolutionary processes, but this error was

(71) Morrel, 'Modern English Psychology', 356.

(72) [G. W. Child], 'Physiological Psychology', *Westminster Review*, 33ns (1868), 63. Child was a follower of William Carpenter, as was Spencer, as is attested in the autobiography. Spencer reviewed the third edition of Carpenter's *Principles of Physiology*, again in the *Westminster*, in 1852. (He had begun his own *Principles of Psychology* in 1851.) He took it as the 'state-of-the-art' text, which would save investigators 'many journeys to libraries, much searching through catalogues, and a great deal of reading.' Notice of *Principles of Physiology, General and Comparative* by W. B. Carpenter, *Westminster Review*, 1ns (1852), 274-75.
nonetheless historically comprehensible, and, within its period, significant for the development of psychology. As Young remarks, the Lamarckian mistake was, for Spencer and other theorists, heuristically effective. It encouraged thought within the evolutionary paradigm, and did so partly because it could build a bridge between the new 'biologised' psychology and the old associationism in such a way as to solve some of the persistent theoretical difficulties of the latter. (73) It also had a wider integrative function. As Burrow demonstrates, despite its scandalous reputation, evolutionary theory did meet the needs of many Victorian intellectuals who, unable to accept traditional accounts of man's place in the scheme of things, nonetheless hankered after some over-arching justification for life. Spencer's Lamarckian doctrines, as part of the overall 'Synthetic Philosophy', were, like Comte's positivism, well-suited to serve such quasi-theological needs because they offered themselves as coherent, monolithic explanations built on an appetising, progressive optimism. As Burrow argues, the collapse of previous integrative social theories (like Burkean conservative organicism or the utilitarianism of the Philosophical Radicals), created the opportunity for a new corporatist explanation which would accommodate a more diverse range of social facts and which stressed gradual evolution and not turbulent revolution. (74) The smooth transmission of psychological characteristics from parent to child could offer a comfortingly ordered conception of a changing society based on traditional and hard-won values, while providing the opportunity for 'vertical' advancement and integration. Meanwhile there was no 'Darwinian' alternative in evolutionary psychological theory to challenge this

(73) Young, Mind, Brain and Adaptation, pp. 186-89.
(74) Burrow, Evolution and Society, pp. 263-71.
conception outright. Darwin noted in The Origin that, among the ‘far more important researches’ which the theory made possible, ‘Psychology will be based on a new foundation’. (75) But he did not attempt such an account despite the chapter in The Descent of Man on the ‘Comparison of the Mental Powers of Man and of the Lower Animals’ which provoked much of the furore The Descent caused in 1871. The impact of Darwinian theory proper on psychology was thus delayed for some time. (76)


III. Spencer and the Changing Religious Response to Psychological Theory

The integrative potential of Spencer’s work, however, should not conceal its disturbing consequences for many Victorians for whom the certainties Spencer might offer were no more attractive than the moral and religious chaos being articulated (they thought) by Darwin, and noisily defended by Huxley. Spencer, of course, received his share of abuse and denigration in the years of his principal publications, and, as ever, the leading issues were religious. The difficulties began before publication. He recalls in the Autobiography that he had difficulty finding a publisher at all, in part because of ‘religious difficulties’. Subsequently Spencer, like all the leading psychologists of the period, was attacked by Anglicans, non-conformists and Catholics alike. We are, by now, very familiar with these polemics and their frequent political edge. But the period also revealed a telling, though gradual, shift towards the liberalisation of religious responses.

Criticism of Spencer’s psychology among Anglicans took an expected course. Thomas Birks, Professor of Moral Philosophy at Cambridge, is representative. In Modern Physical Fatalism and the Doctrine of Evolution, including an examination of Mr. H. Spencer’s First Principles (1876) Birks thought it his academic, intellectual,

(77) Spencer, An Autobiography, I, 462. Spencer remarks that after John Chapman’s retirement in 1858 (Chapman was Spencer’s first publisher, though he did not publish The Principles of Psychology because of the probable losses) London lost its foremost mainstream radical publisher. In the ’fifties, ‘Chapman was the only respectable publisher through whom could be issued books which were tacitly or avowedly rationalistic.’ An Autobiography, II, 33.
religious and moral duty (he tells us in the preface) to expose
Spencer's 'radically unsound' thinking, and restate faith, morality
and truth. Evolutionary theory destroys moral value, our sense of
Providence, and the importance of the Will. It is fatalistic and
nihilistic. It eliminates choice, and abolishes mystery and 'the
Unknowable'. Birks's book is full of this kind of routine objection
to the new psychology, though Birks had troubled to read his opponents
carefully and sometimes uses them astutely. (For instance he turns
Mill's strictures against a priori propositions against Spencer, Comte
and Tyndall. (78)) His position, however, remains that of a theological
traditionalist of the old school for whom, without religion, 'the
whole universe would contain nothing more than dense, whirling balls
of lifeless matter, or scattered and floating patches of nebulous
vapour and confusion, and remain a dreary and barren wilderness, a
waste and desolation for ever more.' (79)

Among non-conformists (Spencer's own background), the Unitarians
were, perhaps surprisingly, particularly stern. The Wellesley Index
records that the unitarian periodical the National Review, though
occupying the middle-ground politically (a proposed early name was
'The Liberal'), was strongly-led editorially, and, as two of its
leading editors - R. H. Hutton and James Martineau - were fiercely
opposed to the new psychology, Spencer, like others, had a rough ride.
Martineau rejected a piece by J. D. Morrel, for example, because,
after Morrel's early favourable review of The Principles of
Psychology, he was 'so obviously taken captive by Spencer, and so ill

(78) Thomas Rawson Birks, Modern Physical Fatalism and the Doctrine
of Evolution, including an examination of Mr. H. Spencer's First

(79) Birks, Modern Fatalism, p. 260.
able to resist the positivist doctrine.' (80) William MacCall was similarly dismissive. Spencer's First Principles (1862) was the 'Hard and Dry Philosophy', the old utilitarianism hitched to French materialism. First Principles is 'really a bundle of psychological crotchets dragged by the old rope of French materialism along a desert of scientific aridities'. Philosophy 'in the diviner sense is dead in England'. (81)

Spencer was one of Hutton's atheists in his piece on 'Atheism' for the National Review in 1856. Holyoake and others received critical attention, but Hutton reserved the bulk of his article for The Principles of Psychology. Because Spencer dismisses faith in God, he, like all modern atheists, 'props up the higher faculties of man completely and solely on the lower organisation, and denies them any independent spring.' (82) The result is devastating for morals and the community. It means the collapse of 'all moral ties and the dissolution of every sacred social organisation'. (83) Once again this is a transposed political anxiety, and Hutton seems to fear some kind of class treachery. The new psychology is a 'levelling' theory in which the reduction of the moral faculties to physical nature produces the same kind of 'soreness' that there is 'between essentially different ranks, where the higher is induced by some theoretic conviction to disavow its special birthright'. Hutton's language pictures urban riot and insurrection eight years after 1848: 'How can any true Baconian induction dissolve the moral will of man into a

(80) Quoted in The Wellesley Index to Victorian Periodicals, III, 140.

(81) MacCall, The Newest Materialism, pp. 94 and 89.

(82) Hutton, 'Atheism', 103.

(83) Hutton, 'Atheism', 97.
contest between a mob of "motor changes" in the brain?’, he asks. (84)
The 'Order' of Nature and the Faculties, and the 'Force' of the human
Will, are the necessary conditions for satisfying human life.
Spencer, though the most able of the new generation of psychologists,
can only see differences of degree, and not of kind. As a result (and
this, once again, is the central arm of the attack), Spencer cannot
understand the action, nature, and special status of the human Will,
for it is the Will which generates the 'creative force' of the moral
life. Alongside it, 'all the so-called "material forces" are but the
mapped-out courses of an invisible power'. (85)

Hutton's arsenal of arguments is familiar, though eloquent. But
his acuity is greater than these vivid commonplaces may suggest.
Hutton was a shrewd and sensitive moral thinker (as his stimulating
criticism of George Eliot's fiction suggests(86)), and his
uncompromising commitment to the defence of religion independent of
the findings or theories of science, led him to a trenchant objection
to Spencer's Lamarckianism. In 'A Questionable Parentage for Morals'
(1869) Hutton resumed his attack on Spencer. Specifically he attacked
the theory of acquired characteristics as a basis for the moral life
as lived by individual moral agents. Hutton notes the similarity
between Spencer's evolutionary scheme, and that of the conventional
utilitarian argument for the acquisition of moral values. Though the
time scale may be radically different, both theories hold that morals
are acquired from without, from the social pressures and conventions

(84) Hutton, 'Atheism', 104 and 122.
(85) Hutton, 'Atheism', 119.
(86) See the pieces, both entitled 'George Eliot', in the National
Review, 11 (1860), 191-219, and the Contemporary Review, 47
(1885), 372-91.
obtaining at birth. That is, says Hutton, from 'a dry habit or tendency, which it is uncomfortable to resist'.(87) Not only does this substitute mere 'inertia' (the avoidance of disturbance from settled routines) for moral choice and activity, it also cannot account for the particularity of any moral life. In what possible form can moral conceptions be passed from parent to child biologically?

It is a perceptive and interesting question, and one that puts in doubt Spencer’s proposed solution to the old associationist difficulties. For Spencer’s theory needs to convert particular associations, and the resultant moral concepts they generate, into general instincts and intuitions. But he cannot specify a means, or even a mode of existence, for such a process, let alone a formal description of an infant’s moral inheritance. In reply Spencer maintained that morals were generated from 'moral sentiments', a non-specific inheritance which comes from the shape of the emotional life, and whose motor is the experience of pleasure.(88) However, though this answers one problem (morals are generated from the active desire for pleasure, and not the passive avoidance of pain), the argument is still where Hutton wants it to be. Spencer’s ‘new’ psychology is a refurbished old utilitarianism. In his concluding contribution to the exchange, Hutton in fact, though of course unwittingly, indicates the form in which the bare bones of a more fully-developed evolutionary ethics might begin. From the point of view of biology, the generation of moral concepts is (in Hutton’s strongly pejorative sense) variable and arbitrary, even


Hutton had been a pupil of James Martineau, and though he formally broke from Unitarianism in 1862, his attitude towards the new psychology remained that of his early mentor. His identification of the personal life as the weak spot in Spencer's theory, and his rejection of Spencer's Lamarckian theories as an unsatisfactory ground for the moral life, were powerful arguments, and indicate a central feature of religious responses to Spencer, and also real weaknesses in his psychological theories. More than most, Spencer's books suffer from an absence of detail. Their theoretical rigour and innovation seems almost in inverse ratio to their human engagements. Thus the concentration on the personal life in critiques of them tells us something about their tone and organisation, as well as something about a change in religious argument in the period. Henceforth the defence of religion gradually abandoned any claim that the world was, in its material being, organised and directed by God. The weight of scientific evidence, even in the human sciences, was too formidable. Instead theological argument took two tacks.

First, religious writers defended the idea of human particularity. Either (in the strongest version of this argument) human beings were categorically different from other orders of creation; or (in its more flexible form) the argument was that humans were simply too complex for the kinds of analysis offered by the likes of Spencer. Evolutionary theories of the moral life (the most common point of argument) were, if not wrong (though most held them to be

---

so), then dangerously reductive. Therefore, in the absence of a satisfactory theory from psychologists, the arguments of theologians and religious writers were better able to provide the necessary concepts and language for fuller, more sensitive analysis.

If this is an essentially aggressive argument aimed at psychology’s weakpoints, then the second was more defensive. Many saw that, because old-school theological accounts of the world had lost credence, it was necessary to build some rapprochement with the new sciences. But to do this two conditions were necessary from the religious point of view. First, some effort had to be made to say that psychology had changed over recent years, and was now closer to religious ideas than formerly. The crucial issue concerned innate ideas, and, as we have seen, Spencer’s theory was equipped to deliver a possible compromise. The second condition (a version of the first) was that psychology should leave sufficient space for religious language in the description of mental activity. Indeed, it is possible to see the quarrels in liberal intellectual circles over the new psychology in the late nineteenth century as quarrels about the purchase rival languages might have over the heartland of human activity; that is, the description of the inner life and moral choice. It is possible, for instance, to understand George Eliot’s fiction in this way. Her novels are formed from a complex, multi-vocal discourse in which the competing languages of the period vie for descriptive adequacy. Hence the complex range of her conceptual vocabulary, the proliferation of ways of seeing that a narrative such as Middlemarch develops and the fascinatingly diverse range of moral predicaments, or ways of seeing similar moral predicaments, that her best work engages.
These two strands of late nineteenth-century theological argument can be seen in James Martineau's critique of Spencer. Martineau attacked Spencer in much the same terms, and with much the same expressive flair, as he had attacked Bain in 1860. He argued that the new psychological theories came at the (temporary) end of a long line of explanations - from mythological deities, through notions of divine architecture, to conceptions of the biological processes - which man had concocted through the ages to express his sense of place in the world. Martineau therefore begins with a strong sense of historical change, but this generous historical sense is provisional and illusory for 'Time counts for nothing with the Eternal'.(90) Martineau’s argument is that man perversely tries to construct elaborate accounts of the machinery of the universe when the underlying processes - those which God Himself has established - remain the same. His opening gambit aligns new psychology with ancient error, diminishes the role of non-religious heuristic activity, replaces evolution with teleology, and insists on the autonomy of Mind, which, capitalised, is identified with God and Spirit. Thus scientists and others may seek elaborate and more or less fanciful 'interpreting conceptions', but patient religion insists only:

that Mind is the first, and rules for ever; and whatever the process be, is its process, moving towards congenial ends. Let this be granted and it matters not by what path or method the Divine Thought advances, or [sic] how long it stays on the road.(91)

Some of man's 'interpreting conceptions' can be beneficial to faith, but evolutionary theory is a harmful error. It 'infuses distrust in our self-knowledge, [and] weakens our subjective religion or native

(90) James Martineau, 'The Place of Mind and Intuition in Man', Contemporary Review, 19 (1872), 607.
(91) Martineau, 'The Place of Mind', 607.
faith in the intuitions of thought and conscience’. (92) Martineau, then, is concerned (as befits a non-conformist analysis) with the understanding of the inner world of man communicating directly with God. The spiritual advice of Martineau’s critique of Spencer is to trust the sanctity of one’s inner light, and not theoretical error.

Meanwhile, Martineau set about these errors in familiar terms. Evolutionary psychology, as the latest version of the ‘Experience Philosophy’, is strained by oversimplification and crude reduction. Complex phenomena are generated from simple premises and from these are supposed to be woven ‘the patterned story of imagination, the delicate web of the affections, or the seamless robe of moral purity’. All moral and spiritual achievements are thus merely ‘transformed sensations ... spun out of the coarse fibre of self-love’. (93) The textile metaphors here are typical of the period, and they are – with the exception of the sentimental robe of purity – shared by Bain, Spencer, Lewes, George Eliot and others – though Martineau, of course, gives them a very different inflexion. This sharing of metaphors, and the resulting difficulties over how their usage should be read in any given case, is an example of the kind of situation outlined above. George Eliot uses them to express the complexity of the inner life amid a web of determinations; Martineau uses them to validate a case for the autonomy of that life based on connotations of rich personal garments. (How can you spin a robe of purity from the coarse fibre of self-love?) The preoccupation of both writers with egoism is another illustration of the proximity of their ethical concerns, and also the variety of ways of understanding them.

A similar example is provided by Martineau's perjorative conception of habit. The mechanism for psychological development in Spencer, and other psychologists writing in the associationist tradition, is merely, Martineau claims, the routine following of ingrained habit. A comparison with George Eliot is again valid. Eliot has a richer sense of the claims and limitations of habit. In novels like *Middlemarch* or *The Mill on the Floss*, habit - with its associated ideas of memory and attachment to the past - can be seen as stifling and ensnaring. It restricts intellectual, emotional and cultural possibility. But it is also seen as an important force in the formation of moral attachments and the making of moral choices. Martineau accuses Spencer of a passive conception of moral activity, a slavish 'deification of public opinion', whose motor is habit. (94) But both Eliot and Spencer had a more robust and incisive sense of the claims of habit on the moral life, and a stronger conviction of its power in the formation of inner and outer creeds, as the career of Maggie Tulliver, for one, illustrates.

Martineau's theory, like many of the same stamp, is essentially an ethical intuitionism. He believes that the moral faculties are innate, and self-acting, and that their origins and functions do not need to be explained or described. Even if the moral faculties did originate in 'animal sensation', he says, psychology 'is not on that account entitled to measure all that comes after it' on the same terms. (95) In other words, Martineau rejects evolutionary psychology as an adequate language for attending to the inner life, and 'the sacredness of Personal Communication' with God. (96) If, he continues,

(94) Martineau, 'The Place of Mind', 610-11.

(95) Martineau, 'The Place of Mind', 611.
the analysis of human beings is merely the analysis of power, struggle and competition (Martineau notes that Spencer’s theories are a clear reflection of orthodox political economy), then what is the point and function of human reason and the moral faculty? (97) Spencer, who rarely missed an opportunity for a public defence, replied on both ontological and epistemological grounds. He and Martineau disagreed about the composition of reality, and, he argued, Martineau travestied the portrait of it offered by scientists. For Martineau, matter, reality, was composed of discrete, simple entities held together by an unknown force. Spencer, however, thought of reality, matter itself, as compound. Its diverse forms were built from shared properties and elements, the compounding of which created the world’s variety. Conversely, these compounds could be analytically reduced to their component parts, and this was the practice of science. The fact that we did not fully understand this complexity was not, however, a reason to posit an underlying, mysterious entity which controlled, though did not participate in, the functioning of matter or physical forces. (98)

Again, this is a familiar argument. It is essentially the same argument physiological psychologists had been making about the relation of mind to brain (or body) for some years. As an argument about the composition of matter it replays quarrels at least as far back as the eighteenth century over the status of physical forces. Were they moved by God, or their own natures? Eighteenth-century unitarians tended to believe the latter. James Martineau believed the former, and his general argument affected the specific. Because

(96) Martineau, 'The Place of Mind', 623.
(97) Martineau, 'The Place of Mind', 612-19.
(98) Herbert Spencer, 'Mr Martineau on Evolution', Contemporary Review, 20 (1872), 141-54.
Martineau could not understand this process-based picture of matter, claimed Spencer, he could not understand how the new psychology could theoretically generate the complexity of advanced mental phenomena from rudimentary beginnings. His perception of the world, therefore, was modelled on massive ontological differences (‘the chasm between the living and the not living’, for instance. (99)) whereas Spencer’s was modelled on ‘community’. Nevertheless, Spencer denied charges of materialism, and quoted from The Principles of Psychology to the effect that matter and spirit could not be separated. It was not Spencer, therefore, who was dividing spiritual concerns from the world, but Martineau. Such division was engrained in his conception of matter. Spencer’s are strong, confident arguments, long-made but only recently accepted, and Martineau’s perception of the world is on the defensive. As Spencer noted at the time in a letter to his American friend and patron E. W. Youmans, ‘the concessions [in Martineau’s article] are large; and its criticisms feeble. It illustrates what continually happens with all parties who stand by the old. If they do nothing, things go against them still more’. (100)

Perhaps as a result of the general situation, the effort to counteract the ostensibly anti-religious tendency of Spencer’s thought sometimes took on desperate, epic proportions. A case in point is the campaign of St. George Mivart (1827-1900), a catholic convert, ex-barrister, biologist, zoologist, Fellow of the Royal Society, and leading campaigner against evolutionary theory in the 1870s and beyond. (101) Mivart had been on good terms with several leading evolutionists in the ‘sixties, including Huxley, who respected his

(99) Spencer, ‘Martineau on Evolution’, 143.

(100) Spencer to Youmans 8 April 1872. Quoted in An Autobiography, II, 245.
work on anatomy, and was influential in Mivart's election as an FRS in 1869. In 1871, though, Mivart played a substantial role in the anti-Darwinian furore over The Descent of Man and continued to attack Darwin thereafter for biological anthropomorphism in attributing human qualities to 'brutes'.(102) He maintained his conviction of the essential disparity between organic and inorganic, human and animal, and the higher and lower faculties of mind throughout his career. His truculent, disputatious disposition, and heady mixture of science and faith, dogma and free-speech, made him an unusual personality, but a man whose conflicts and quarrels are nevertheless, or even thereby, representative. In a last act, in 1900, the year of his death, he was excommunicated for defying church authority by writing, in defence of Catholicism, for the liberal periodicals The Fortnightly Review and The Nineteenth Century.

His campaign against Spencer began in 1873 in a review-article for the Tory periodical The Quarterly Review which covered the second edition of The Principles of Psychology, the Essays and the second edition of First Principles. The article placed Spencer in the context of the age-old dispute between empiricists, sceptics and materialists on the one hand, and the school of Kant and Reid on the other. The point at issue concerns the question of whether the mind possesses innate, a priori principles or faculties. Mivart holds that it does. He recognises Spencer's novel solution to the problem (what


is a priori to the individual, is a posteriori to the race), nevertheless in Spencer, Huxley, Lewes, Bain and Mill 'Hume lives again'. Added to this is the 'grossest sensationalism' of Comte, and now the evolutionary theories of Spencer and Darwin who seek to derive the multiplicity of Creation from singularity by 'development'. Thus Shakespeare, Plato, Raphaele (sic) and Newton are seen as 'the ultimate outcome of an unconscious primal mist' and men are identified with brutes.(103) Spencer's thought denies all 'truth', and threatens moral conviction by denying the efficacy of duty, the capacity to choose freely and the autonomy and capacity of the Will. In addition, human capacities are brought into contagious proximity to the passions of brutes. In an age when 'calamitous social and political dangers are urged upon us with the reckless but pertinacious zeal of democratic passion', these kinds of ideas will rot the marrow of the nation whose bones are formed by 'philosophic ideas'. The 'social consequences' of Spencer's ideas are 'manifestly evil in the highest degree', for a 'passionate hatred of religion ... lies at the bottom of much of the popular metaphysical teaching now in vogue'.(104)

Mivart's article oscillates between this kind of apocalyptic Tory hysteria, and more informed and telling comment on Spencer's work (his comments on Spencer's epistemology are very shrewd). However Mivart was by no means content to leave matters there. In 1874 he commenced an extraordinary nine-part, 240-page, six-year-long account of Spencer's psychology for the Catholic Dublin Review. 'An Examination of Herbert Spencer's Psychology' is, I think, the most extraordinary thing I have read in the course of research for this thesis.

(103) [St. George Mivart], 'Herbert Spencer', Quarterly Review, 135 (1873), 512.

(104) [Mivart], 'Herbert Spencer', 532 and 537.
Polemical, repetitive, furiously accusatory, and deeply out of date, Mivart's series of articles is an indication not just of the heat such debates produced in this period, but also of a generational crisis among Christians involved in scientific dispute. For, on the one hand, such men and women wanted to maintain their faith and convictions, but on the other hand the weight of argument and evidence was forcing them to concede ground rapidly.

The arguments Mivart offers in the 'Examination' are little different from those of his Quarterly Review piece, and little different too from many others in the period. But it is their extraordinary length and passion which is fascinating, for what they present is a personality at the edge of its tolerance for rational enquiry, yet pulled back towards such enquiry as if by compulsion. Mivart is facing, on every page, questions of the deepest implication and emotional conviction. 'All the highest questions of philosophy, those concerning God, the human soul, its nature and destiny, have now come to depend on questions of psychology', is the proposition with which he begins the series. (105) Thereafter he is struggling with angels and demons. It is the spectacle of a man wrestling not merely with his enemies, but with the two sides of his own convictions. By the close of the series, after rejecting the major founding principles on which Spencer's psychology rests - the priority of the biological, the evolutionary continuity between lower and higher (in mental capacity as well as living species), the Protestant origins of Spencer's intellectual world - Mivart seeks a reconciliation between his religious faith and an outlook which, one strongly suspects, he

(105) 'M.' [St. George Mivart], 'An Examination of Mr. Herbert Spencer's Psychology: Part I', Dublin Review, 23ns (1874), 476.
knows must carry the future before it. Part nine seeks to enquire how Spencer’s philosophy can be reconciled with, even recouped for, Catholicism, and he finds the material for this in the stress on the unknown in Spencer’s epistemology, his refusal to acquiesce in Cartesian dualisms, and his acknowledgement that, in the matter of human understanding and belief, no mere rationalism will suffice. Men’s convictions are formed in the ‘perceptions of the senses’ and the hunches of the intellect. At the heart of Spencerian rationality, Mivart claims, is the core of an incipient theology. (106)

The ‘Examination’ did not end Mivart’s struggle to reconcile the basic arguments of the new psychology with religious faith. Some of the pieces which caused his break with Catholic authority were published in The Nineteenth Century between 1878 and 1899. In ‘Modern Catholics and Scientific Freedom’ (1885) he saw no contradiction between his twin vocations as a Catholic and as a scientist, and protested against the increasing hostility to science in the church hierarchy. His argument is an off-the-peg one (science looks after its province, and theology takes care of the rest, just as physiology and biology examine the ‘merely animal nature of man’ leaving other disciplines to nurture and describe other needs), but he ends wishing ‘good speed’ to the new psychology, and there is no doubting the spiritual bravery of his decisions. (107) In ‘The New Psychology’ (1889) he appeals to scientific men not to shut themselves off from theological, moral and spiritual questions, and thus to follow the path of Cartesian dualism. Instead he argues for a ‘unified’ view of


man and nature, for seeing all living creatures as 'the result of the coalescence of two factors into one absolute unity'. As oxygen and hydrogen are combined in water, so the body and 'immaterial energy' are combined in human beings. (108) Mivart thus goes some way towards meeting the objections Spencer made against Martineau without losing sight of the standard religious arguments of the period. He asks that psychologists, while they continue their study of biological processes, should not neglect the individual and the personal life. It is in the study of the individual that the 'psychical' and spiritual aspects are uppermost. It 'is the immaterial energy, or soul, which thus shows itself, revealing ... the essential nature of the individual man or woman whose personality may so powerfully yet so mysteriously affect us.' (109)

Mivart's talk of 'immaterial energy' was, of course, unpalatable nonsense for scientifically-inclined thinkers, and illustrates that his reconciling intentions were not infinitely tolerant. In an 1878 essay, 'Force, Energy and Will', Mivart rejected absolutely the fashionable notions of the 'transformation of Force' we have encountered in connection with Bain's work and which Spencer also, though rather ambiguously, endorsed. (110) The idea that there was one force running through all things was too much of a 'transformational'


(110) Spencer equivocated on the idea of 'Force' because in the end it does appear a rather metaphysical idea. For discussion see H. I. Sharlin, 'Herbert Spencer and Scientism', Annals of Science, 33 (1976), 457-80, and Oldroyd, Darwinian Impacts, p. 210. Spencer claimed he had drafted a 'one-force' argument in writing The Principles of Psychology in the early 'fifties (which would have made him an innovator here also) but suppressed it because of his uncertainty about its validity. See An Autobiography, II, 13-16.
idea for Mivart, because it would imply the collapse of hierarchical
distinctions, in particular those between species. (The conviction
that man was biologically distinct from other animals never left him.)
He was, however, prepared to accept the notion as symbolic, as a kind
of scientific jargon for the First Cause or God.(111) Elsewhere,
responses to the idea varied, though others too found it unpalatable.
Thomas Birks could not see why, if such an idea were to be posited,
one could not go the whole hog and call it God. 'Positivists' were
inconsistent, he claimed: 'Instead of excluding the idea of Force as
metaphysical they seem ready to invest it with Divine attributes and
place it on the throne of the universe. It is Something uncreated,
invariable, indestructable, almighty, and eternal.'(112) On these
grounds he attacked the use of evolutionary theory by liberal
theologians. Likewise, though from a different perspective,
J. F. Moulton objected to the extended use of the idea of Force beyond
its proper scientific meanings by Spencer and others. Spencer turned
experimental law into a priori positions, thus ruining their
scientific status and usefulness.(113) T. H. Green correctly
perceived, in his critique of Spencer, that it was unclear whether the
knowledge of force was the outcome of simple sensation (therefore
epistemologically immediately valid) or an 'intellectual synthesis',
in which case its epistemological status was more complicated, and
dubious.(114)

Nonetheless, the direction of Mivart's intellectual career is

(111) St. George Mivart, 'Force, Energy and Will', Nineteenth Century,
3 (1878), 933-48.

(112) Birks, Modern Physical Fatalism, p. 218.

(113) [J. F. Moulton], 'Herbert Spencer', British Quarterly Review, 58
(1873), 472-504.
representative of a significant turn in the reception Spencer received in religious quarters. Spencer himself detected a change in mood. He recalled in his Autobiography that the exchanges with Martineau in 1872 (of which he decisively had the better) seemed to mark a liberalisation of theological opinion which continued.(115) Certainly several Christian writers welcomed - more or less enthusiastically - the possible reconciliation between science and religion Spencer's theories, and its over-arching 'system', appeared to offer. A reviewer of First Principles in 1863 for the British Quarterly Review, a non-conformist evangelical periodical committed to free discussion, seized on the 'force' idea with more enthusiasm than Mivart, or, for that matter, Spencer. He vividly pictured it at work in the crashing of cannonballs, in the steps of dinosaurs through primeval forests and the whizzing molecules of the rings of Saturn. It was the 'actuality underlying phenomena ... beyond the reach of human intellect .. Ever near us, the one Divine and Omnipotent mystery of the world, it remains unchanged and insoluble for all the petty strivings of our reason', transcending 'immeasurably the most transcendental analysis that man has ever been able to invent'.(116) But this is intellectual appropriation and gold-plating. The reviewer was sceptical of most of Spencer's theories. He ends attacking him for 'practical Atheism', and advising him to surrender his intellectual pride for the beauty of the idea his theories contain, but scarcely acknowledge.


(116) Anon., 'Spencer's First Principles', 91.
Similarly, another British Quarterly writer in 1874 attacked the 'rubbish heaps' and 'dwarfs' of Positivism, but found in Spencer's work a possibility for the reconciliation of science and religion made possible by the loosening of the 'materialistic dogmatism' he had detected in scientific circles of late. Spencer acknowledged the mystery of existence beneath rationalistic enquiry. As a result 'science cannot scorn religion as dealing any more itself with the "unknowable"; and religion must not frown down science as a traitor to the highest interests of humanity’. Spencer is to be welcomed because of his 'tone of brotherhood towards religion'.(117) What is also interesting about this piece is that the writer is clearly a Germanist (it offers itself as a review of a recent lecture by Carpenter and Gott und die Natur by Von Dr. Hermann Ulrici which dates from 1866), and he sees a connection between Spencer and the Romantic Naturphilosophie which influenced Coleridge.(118)

For his own part, Spencer, perhaps cannily, continued to keep his options open. In a postscript added to Part 1 of the sixth edition of First Principles dated March 1899, he wrote:

But an account of the Transformation of Things, given in the pages which follow, is simply an orderly presentation of facts; and the interpretation of facts is nothing more than a statement of the ultimate uniformities they present - the laws to which they conform. Is the reader an atheist? The exposition of these facts and these laws will neither yield support to his belief nor destroy it. Is he a pantheist? The phenomena and the inferences as now set forth will not force on him any incongruous implication. Does he think that God is immanent throughout all things, from concentrating nebulae to the thoughts of poets? Then the theory to be put before him contains no disproof of that view. Does he believe in a Deity who has given unchanging

(117) Anon., 'Science, Philosophy, and Religion', British Quarterly Review, 60 (1874), 107-08.

(118) There is some evidence for such a connection, though Spencer never really read very far in anything. See the discussion of Spencer in Young, Mind, Brain, and Adaptation.
laws to the Universe? Then he will find nothing at variance with his belief in an exposition of those laws and an account of the results.\(^{(119)}\)

The distinction between fact and interpretation which Spencer uses here is a familiar one from many hermeneutic theories. It also repeats an argument, which had been used for half a century by the time Spencer wrote this, to effect a compromise between science and religion. It had been offered by H. L. Mansel in his Bampton lectures in 1858 and published as *The Limits of Religious Thought* (1859). The resulting controversy ensured its familiarity and eventual success. Mansel had argued that religion was beyond science because the latter deals only with objects that can be conceived rationally in finite terms. Religion, therefore, had no need to feel threatened by science, and vice versa. As Peel argues, this argument was opportunely similar to the kind of arguments Spencer himself wanted to make in the 'fifties, and, as we have seen, continued to make until his death.\(^{(120)}\) A discussion of how this argument related to the epistemology Spencer offered in *The Principles of Psychology*, and an assessment of the strengths and limitations of that epistemology, will close this chapter.


\(^{(120)}\) Peel, *Herbert Spencer*, p. 127.
IV. Epistemology, Evolutionary Psychology and the Idealist Critique

The British Quarterly writer on 'Science, Philosophy and Religion', who, as we have seen, was well-disposed towards Spencer, nonetheless attacked Bain for basing his epistemology on a knowledge of phenomena alone, irrespective of a consideration of the activities of the mind perceiving these phenomena. As a result, he says, Bain's classically associationist theories rest like 'the Hindoo sense of the elephant upon the tortoise'.(121) What, then, was so different about Spencer's account, and why did it appeal to writers such as this?

The first edition of The Principles of Psychology, unlike subsequent editions, begins with a consideration of epistemological questions. By the second edition (begun in 1867), Spencer had altered the arrangement to bring the book into line with the increasingly standard practice of, for instance, the influential books by Bain or the German Wundt, which became textbooks. They began with physiology, before working-up to their psychology. Thus the form of these books mimicked the genetic account of the formation of mind the theory proposed. In the second and third editions of The Principles of Psychology, Spencer began with his evolutionary theories. Part 1 of the first edition, which tackles epistemological questions, now forms Part 7, and the entire first volume is concerned with biological and physiological topics. In the preface, he speaks of the 'philosophical' topics being 'relegated' in importance.(122) Yet Spencer had chosen the organisation of the first edition quite deliberately. In the Autobiography he says that the four parts of the

original were written in the order three, one, two, four. (123) That is, Spencer had conceived of the biological part first. He then chose to organise the book differently. We may wonder why.

Part of the answer no doubt is that, in spite of his innovative introduction of biology, he was still writing in the early 1850s in a discipline which was predominantly thought to belong to philosophy rather than the natural sciences. Anyone opening a book called The Principles of Psychology would have expected attention to epistemological or other philosophically-orientated topics. But I think there was a deeper reason also concerned with the book’s originality. An enthusiastic review of the second edition by Douglas Spalding for Nature in 1873 gives a clue. Spencer, says Spalding, is the first serious defender of a realist epistemology since the time of Hume and Berkeley, thinkers who rendered a defence inconceivable for the best part of a century. (124) Spalding exaggerates, but associationism was beset by epistemological difficulties because it could not, except by assertion, negotiate the transition from mental to physiological events. That is, it tended to finesse its epistemological difficulties, and assume that the brain and nervous system stored or copied replicas of external events. The idea of representation was not, therefore, in classical associationism problematic enough. Bain, for instance, as late as the 1880s could only see the fierce realism/idealism quarrel of those years as an unnecessary difficulty provoked by the idealist’s refusal to think with common-sense, as people did spontaneously if left to themselves. (125) His reluctance to engage may well signal that he had

Meanwhile the essentially idealist tradition of faculty psychology was as intuitionist in its epistemology as in its ethics. Expert idealist thinkers such as T. H. Green splendidly diagnosed Spencer's failings, but did not move the argument much further forward. So Spalding is identifying a genuine problem, and one which he was not alone in perceiving. The revival of interest in German idealist thought, of which Green's critiques of Spencer and Lewes were a part, reopened old quarrels. These needed to be reopened because Spencer and others had offered a realist epistemology which aimed to appeal not just to supporters and partisans, but also liberally-minded religious thinkers who might be satisfied with an epistemology which stopped short of claiming that the world, and everything in it, was tidily and reductively explicable. Spencer, therefore, attempting to launch an innovative psychological theory based on scientific rather than philosophical grounds, needed to deliver an epistemology that would satisfy the expectations of the discipline he was working within. He needed to set-out a philosophical defence for switching that discipline from philosophy to biology, and try to negotiate the religious and political debate which surrounded psychology in the mid-century. This is why epistemological questions are at the very front of our attention when we read the first edition of The Principles of Psychology. As C. U. M. Smith notes, Spencer's epistemology has sometimes been seen as only tangentially related to the biological part of his psychology (perhaps, one might think, because he himself 'relegated' it). In fact, though, the two elements are closely and necessarily entwined. (126)

(125) Bain, 'Mr. Spencer's Psychological "Congruities"', 394-406.
The Principles of Psychology of 1855 begins with some fundamental questions. What is the test which validates any knowledge? On what terms do we think we know the properties of matter, or other minds? On what grounds can we construct knowledge-propositions about ourselves, when the subject that proposes that knowledge is also its object? Spencer rejects 'unaided internal perception'. We do not know things spontaneously, otherwise how could error have existed? (This by the way is Spencer's answer to those in the realist camp who wondered why he bothered making an epistemological case at all.)(127) What special mode of cognition is it that rescues psychology, and other forms of knowledge, from 'a mere aggregation of opinions'? Spencer's answer is to seek to 'make a particular mode of perception the guarantee of all other modes'. (128) That is, there is no mode of cognition, categorically different from perception, which can be thought to establish truth. (Such a categorically different mode of understanding might, for instance, be divine revelation). The validity of a knowledge-proposition will be gauged in relation to other perceptual operations. As the French writer Ribot - whose English Psychology Spencer praised in the preface to the second edition of The Principles - put it, Spencer gives to perception the 'supremacy which metaphysicians ascribe to reason.' Perception is the 'organic classification of relations' obtaining in the world outside the perceiving self. Realism is therefore justified because it is simpler, and does not require any additional psychological machinery

(126) Smith, 'Evolution and the Problem of Mind: Part 1: Herbert Spencer'.

(127) This question was asked, for instance, by the free-thinker F. B. Barton ('Spencer's "Principles of Psychology"') and, as we have seen, later by Bain.

other than the standard forms of cognitive activity. It does not, that is, sever subject from object. (129)

Spencer rejects idealism (Fichte and Schelling) and scepticism (Hume). He also rejects Reid’s — or, for that matter, Bain’s — common-sense realism (‘right as Reid may have been in his convictions, he cannot be said to have demonstrated he was so’). He rejects, too, Hamilton’s neo-Kantian intuitionist identification of subject and object as simultaneously present in consciousness in acts of cognition. Spencer believes that such moments of apparent intuition can be decomposed into simpler, more rudimentary elements. (130) As Ribot explained, Spencer held that there were two series of events, the internal and the external, which have their own regularities, but which do correspond, though the connecting (Spencer would say ‘causal’) chains were sometimes complex and indirect. Epistemological questions therefore were questions of belief in the connections proposed. Any account of the epistemology of science, as of ordinary behaviour, was an effort to establish ‘not any substantive proposition believed, but some canon of belief itself’. (131) As Burrow, Peel and others point out, Spencer thus substitutes psychological categories

(129) Ribot, English Psychology, pp. 180-84. Subsequent editions of The Principles incorporated Ribot’s point directly. Spencer warned against the ‘usurpation’ of cognition by reason. The cultivation of the reason often led to it becoming itself ‘the final object of superstition’, and the ‘worship’ of abstract metaphysics, ‘an amputated limb in empty space’. ‘Perception’ (i.e. empiricism) was much better. (The Principles of Psychology, 3rd. edn., II, 314-35.) The point was virtual anyway in the first edition which very early rejected such devices in logic as the analysis of the syllogism as a means for psychological investigation. Intelligence, for Spencer, was more than reasoning.

(130) The Principles of Psychology, pp. 5-10. The attack on idealism is much expanded in subsequent editions. See, for example, Vol. 2, Part VIII.

for logical ones within his epistemology, and has a causal, rather than logical, approach to meaning.\textsuperscript{(132)}

Spencer called his epistemological theory 'the universal postulate' and, later, 'transfigured realism'. By the universal postulate he means to indicate an idea in some ways similar to Karl Popper's criteria of falsifiability. That is, one cannot know the truth about the world absolutely. Instead one devises more or less adequate theories about it which, it is likely, will be falsified as time goes on. Nonetheless, while they prevail, these function, with more or less adequacy, as though they were true. Spencer's idea is similar. (Though it should be said that the design of his theories are not at all Popperian. They are designed to assert truth claims, and not to encourage falsification. We shall return to this contradiction.) Spencer holds that we believe when the alternative is inconceivable. The burden of validation is thus shifted from the properties of mind (or the nervous system), essentially or statically considered, to the activities of mind derived in and through experience. The mind does hold convictions a priori, but it discovers them, and maybe revises them, as it goes on. The universal postulate is that a belief prevails in the absence of a better belief, and

\textsuperscript{(132)} The general mid-nineteenth-century context of these arguments, particularly that of the Mill/Whewell disputes about scientific procedure, is well set-out by Peel, who also points to Spencer's influence on American 'pragmatists' like Dewey and James in the early twentieth century. He further notes that the kind of theory Spencer is outlining has been widely influential in science under then name 'operationalism'. Peel, \textit{Herbert Spencer}, pp. 117-20. See also Burrow, \textit{Evolution and Society}, pp. 209-13. Maurice Mandelbaum points out that Spencer's epistemology, and his emphasis on belief rather than 'truth' (and therefore a fundamental 'unknowingness' in an absolute sense) is typical of a general turn in nineteenth-century thought. See Mandelbaum, \textit{History, Man, and Reason: A Study in Nineteenth-Century Thought} (London, Johns Hopkins University Press, 1971), ch. 14.
because rival beliefs are not so irreplaceable, necessary, or easy to adapt.(133) This is a 'transfigured realism' because it is not a 'naive' realism. A naive realism might hold that our mental contents correspond in a simple, unmediated way to the world outside our mental operations. Nonetheless a principle of economy holds good in Spencer’s theory, for beliefs are less easily sustainable the more complicated they are, and it is axiomatic that beliefs can, like all mental contents, be themselves decomposed into simpler elements. The essential beliefs, therefore, are those which have fewest components.

It is easy to see the homology between this epistemological theory and Spencer’s biological theory. Both claim to be based on experience rather than a priori principles, and both develop ideas of competition among their elements rather than relying on pre-established hierarchies. Indeed, it seems that an idea prevails in much the same way as a creature: by being able to concentrate on essential features, meet the needs and challenges of the environment, and form part of a structure of adjacent, similar, or supporting ideas. The reason why Spencer’s psychology prevailed - for instance - might be thought to be because its structure is clear and coherent (though not designed for falsification), because it responded to the demands of the intellectual environment to look at relevant new facts and to resist antagonistic conceptions, and because it was also able to integrate with relevant existing paradigms (which included the associationist tradition in psychology, evolutionary thought in the natural sciences, utilitarian social theory, political economy, and, with more limited success, the liberal element in religious thought also.)

Spencer's epistemology, therefore, is dynamic in intention and substance, and it is theoretically coherent in relation to the rest of his psychology. Its realism is posited on the fact that viewpoints are multiple, but changeable, and that, though human cognition works by the construction of its world, these constructions are readily open to embarrassment by the world outside them. This, as Smith, Peel, and others have pointed out, is a very modern style of thinking, and just as George Eliot's novels are not, as has recently been claimed, written in a mode of naive, expressive realism, so Spencer's epistemology is not dumbly transcriptive either. Indeed it is tempting to push the parallel further and recall once again the incident at Dagley's farm in chapter 39 of Middlemarch. That incident is constructed by Eliot (and it is very typical of her practice) in terms of the differences in perception of no less than seven subjectivities: the sentimental, artistically-inclined, upper-class 'observer' who finds the scene picturesque and with whom the episode starts, Mr Brook, Mr Dagley, Mrs Dagley, the tartly-observed habitué of intellectual London with whom the episode ends, the narrator, and the reader - who may share some of the traits and blindnesses of the visiting observer and the London intellectual. (In fact one might even want to say there are two readers - and therefore eight subjectivities - if a distinction is made between the reader of the 1870s and that of the 1980s.) The episode gains its epistemological (and ethical) effect by juxtaposing these subjectivities in the knowledge that each is partial, and none shares precisely the others' preconceptions or interests. Each (some more evidently than others) is constructing a way of understanding, and the overall account of particular, contingent, and sometimes disrupted and changing pictures of the world is strikingly similar to the epistemological and
cognitive world envisaged by Spencer, and, as we shall see, by G. H. Lewes also, in psychological theory. The episode is also representative of the world of the novel, for Middlemarch is a work concerned with limitation, with characters who do not know enough - about their own worlds, about the other worlds with which they come into contact, or about themselves.

This is the radical, realist epistemology at the heart of the fictional technique of George Eliot and the new psychology of Spencer and Lewes. But, as regards Spencer, this is not the whole story. For Spencer's theory also appears as a dogmatic positivism of an intimidating, creed-building, assertive, 'typically nineteenth-century' kind which has been scorned by twentieth-century thinkers from Wittgenstein and Popper to contemporary literary theorists. The manner of the multiple tomes of the 'synthetic philosophy', and its ambition to be a complete 'system', contradicts at every turn the exacting, critical epistemology it announces. To many contemporaries therefore, Spencer's psychology appeared, to younger readers especially, every bit as 'metaphysical' as those it claimed to scorn. T. H. Green (1836-1882) accused Spencer of this (though in order to re-instate metaphysics), and J. F. Moulton (1844-1921), a young London barrister and MP, was, as we have already seen with respect to Spencer's conception of Force, more forthright still. Spencer's theories do have charm and elegance, he says, but they are metaphysical through and through. Though proselytising for science, Spencer 'bullies the poor physicist as other metaphysicians do', and, what is more, the resulting pseudo- metaphysics is a 'mélange of absurdities and contradictions'. As a result Spencer is not even 'to be trusted in the inductive portion of the work, since he
is strangely incapable of distinguishing between superficial and deep-seated resemblances'. (134)

The contradiction in Spencer's work is not merely a matter of form contradicting substance, however. There are genuine difficulties at the heart of the epistemological part of Spencer's psychology which compromise it. But it is important again to stress that these also enabled it, in the late nineteenth century, to appear partially attractive to Christians and others who would ordinarily be scandalised by its evolutionism, its materialism, and its, if not atheism, then frank absence of any substantial attention to God - however adroitly coy Spencer may have been in public pronouncement. In the chapters on perception in Part 2, Spencer argues that every perception involves recognition and classification, and vice versa. Perception thus involves placing things in classes on the basis of likeness: 'the perception of any object, therefore, is impossible save under the form either of Recognition or Classification'. Further, 'All psychologists concur in the doctrine that most of the elements which go to make up the cognition of an observed object, are not known immediately through the senses, but are mediately known by an instantaneous and unconscious ratiocination.' For instance, the perception of solidity, weight, dimension, and so on, are inferential, and not direct sensations. All cognitions are acquired, even 'those apparently simple though really very complex cognitions, by which we guide ourselves through the street.' These too involve classification and recognition. Spencer's conclusion is, therefore, that 'the divisions we make between the various mental processes have merely a superficial truth.' For example the distinction between reasoning

(134) Moulton, 'Herbert Spencer', 474, 479 and 501.
(which seems indirect) and perception (which seems direct) will not hold, for the mental operations we think of as distinctive to each of these operations are actually a part of the other also. All perception is mediate, 'the directness and indirectness is wholly a matter of degree'.(135)

Spencer’s analytical method is to decompose the complex into the simple. But what is the simple here? Analytical decomposition would seem more like an endless regress because perceptual acts always seem to depend on prior acquisitions, 'before-known attributes, before-known relations, and before-known conditions'.(136) The argument is circular when one considers it genetically. How did the first classifications arise? How is the transition from sensation to perception affected? The condition of existence of the latter is the classification of the already-known: 'the process of perception consists in the unconscious classing of these impressions, relations, and conditions, with the like before known ones.'(137) Spencer’s epistemology can appear as though it cannot distinguish its chickens from its eggs without already knowing what those two classes of phenomena are. The difficulty is three-fold. First, Spencer has handed over the genetic problem (how classificatory sets get started) to evolutionary theory (we are born with the acquisitions of our ancestors). He can thus finesse the difficulty by pointing down the mists of time, without having to worry too much about the cognitive adequacy of the categories in place (they have been tried and tested through generations of experience).

(135) The Principles of Psychology, pp. 185-89.
Second, because previous psychological theories have built false distinctions between the various perceptual or cognitive operations, Spencer can gain a rhetorical victory by insisting that the differences we imagine between, say, reasoning and perceiving are not absolute. However, this still leaves the distinctions he does use (which he derives from those earlier psychologists whose taxonomies he rejects, for example those between sensation, perception and cognition) unexplained and undefined. The problem is genetic and psycho-dynamic. How does an individual, or indeed a race, get from sensation to perception? But it is also a relatively simple conceptual problem concerning the definition of terms. These seem to slide-about rather too easily in ways which baffle or compromise Spencer’s meaning from time to time. For example, when he distinguishes between sensation and perception, he is forced to backtrack alarmingly. Sensation is a rudimentary kind of perception (because there are no absolute distinctions between mental processes), but it is distinguished from perception proper because the latter is ‘the cognition of an external object’. (138) There are two problems with this. First, what is the difference between a perception and a cognition, and if there is none why are two different terms used? Second, from where do we get the essential distinction between inner and outer which organises the whole cognitive field at this level, and which seems to imply that there is a categorical difference between sensation and perception? As Spencer had earlier admitted, the whole of his account of perception is dependent on a sense of ‘outness’, of ‘something separate from consciousness – something belonging, not to the mind, but to an object out of the mind.’ (139) His argument that

the distinction between inner and outer is then partly one of degree ('intensity' or 'vividness'), and partly one of experience stretching back into evolutionary time, is theoretically consistent, but does not answer the substantial epistemological difficulty, as T. H. Green realised with glee. Green accuses Spencer (quite rightly it seems to me) of confusing 'Fact and logical thing, real essence and nominal essence, events in the way of sensation and events in our mental history' by insisting on only quantitative distinctions.(140)

Given the obstructive hierarchies and distinctions made among mental activities in Spencer's day, one can understand why he wished to reject the very idea of distinction in a psychology that is process-based. And one can understand too that, at basic levels of activity like the neurological, Spencer's insistence on seeing all processes as similar (to the point sometimes of identity) has an arguable truth also, especially in the context of the neurological knowledge of his period. However his failure to make necessary distinctions at other levels is very damaging, and was a hostage to fortune to acute critics like Green. An influential modern writer on psycho-biology, Steven Rose, conceptualises the problem in a way that exposes Spencer's difficulty. Rose argues that the psycho-biological account of mental activity must be organised in a hierarchy of explanatory levels. These might, typically, stretch from (this is taken from Rose's own diagram) the physical, through to the chemical, anatomical-biological, physiological, psychological (mentalistic), and the social.(141) The boundaries between these levels are not absolute,


but operational. They are ways of organising data and explanation such that the relevant phenomena are respected and given due account. In this way the statement ‘He is in love’ can be described in terms of ‘the movement of electrons, the turnover of molecules or the firing of cells’ but not only in that way. (142) The flexibility of Rose’s operational hierarchy does much to clarify the problems endemic to nineteenth-century arguments which, understandably, were often of the ‘all-or-nothing’ kind, and, in ignorance and polemic, made too few distinctions when more and less and different were needed from both sides.

The third problem in Spencer’s epistemology is more philosophically-orientated, but none the less follows pretty directly from these considerations. It too concerns distinctions and differences. As we have seen, for Spencer, the perceptual process is organised by recognition and classification. That is, it is organised by the apprehension of similarity. To place things into classes is to organise them on the basis of perceived likenesses among the members of that class. Yet, once again, it is difficult to perceive how the organisation of this system of resemblances originates. In Spencer’s explanation of the origin of this process (which comes sometime after the original account of perception), he stresses the importance of unlikeness, not similarity. The cognition of likeness is ‘two relations of likeness which neutralise each other’, but ‘the relation of unlikeness is the primordial one - is the relation involved in every other relation.’ (143) The strength of this theory is its stress on the relations between phenomena, and difference as the foundation

(143) The Principles of Psychology, p. 316.
of perception. One weakness is its commitment to the old mode of
analysis, whereby sensations, perceptions and other mental events are
parsed-out like sentences on the principle of uniform origin and
development. Another weakness is the difficulty of seeing how, from a
system of differences, any structure of resemblances begins to occur.

Spencer regularly insists that the perception of relationships,
as of phenomena themselves, is founded in experience. (The following
is a typical example: 'the reader should be reminded that this
analysis of the relation of co-existence, resulting as it does from
the conclusion that it is a relation disclosed by experience, supplies
the ultimate disproof of the hypothesis that Space is a form of
thought'.(144)) But it is difficult to envisage how the mind’s
construction of sets or classes develops. Spencer, as in this
example, is keen to deny that the mind possesses a priori, Kantian
'forms of thought' like Space or Time, yet it does seem that
resemblance is one such form of thought because it is generated from
nothing in the formal description of the system or its mechanisms.
These difficulties seem to have struck a reviewer for the Westminster
Review in 1856. The writer - probably H. B. Wilson, a liberal
theologian - comments that the realist epistemology is endangered by
the lack of a 'permanent fulcrum' which can make sense of the
'consciousness of change'.(145) That is, Spencer's epistemology lacks
a steadying mechanism. The strong sense of the differences between
phenomena which is stressed in parts of The Principles of Psychology
threatens to produce an atomistic mental world which, beyond the very
simplest of phenomena, cannot generate the classes of phenomena and

(145) Wilson, 'Theology and Philosophy', 42.
relations which the rest of the epistemology depends upon. If similarities cancel ('neutralise') each other, one is left with a very long string of different things. The problem is part of a paradox rather like that exploited much more recently by Jacques Derrida. If one is going to talk about structured phenomena, what is it that structures the structure?(146) Is it a property of the things that make-up the structure, or is it composed from without?

The problem is a persistent one in all set theory, of course, but it is one that was ruthlessly exposed by T. H. Green who claimed, with some justice, that it was typical of all epistemologies written in the Lockeian ‘experience’ tradition. The error lies in the confusion of sensations with perception of relations. For Green they are categorically different things, and he charges Spencer, like Locke, with confusing feelings of touch with judgements of solidity. The one is a passive reception of stimuli, the other an active construction by the mind. As a result, he says, Spencer blurs subject and object, fails to define what he understands by consciousness (it seems to be a ‘limbo of fleeting states’ for the most part, says Green), and fails to answer Hume’s sceptical challenge. For Hume had driven a wedge into realism on the basis of such distinctions. Thus most of Spencer’s supposedly ‘realist’ epistemology might legitimately be claimed as their own by Hume or Berkeley. Spencer therefore covers the case with a fog of ‘mechanical or physiological metaphors’. The figurative language of streams, threads, and so on, is merely an attempt to fashion ‘a shelter for the ambiguity’. (147) The distance


(147) Green, ‘Spencer on Subject and Object’ and ‘Spencer on the Independence of Matter’, passim.
between the assessments of Green and Douglas Spalding (with whom we began this section) could not be greater. In the preface to the third edition of *The Principles of Psychology* (1880), Spencer, responding in part to Green's criticism, pictures himself as a victim of the 'political or theological' warfare between realism and idealism. Thus, attacked from both sides, he can see 'an element of truth in each', and a compromise, or meeting of extremes, is to be found in 'Transfigured Realism'.(148) It is a weak argument.

Such, then, were the difficulties and achievements of Spencer's theory. He played a principal part in shifting the paradigm of British psychology towards biology, and in doing so offered to update its model of analysis by refurbishing classical associationism and defending and defining a realist epistemology. These achievements were not without the problems we have outlined. As ever, however, the construction of psychological discourse was not the work of one individual. Others of the same generation working in the same areas had other proposals, and tackled these problems with other theories. We therefore turn now to the related, but different, efforts of G. H. Lewes towards ends recognisably similar, but approached quite differently.

CHAPTER FOUR

HISTORY, MIND AND LANGUAGE IN G. H. LEWES

I. Problems of Text and Context

A consideration of the work of G. H. Lewes is an appropriate place to close this thesis. For Lewes is representative of the kind of intellectual whose work has formed its substance. Living and working outside the mainstream institutional life of his times, profiting by the career available to Victorian free-lance writers through the periodical press, and drawing upon intellectual resources which were unorthodox and challenging, Lewes's career is similar, in this respect, to that of Spencer, Bain and George Eliot. His intellectual style, too, was typical: versatile, polymathic, innovative, politically dissenting, with an ear turned to Europe and the provinces rather than the traditional seats of learning, he, like Spencer and Bain, was an exhaustive constructor of an encompassing account of life and culture which would satisfy serious minds in scope as well as details.

Today, more accustomed to an intellectual world of partiality, discontinuity and fragmentation, this style of thinking is often characterised pejoratively - as displacement (for lost religion), as a bid for mastery and intellectual totality in an imperial age, or as merely naive ('positivist') faith in the clarity of the world. But for Victorian intellectuals without ready-made institutional affiliations (guaranteeing place and forms of belief) these systems answered needs, and enabled a more generously encompassing vision of
culture and the intellectual life. Lewes's career as a novelist, playwright, actor, editor, journalist, literary critic, biographer, historian of philosophy, philosopher of science, Comtist, leading figure in London (and European) scientific circles, and eminent psycho-physiologist, is not just evidence of a flexible and omnivorous intelligence (still less of a third-rate, butterfly mind as sometimes appears from assessments of him). Rather it is testimony to an intellectual milieu and cultural ethos which embraced science and literature, philosophy and empirical work (Lewes was a great visitor of German laboratories and cutter-up of frogs in his own basement), as well as the study of history, society and the political life of his times. What is also distinctive about this intellectual culture is that it saw these various enterprises as essentially related.

Yet Lewes was not quite a system-builder in the manner of Bain or Spencer. Spencer's controlled (and controlling) systemisation is apparent to anyone who surveys the run of his books on a library shelf with their homogeneous titles, methods and procedure. Bain too, though not in quite this way, also offered to complete the systematic intellectual project handed to him by the tradition within which he worked, and attempted the thorough anatomy of the human mind and behaviour. Lewes's work, with the same materials and something of the same objectives, is much more piecemeal, much less sustained in its project, much better able to respond and change direction, much less tied to a single uniform vision. In chapter one we briefly noted how Lewes revised and pillaged his texts, borrowing from himself, but changing arguments and positions, in the successive revisions of his history of philosophy. This is typical of his procedure, and Problems of Life and Mind is another example. With its five volumes, uniform
spines, and over 2000 pages it looks like a another swollen Spencerian performance. But in fact its nature is quite other, and what immediately strikes many readers is how confusing it is to try to get any purchase on it as a united project.

It appears - indeed is - rather sprawling and ill-organised in a way which is not merely due to the fact that it remained unfinished at his death. The whole seems to contain different elements, without a compelling sense of relationship or organisation. The volumes are of different lengths and are written within different registers of address and language. Volume four, *The Study of Psychology*, is a popularising digest of contemporary ideas written in his most patient, expository manner. Other volumes, however, are more densely technical (like volume three which deals with advanced physiological theory drawing on the latest European research), and an accessible introduction to the series is not best effected by an opening pair of forbidding volumes dealing with epistemological questions. Finally, the fifth and last volume is frankly speculative in a rather piecemeal fashion which, again, is not entirely explained by that fact that it was unfinished. The whole is also irritatingly repetitive - though in this respect it is no different from comparable works by Spencer and Bain, and an early reviewer thought this a justified tactic because of the lax habits of attention of contemporary readers. (1) Altogether, then, it is perhaps not surprising that this ungainly sequence should not have been in print since its first publication. However it should also be said that initial sales were good, and the first volume outsold similar ventures by either Spencer or Bain. It sold 800 promptly ('a good sale' as George Eliot remarked(2)) and a second

(1) Anon., 'Lewes's Problems of Life and Mind', *Saturday Review*, XL (1875), 301-02.
edition was requested by the publishers within a couple of months.(3) By and large Problems of Life and Mind has been neglected by twentieth-century commentators. This is something to do with its bulk and unpromising form, no doubt. It is also due to the long shadow thrown by George Eliot's reputation. Because of his varied career, and his relationship with her, certain endemic cultural prejudices have come into play and Lewes has been seen as a writer who more properly belongs to the literary half of the two cultures. Just as certain styles of literary criticism (like that represented by Leavis's influential The Great Tradition) came to terms with George Eliot's scientific interests by ignoring them, so Lewes's major work has become largely invisible. A fierce early remark by A. T. Kitchel is representative of a larger habit: praising Lewes's literary criticism, she comments that 'English criticism suffered a loss when powers like these were swamped in the scientific flood.'(4) Sister Kitchel, no doubt, had her own particular axe to grind, but the subsequent hostility of Leavis and the New Criticism to science created an obscurity which is only now beginning to be clarified by recent work such as that by Beer, Levine, Myers and Shuttleworth.(5) But even among writers sympathetic to science and among historians of psychology, there has been a reluctance to engage fully with Lewes's work. The writer who was translated across Europe, whose psychological ideas influenced Pavlov, Rutherford and Hughlings Jackson,(6) who was held by the major French psychologist of his day, Théodule Ribot, to have been so innovative in his theories of nervous

(2) George Eliot to Mrs Bray, 22 December 1873, Letters, V, 472.
(3) Letters, V, 8.
(4) Kitchel, Lewes and Eliot, p. 301.
action and consciousness that he exceeded ‘all that Mr Spencer and Mr Bain have advanced on this point’(7), and who was regarded by that most laborious of historians Howard Warren to have been the culmination of nineteenth-century associationism,(8) has been surprisingly little discussed. Within the history of psychology - with its synoptic purposes and assumptions - this has been largely because of what is felt to have been his lack of influence. However claims to influence are strange things sometimes and, from the standpoint of influential findings Lewes’s claims are certainly as good as those of Bain or Spencer.

The truth is, though, that other criteria are in play in such

(5) There is more than an incidental connection here. The general views on science and mind of many American New Critics were of a piece with those of the nineteenth-century opponents of the new psychology. John Crowe Ransom, for instance, had views on biology which were little developed from the Romantic organicism of Coleridge, and Allen Tate, as late as 1940, was willing to assert ‘the belief, philosophically tenable, in a radical discontinuity between the physical and the spiritual realms’. See Allen Tate, ‘The Present Function of Criticism’ (originally published 1940), reprinted in Essays in Modern Literary Criticism, ed. Ray B. West (New York, Holt, Rinehart and Winston, 1952), p. 146. As Tate’s title suggests, these arguments are a late replay of their nineteenth-century forebears. For further comment see Rick Rylance, ‘The New Criticism’ in Encyclopaedia of Literature and Criticism, ed. Martin Coyle, Peter Garside, Malcolm Keßall and John Peck (London, Routledge, 1990), pp. 721-35.


(7) Ribot, English Psychology, p. 311.

assessments. There was the profuse career, and the feeling he properly belonged to literature. He did not attract partisans like Spencer, or seem representative of an historical transition like Bain. As a result Lewes is regularly acknowledged as interesting, even important, and commentators plead for greater attention to his work, but in fact it receives relatively little. Recently it has been examined for supporting material for sophisticated work centred elsewhere (usually on George Eliot), but there has been little attention to the developing thought, and, quite extraordinarily, virtually nothing on *Problems of Life and Mind* as a whole entity. What commentary has been offered, largely by American scholars, is vitiated — as I shall argue more fully in section six of this chapter — by persistently reading Lewes out of context. In many of these accounts, including the most substantial monograph on him by Hock Guan Tjoa, Lewes is re-read as a Kantian idealist, and other features of his work, career and influence are thus pulled out of shape.

The problem, then, is two-fold, for Lewes has not been read satisfactorily either in terms of his texts, or in terms of his contexts. It is only by seeing the one in terms of the other that his achievement’s proper strengths and limitations can be understood. As Howard Warren recognised, Lewes has been unfortunate in that he came at the very end of a tradition of psychological enquiry. For Lewes did his major work when the influential formulations (and careers) had already been made, and when the kind of totalising project for psychology envisaged by Spencer and Bain was giving way to, on the one hand, a more cautious, and increasingly specialised kind of experimental enquiry (of a kind Lewes in fact encouraged(9)), and, on the other, the psychological modernism of Freud, which proposed a
quite different model of analysis and different assumptions about the mind's genesis, dynamics and relations with the world. What is true of Lewes's place in the history of psychology, is also true of his situation in relation to the history of nineteenth-century philosophy. Just as the 'experience' psychology associated with Mill, Bain, Spencer and Lewes himself, seemed to have won the major argument, there was a shift back towards the analysis of mental contents carried through by a revival in idealist and neo-Kantian thought. This concluding chapter, therefore, will examine Lewes's work in the light of these diverse contexts, and analyse Problems of Life and Mind as a text of its time which seeks to develop the tradition of enquiry in which it participated beyond itself in the light of barely-grasped,

(9) James Sully, a psychologist of the next generation, and one of Lewes's literary executors, noted that one problem for Lewes was that he was too general and philosophical for the scientists, and too specialised and scientific for the philosopher-psychologists of the previous generation, though in fact Lewes's practice and ideas were 'far in advance' of his time. Science and philosophy were both needed as psychology narrowed and specialised. (See James Sully, 'Problems of Life and Mind. Third Series. By George Henry Lewes', The Academy, 24 April 1880, 308-10.) A year earlier, in his obituary tribute to Lewes, Sully had stressed the value of Lewes's detailed attention to scientific fact, and his impatience in Problems of Life and Mind with abstractions and 'logical fictions'. (See James Sully, 'George Henry Lewes', New Quarterly Review, 2ns (1879), 356-76.) Like Spencer, Lewes and Bain, Sully was born outside the intellectual purple, and his autobiography gives an interesting account of a relaxed, liberal-minded and politically-radical upbringing in an intellectually-encouraging dissenting culture. (Sully's family were Baptists.) He pointedly contrasts his own experience with the account given by Samuel Butler in The Way of All Flesh. Butler, too, of course, was much interested in psychological and evolutionary questions, and both his and Sully's careers are further illustration of the thesis advanced above concerning the intellectual culture from which mid-to-late nineteenth-century psychology grew. Again the important points of intellectual contact are from the provinces (Bain, Spencer, Butler, George Eliot), or from autodidact or dissenting London (Lewes, Sully), and then from European sources. Sully completed his education with the physiologist Hermann Lotze at Göttingen. See James Sully, My Life and Friends: A Psychologist's Memories (London, T. Fisher Unwin, 1918).
developing circumstances. It is tempting (rather in the manner of Lucien Goldmann’s analysis of Racine and Pascal perhaps(10)), to see the formal disorganisation of the Problems as symptomatic of larger structural shifts in the intellectual and disciplinary culture of its day. But at the same time it is also necessary to take account of the active constituents of Lewes’s project. For an intellectual event is much more than a reflection of larger structural circumstances, and we need to balance a sense of Lewes’s historicity - and perhaps belatedness - against an informed grasp of intentions, conscious theoretical developments and intellectual choices and proposals.

Despite its ramshackle appearance, Problems of Life and Mind is coherent in its theoretical project. Indeed its apparent formal disarray is an almost necessary part of its conception. The fluidity of its structure reflects diverse elements of its purpose, contents and arguments for powerful reasons. Problems of Life and Mind is about the historicality of truth, and its formal (and indeed intellectual) difficulties stem from the latent, and sometimes manifest, contradiction between its law-bound, law-discovering scientific enterprise, grounded in Comtean positivism, and its strong sense of the determination of intellectual and cultural life by the historical moment. The Problems, quite unlike texts by Spencer or Bain, is self-consciously aware of its own historicity. This is registered most commonly through a perception of the inevitable limitations of contemporary knowledge as a sufficient basis for formulating theory, and a recognition of the cultural pressures placed upon its articulation. I will come to a fuller account of this

shortly, but it is worth pausing to indicate the difference in this respect from Spencer. As we have seen in the previous chapter, Spencer unrolls his truth seamlessly, converting provisional propositions into Kant-like transcendant truths which (as Lewes recognised) conceal a dualism in an apparently materialistic, monistic realism. Spencer's conception of history in his Psychology appears mainly in the form of the determining structures imposed on the mind by its (Lamarckian) evolutionary inheritance. But the theoretical effect of this is to freeze historical process as biology, preventing provisionality or relativism. In fact, for all the formal commitment to induction as a principle of investigation, Spencer abolishes the historicity of his own thought even at the moment of its apparent acceptance in the biology of mind. He thus pictures individuals as simultaneously prisoners of their own pasts, but also as free to exert choice in the long avenue of progress. As a result, his texts look - evasively - behind and before, they rarely look around, and this central, organising conception enables Spencer's orderly, systemised account of the world. By contrast Lewes's world is - like his texts - much messier. He is much more willing to accept provisionality, and this provisionality is the source of much of his writing's best energy and best thinking. It is also the source of some compromising contradiction.

The differences between Spencer and Lewes are not confined to the relative weight each attaches to the historicity of the present. The same structural difference is evident in their accounts of language, and the weight and nature of the attention each gives to epistemological questions. Spencer takes his view of language from the utilitarian tradition. It is a heavily empirical account in which
language is described in ways that emphasise its nominal functions at
the expense of creative usage, or, indeed, structural organisation.(11) Lewes, on the other hand, emphasises the enabling and creative uses of language much more vigorously. This might be expected from a man with his literary interests, but it is of wider importance. For Lewes, as for Huxley, Max Muller and other leading intellectuals in the 1860s,(12) the use of language is the distinctively human activity. The ability to create through language, and to manipulate the environment thereby, separates man from the animals and explains their spectacular development as a species. And as we shall see in section two of this chapter, this much more generous - but much more unstable - conception of language's potential is evident from Lewes's own use of language in Problems of Life and Mind.

A related point can be made about the epistemologies of both writers. Lewes's epistemological ideas will be the subject of more extended discussion later, but it is worth noting initially that epistemological questions are heavily foregrounded in Problems of Life and Mind. (They probably account for a good half of the whole text, including much of the first two volumes). In Spencer, however, there is a progressive downgrading of their importance. He began the first edition of The Principles of Psychology, as Lewes does the Problems,


(12) Gillian Beer, Darwin's Plots, p. 139.
with epistemological questions. But in subsequent editions they are relegated to a much less prominent role. At the same time an ostensibly a posteriori account of the origin of cognitive activity gives way to a position which is effectively indistinguishable from a priori 'forms of thought' arguments, which is why his work appealed to some moderate opinion eager for compromise between the 'experience' and 'spiritualist' psychological schools. Lewes's epistemology, by contrast, refuses to let go of arguments that stress process. What is distinctive in his account is the stress on the complexity of the activity that constitutes human perception. What is admirable is his refusal to let it slide into a conventionalised descriptive cognitive formula. This stress on complexity is shared by George Eliot. In both writers it is backed by an ethics which stresses the way to sympathetic understanding through the recognition of partiality of perception, and the acceptance of other ways of seeing and experiences different from one's own.

The structural organisation of Lewes's text, then, reflects some important features of the arguments and content of the work. Truth-claims are made complex by historical self-consciousness, a complex and process-based epistemology, and conception - and use - of language which creatively challenges established models and metaphors, as we shall see. Despite their commitment to comprehensive accounts of the world, both Lewes's psychological work, and George Eliot's fiction, in the late 1860s and 1870s, share a sense of a world of 'thick description' (to use a term from the anthropologist Clifford Geertz) which resists system at the same time as it is eager for a coherent, totalised vision. Some indication of this restlessness is given by Lewes's own account of the composition of Problems of Life
Lewes thought that the Problems were written within the 'experience' tradition of psychological theory, but the genesis of the text was more mixed. In the 'Preface' to volume one, he writes that the project originated as far back as 1836 'when with the rashness of ambitious youth I planned a treatise on the Philosophy of Mind in which the doctrines of Reid, Stewart, and Brown were to be physiologically interpreted.' This was abandoned because of his lack of physiological knowledge and because of his 'growing dissatisfaction with the doctrines of the Scotch school'. But it is interesting to note that he wished to integrate rival theories from the very beginning. Thereafter he looked continually for opportunities to formulate a comprehensive psychological programme. In the early 1860s he made an attempt to apply discoveries in animal psychology to the behaviour of man under the deliberately provocative title (we learn from his journal(14)) of 'The Soul and its Mechanism'. This was inspired by his growing interest in evolutionary ideas, and would have been a startlingly original - if premature - endeavour. (In the 'Preface' Lewes dismisses it as clearly erroneous.) Problems of Life and Mind was not therefore conceived, in anything like its eventual form, until the end of the 1860s - the name was chosen in January 1869(15) - and even then Lewes felt uncertain of its scope. Handicapped by what he felt was the unsatisfactory state of physiological knowledge, and the lack of a sufficiently comprehensive sense of what psychology as a science should be, the Problems were originally envisaged as a series of essays rather than a unified

(14) Kitchel, Lewes and Eliot, p. 216.
project. These essays would also look beyond psychology and encompass 'a systematic introduction to the philosophy of science'.

There are several points to make about this. We might note the Victorian scale and grandeur of the enterprise, its urge for system and desire to be comprehensive and general. But we also note the anxiety about psychology's status as a science (an anxiety typical of this period), despite the consciousness of tradition, and the anxiety about the sufficiency of available knowledge for the grand scheme. These worries are distinctively Lewesian - you would not find them expressed by Spencer for example - and they follow directly from Lewes's powerful sense of the historically-specific nature, and therefore provisionality, of scientific and other forms of human knowledge. Intellectual work must be understood as a product of its age and occasion. Thus, in the first volume of *Problems of Life and Mind*, he argues that science and metaphysics alike take their impetus from the questions set by the age: 'the question of originality is of quite minor importance; that of efficiency most concerns us.'

Lewes was committed to this idea and it is extended in volume two. Knowledge develops, but it becomes progressively more adequate to the phenomena it describes without becoming ultimately so.

---

(16) *Problems of Life and Mind: First Series: The Foundations of a Creed*, vol. 1 (London, Trubner and Co, 1874), 'Preface'. The organisation of *Problems of Life and Mind* is complex. Lewes divided it into three 'series'. This division, however, is cumbersome for finding one's way around its bulk. I therefore henceforth give citations by volume number followed by page number. The volumes correspond to the series numbers as follows (all were published by Trubners): Series 1 - volumes 1 (1874) and 2 (1875) (*The Foundations of a Creed*); Series 2 - volume 3 (1877) (*The Physical Basis of Mind*); Series 3 - volumes 4 (*The Study of Psychology, 1879*) and 5 (independently untitled, 1879).

(17) *Problems of Life and Mind*, I, 84.
'Truths' develop from each other in this way, but from an historical point of view it is misleading to talk about 'error' in any absolute sense. Pre-Copernican theories of planetary motion, for instance, were 'right' for a long period in terms of the questions asked of them by the relevant needs, concepts and propositions of the age in their cultural, institutional and intellectual relations. Thus the replacement of one theory by another is much more of an evolutionary process than an arrival at a singular static 'truth'. A new theory develops because it is better suited to the circumstances in which it functions. Copernican theory, for example,

was not an exhibition of the untruth of the old theory; on the contrary, that formula so far expressed real observations that, even now, in spite of Copernicus, Galileo, Newton, and Laplace, we habitually regard the world as at rest, and only adopt the enlarged theory for astronomical purposes, when dealing with phenomena which were hardly suspected when the old theory was framed. ... Nor have we any grounds for supposing this interpretation to be final: it embodies present knowledge, that is all.(18)

However this is not a justification for a corrosive scepticism. It implies only a continual struggle for the adequacy of interpretation in specific historical circumstances.

Lewes finds an example in his own day too. He realises that there can never be a decisive outcome to the battle between creationism and Darwinian evolutionary theory because neither case can be established on grounds that satisfy the other. This is because 'Science is no transcript of Reality, but an ideal construction framed out of the analysis of the complex phenomena given synthetically in Feeling, and expressed in abstractions.'(19) All formulations in language therefore are subject to revision or challenge. But this

(18) Problems of Life and Mind, II, 82-3.
(19) Problems of Life and Mind, II, 86.
does not mean that all propositions are equally valid. Intellectual cultures devise tests to monitor adequacy (usually through institutional pressure or testing by application). This regulates the apparent relativism, as does Lewes's emphasis on the act of human creative adequacy which brings successful theories into being. It is important to stress this last point, because some influential recent theories - associated most closely with the 'deconstructive' arguments of Jacques Derrida and his followers - have proposed only the first, epistemologically sceptical, part of the argument and ignored the second. Thus they have failed to offer either a sufficient conception of human creativity, or a sufficient understanding of the function of knowledge-propositions and language performances in human societies. As a result the theory associated with this line of thinking has derisively dismissed writing in a 'realist' mode as mere ideological camouflage for authority structures - as for example in Colin MacCabe's criticism of Middlemarch examined in the previous chapter.

The double-edged theory offered by Lewes - that knowledge is both creatively adequate and radically provisional - is a central point in his work, and one that is shared by George Eliot. (It is, for instance, echoed by her in the opening epigraph to Daniel Deronda then - 1875 - being written.) Testing by application is effective, but applications will themselves be historically defined. There can be no ultimately decisive tests. In volume four of the Problems (1879) Lewes concludes that knowledge is in fact driven by need: 'we only see what interests us'.(20) It is thus related not only to historical and cultural conditions, but also to the psychological conditions of the human participants in any act of knowledge-creation. This too is

(20) Problems of Life and Mind, IV, 42.
a key idea in George Eliot’s thinking, where it is given a particular ethical turn. Ethical action in Eliot’s fiction consists of the conscious realisation of limitation, either of perception, culture or a whole personality. (21) The important initial step - be it by Gwendolen Harleth, or that unnamed, because typical, 'observer under the softening influence of the fine arts' who is imagined looking at Dagley’s run-down farm in chapter 39 of Middlemarch - is to become conscious of the limitations of one's own views. If we turn round Lewes's proposition we can see its ethical bearing. If we see primarily only what interests us, perhaps our interests would become larger if we saw more, and a 'growing good' will ensue. Thus, the fact that man is a social being is morally and psychological enlarging, and man's 'higher faculties are evolved through social needs ... Mind [is] an expression of organic and social conditions.' (22)

Middlemarch, however, does not only provide illustration of the ethical register of these arguments. The text is also explicitly concerned, in an informed way, with the historical and social circumstances in which bio-medical research is conducted. Thus it is frequently noted that Lydgate's interest in Bichat is a sign of his intellectual potential and seriousness, and of how up-to-date he is in his researches. All of which is true. What is less frequently remarked, however, is that, by the time the novel was published, serious reservations had been entered about Bichat's work which would have qualified the sense informed readers had of his achievement. His status in the history of biology, of course, was not in question. But

(21) For illuminating discussion of these important areas see Myers, The Teaching of George Eliot, esp. ch 9.

(22) Problems of Life and Mind, IV, 6.
the nature of his scientific project, and the theoretical underpinning of his research was doubted. Bichat's wish - taken up by Lydgate - was to find a common substance to explain histological phenomena. Lydgate dreams of extending this to mental phenomena, to investigate the 'invisible thoroughfares which are the first lurking-places of anguish, mania and crime'.(23) But the direction of analysis by later biologists and psycho-physiologists was to see phenomena as non-reducible to such - essentially biologically determinist - causes. In volume three of the Problems Lewes commented that Bichat was mistaken because he attached too much importance to physiological processes at the expense of attention to the 'External Medium' with which they interacted.(24) (Lewes, of course, is using the later more sophisticated biological terminology of Claude Bernard whose influence on his work was extensive.) Later he also comments that Bichat was 'not sufficiently disengaged from the metaphysical mode of viewing biological phenomena', and treats physiological properties as entities credited with an agency of their own.(25) In other words, Bichat worked within the biological paradigm of vitalism.(26) Instead of seeing the whole as the function of diverse, interacting influences, Bichat tends to seek reductive explanations. This way of thinking runs entirely contrary to Lewes's own physiological work which, since the important 1859 paper given to the British Association, had stressed that the properties of nerves depended on location, and their

(23) Middlemarch, p. 194.

(24) Problems of Life and Mind, III, 27.


functions depended on interaction with the environment. This is the main bias of Lewes's physiological psychology, and indeed it forms the core of his reputation. The stress he placed on 'the social factor' in psychology was what distinguished him for many of his contemporaries, and his specific point about nervous action received praise both at the time and subsequently. (27)

George Eliot of course would have been well-aware of these reservations about Bichat's work. (She comments that Lydgate's way of putting the question about 'the primitive tissue' was 'not quite in the way required by the awaiting answer'. (28)) But what consequences do they have for our sense of Lydgate's hopes? Clearly, they severely qualify them. But the reservations entered are not entirely compromising either to Bichat or the go-ahead young doctor. What we have is a subtle account of the interaction of scientific knowledge, local culture and a specific personality. Lydgate finds Bichat appealing not only because he is in the van of contemporary ideas, but also because he offers reductive explanations which ignore context - just as Lydgate is unable, either professionally, or in his personal life, to appreciate fully the power of social influence. In the same way, the fact that Bichat's work has been reconsidered by posterity does not diminish his achievements as a scientist, nor - following Lewes's theories of the relationship between period and intellectual need - does it diminish the success of his work for its time. Bichat

(27) For details of the 'social factor' in psychology see section two of this chapter. Several commentators praise Lewes's hypothesis about the nerves. See, for example, Ribot, English Psychology, p. 287; Sully, 'Problems of Life and Mind. Third Series', 309-10; Smith, 'George Henry Lewes and his "Physiology of Common Life"', 572. It was admired at the time by Huxley, among others, who delivered the relevant paper for Lewes.

(28) Middlemarch, p. 178.
both met demands set by the age and enabled further work (including that of Lewes himself). The general theory about the development of knowledge set out in *Problems of Life and Mind* is born out in George Eliot’s novel.

A historicised evolutionary theory of knowledge thus necessarily entails limitation, for every observer’s mind is ‘the product of history’, and all ‘sentiments and opinions’ are tied to the epoch and culture which produces them. (29) This, of course, will apply to *Problems of Life and Mind* itself as to any other text. To take a negative example, Lewes, like Spencer, sometimes indulged in a characteristically Victorian racial denigration of ‘savage’ cultures. This is a morally and ideologically unselfconscious example. Elsewhere Lewes is more promisingly circumspect, as in his powerful awareness of the limitations placed on his work by the state of physiological knowledge. In the third volume of the *Problems, The Physical Basis of Mind* (1877), he enters caveats, not only about the provisionality of theoretical formulations, but also about the very foundations of physiological knowledge itself. He cites Lotze with approval to the effect that even good physiological hypotheses have an effective scientific life of only about five years, and writes that medical men and psychologists ought to be warned against founding theories of disease, or of mental processes, on such very insecure bases; and physiological students will do well to remember the large admixture of Hypothesis which every description of the nervous system now contains. (30)

In illustration of this general point, as we shall see,

(29) *Problems of Life and Mind*, III, 97.

(30) *Problems of Life and Mind*, III, 224.
Problems of Life and Mind is itself unable to sort out a coherent evolutionary theory. It hovers somewhat indecisively between the Lamarckian and the Darwinian hypotheses as the various intellectual needs of the theory dictate. But it is important to recognise that this is a historical, as much as personal, difficulty, and Lewes was, of course, by no means alone in facing it.

The recognition of the provisionality of knowledge is one reason why Problems of Life and Mind is so persistently concerned with epistemology and methodology. It is one source, for instance, of Lewes's reservations about Spencer's theory of knowledge. Though he is generally laudatory about his friend and ally's work, he dissents from some features of his theory. Lewes sees Spencer's 'Universal Postulate' as an unnecessary hostage to idealism, because it seems to imply some hypothesis of 'unproved truth' waiting to be inevitably discovered. (31) For Lewes, 'truth' can only exist in 'feeling', in sensually verifiable, and historically-specific ways. It exists only in determining contexts, hence the importance of correct method. In the absence of reliable data in a rapidly developing field, methodology becomes essential. Closing the first two volumes - 'The Foundation of a Creed' - with an envoy, it is this Lewes chooses to stress. Correct method, he says, will survive the overturning of this or that result or hypothesis, and will ensure proper circumspection and verification. 'L'Envoy' is aimed, therefore, not at contemporaries whose views have hardened into 'doctrine', but at the younger generation of his readers. For it is their ideas that will 'set the conditions which determine the acceptance of new truths'. (32)

(31) Problems of Life and Mind, II, 90.
(32) Problems of Life and Mind, II, 506.
New truths - or knowledge propositions - occur through the interaction of developments in empirical findings or theory with specific social and cultural situations. We have seen in chapter one how Lewes had a strong - and quite accurate - sense of the way in which the post-French Revolutionary political climate had influenced the development of research in physiological psychology. This sense never left him, but the central concern of Problems of Life and Mind is more forward-looking. Specifically, it looks to rebuild the national culture in such a way that science will become a more integral part of British intellectual life. Lewes writes that the 'absence of [science] during the last two hundred years has been a serious defect in her culture'. Contrasting Britain unfavourably with Germany, he castigates British parochialism and failure to engage with important international developments. This has a strikingly modern ring to it, not just in the light of recent political history, but also in the context of recent polemical jeremiads (from both left and right) on the insularity and the pro-literary, anti-scientific prejudices endemic to British culture. (The best-known of these is probable that by the American Martin J. Weiner.)

Lewes's opportunity to redraw the map of English intellectual life was provided by the general climate of the decade or so after 1865, and it comes in the context of other, rival bids to reshape the culture during these years - most famously Matthew Arnold's.

(33) See Tjoa, George Henry Lewes, pp. 83-104 for comment on Lewes's efforts to construct a unified and coherent world view which would embrace literature, science, history, and so on. I will discuss my reservations about Tjoa's construction of this enterprise in section six of this chapter.

(34) Problems of Life and Mind, I, 84-6.

anti-scientific anatomy of British spiritual debility in *Culture* and *Anarchy*. But within the scientific wing of opinion there was a fairly wide spread sense of optimism and possibility. Major battles had been fought and not lost, and the war seemed to be being won, if only by attrition. Though neutral observers like the barrister, poet and maverick intellectual William Smith (who had been a friend of Lewes since the 1840s, though he did not see eye-to-eye with him intellectually) could comment in 1870 that ‘mental philosophy [was] now accustomed to the language of apology’, (36) there was a firm sense among the new psychologists that their opponents’ arguments sounded increasingly weak. This is born out by the hostile reviews which *Problems of Life and Mind* received. These were by and large, as Lewes himself said of Richard Hutton’s attack in *The Spectator*, really ‘too feeble’. (37) Hutton’s criticisms, and carping tone, are drawn from a different age, and are as frail in their rhetoric as their arguments. The first volume of the *Problems*, says Hutton, is difficult to read because of the ‘dense mass of physiological and biological knowledge through which the reader has to push his way’. This ‘desert’ (what desert has a ‘dense mass’ of vegetation?) is inappropriate for a book on the mind, as is Lewes’s tendentious refusal to discuss ‘necessary and universal truths’. Lewes is really metaphysical without admitting it, for the assertion that there are no *a priori* truths is itself an *a priori* assumption. (38) These were not really viable arguments in the 1870s.


(37) Lewes to Alexander Main, 13 March 1874. *Letters*, VI, 30.

(38) [Richard Holt Hutton], ‘Mr Lewes’s "Problems of Life and Mind"’, *The Spectator*, 28 February 1874, 271-73.
Others, however, took a similar line. An anonymous reviewer of volume one of the Problems in the Westminster in 1874 opened his commentary in the facetious, Swiftian manner familiar from earlier denunciations of Spencer and other evolutionists. He looked forward to the race of 'diviner Mammals' to come, with 'prehensile appendages' and 'high Intelligences'.(39) The aim of this, of course, was to demean the account of man as a spiritual being apparently entailed by the newer psychological writing. More specific comments also followed well-trodden ground: Lewes trespasses in conventionally religious areas, his work is damagingly allied to Mill's (an extraordinary thing for a reviewer in the Westminster to say), his language is jargon, offensive to common sense, and unable to say anything about 'ourselves, our feelings, passions, sensations, thoughts, wills, and actions - nay the very fact of our existence'.(40) But what is interesting about this essay is the picture it gives of Lewes's reputation. There is early praise: Lewes is 'one of our most celebrated scientific inquirers, who, if not the greatest of philosophers, at least knows more about philosophy than any other living author, and whose reputation as a thinker has been founded not only on his great and varied knowledge, but on his supposed trustworthiness to take the common sense view on difficult problems.'(41) Problems of Life and Mind, therefore, he goes on to say, comes as an even greater shock.

Lewes was in fact regarded as occupying the middle ground of psychological opinion, even in the Problems. That text did, as Ribot

(39) Anon., 'Mr Lewes and Metaphysics', Westminster Review, 46ns (1874), 104.

(40) Anon., 'Lewes and Metaphysics', 104-05.

(41) Anon., 'Lewes and Metaphysics', 105.
noted, push some arguments - particularly over the role of society in the formation of mind and the description of the mind-body problem - beyond the conventional limits of the period (and these were the issues singled out by the Westminster reviewer for special hostility). Nonetheless observers did see that the future lay with this kind of enquiry. Another neutrally-minded commentator in the Atheneum in 1879, reviewing the fourth volume of the Problems, contrasted Lewes's work with that of Henry Calderwood, a latter-day supporter of the 'Scotch School'. This body of theory the reviewer bluntly described as 'obsolete'. Though reservations were felt about Lewes's work, 'we would rather build from the foundation with Mr Lewes than descend to a lower story [sic] from the air-built roof of Professor Calderwood.' (42) The metaphor is a little garbled, but it would have suited Lewes's picture of his own work as methodologically re-orientating psychology. The review ends recommending Lewes's book as 'decidedly the best statement in English of the problems and methods of psychology.'

Certainly by the standards of, say, John Tyndall or T. H. Huxley, Lewes was moderate in tone and conclusion. Indeed Lewes forcefully takes his distance from the extreme 'automatist' position adopted by these writers. By the mid-seventies, Huxley and Tyndall were seen as putting the limit case of the new theory. Tyndall's essays were especially militant. "Materialism" and its Opponents' (1875) declared that religious 'squatters' should be evicted from science's domain, and that the ultramontane intelligence was 'through lack of exercise, virtually the underdeveloped brain of the child'. Why, protested Tyndall, should the new scientific theories always be forced

(42) Anon., 'Current Philosophy', The Atheneum, 27 September 1879, 398. For comment on Calderwood see below, n. 94.
onto the defensive? Why do religious writers not defend their own 'absurd cosmogony' instead of interfering in that of scientific theory? Religious writers - he has James Martineau specifically in mind - always treat assumptions as facts, whereas the new psychology claims at most that it only feels and deduces.(43) In 'Science and Man' (1877) Tyndall attempted to turn round the conservatively-inclined organicist tradition in English thought. Expressing an initially surprising agreement with Carlyle, Tyndall draws out the classic organicist analogy which compares the universe to an organism like a tree. Anti-materialists are correct, says Tyndall, the universe is not a machine. It is an energy system, like an organism. Both Carlyle's idealist organicism, and Tyndall's so-called 'materialism' have the same basis therefore. Both imply 'the interdependence and harmonious interaction of parts, and the subordination of the individual powers of the universal organism to the working of the whole.'(44) Where the two schools part company is in the addition of an agent - like the soul - which works from outside the system, controlling or intervening in its operation. Unable to refute materialism's operational model, therefore, or explain in any plausible scientific terms how such an entity might function, the anti-materialist tactic is to resort to low abuse. Tyndall's essay was the text of an address given to the Radical Birmingham and Midland Institute, and he therefore ends attacking the political insults flung at scientific materialism, and the disgraceful blackening of individual reputations and characters (his example is Lewes's early comrade George Jacob Holyoake).


(44) John Tyndall, 'Science and Man', *Fortnightly Review*, 22ns (1877), 595.
Tyndall's essays are at the rough-and-tumble end of the war of the psychological schools, but they are indicative of some of the central shifts in opinion. Tyndall's polemically shrewd attempt to appropriate organicist rhetoric is of a piece with the shift in George Eliot's conception of the functioning of the organic model. As we have observed in the previous chapter, and as has been thoroughly documented by Sally Shuttleworth, Eliot followed alterations in general biological opinion carefully. By the time she came to write Middlemarch, therefore, she had changed her analytic model to one which involved a much more dynamic, and indeed unstable, sense of process and energy systems. Her 'natural history method' (to use Bain's term) is now a much more complicated matter. For one thing, as Middlemarch makes clear, organic structures can be ensnaring and predatory as well as nourishing. It depends, once more, on where you stand and how you look. A similar adjustment to, and sense of complexity in, the model is observable also in Lewes's work, as we shall see in section two of this chapter.

The mood, then, in which Problems of Life and Mind was written is, from the scientific point of view, much more buoyant (and indeed intellectually rich) than that in which, say, Bain's or Spencer's early work was undertaken in the 1850s. This does not mean that opposition had fallen away of course. Like Bain and Spencer, Lewes, too, had publication difficulties. Blackwood refused the text of the first volume of the Problems on religious grounds. Having, in 1873, written to Lewes that he had 'no hesitation in agreeing to publish the work [Problems of Life and Mind] and on the terms you propose', and having no fears that 'the cause of real religion [could be] injured by

any amount of free and fair discussion such as yours is sure to be', (46) nonetheless Blackwood withdrew four months later. Having read the first few sheets only, he concluded that Lewes assumed 'too much a general disbelief in religion'. (47) Lewes was annoyed, but also relieved. (48) He had foreseen difficulties, even warning Blackwood that the book might give a 'metafeesical' shock to 'Scotch friends and clients'. (49) In the event Lewes had no trouble in placing the book with Trubners, a scientific publisher, to the advantage of both parties. Volume one, as we have noted, sold exceptionally well.

Lewes, of course, was alert to the difficulties of public discussion of ideas such as his. Generally, he was thought to occupy a respectable and sensible middle-ground of advanced opinion; and there was no doubt that the Eliot-Lewes couple appeared impressively prestigious by, say, 1870. (50) Nevertheless, the intellectual and cultural climate remained hostile in major respects. As late as 1885, Lewes remained a man of 'negative convictions' for John Tulloch, and had 'much of a Frenchman in his ways', a damning error if ever there were one. (51) Thus, in two articles for the Fortnightly in 1876 on 'Spiritualism and Materialism', Lewes resumed some of Tyndall's themes and protested that 'the rhetoric of many spiritualists is very distasteful to serious minds' when it descended to accusations of failure in morals or conscience by individual 'materialists'. (52) As ever Lewes was conscious of the political bearing of these arguments:

"a final word on the moral attitude so unjustifiably assumed by spiritualists. The two hypotheses are not unlike Toryism"

(47) Blackwood to Lewes, 14 April 1873, Letters, V, 400.
(49) Lewes to Blackwood, 18 January 1873, Letters, V, 371.
and Radicalism in politics. They express one-sided views, and represent Order and Progress. Organicism claims to unite these views by showing that Progress is the development of Order. Meanwhile the Spiritualist and Tory are strong in so far as each steadfastly opposes inadequate explanations and precipitate changes; the Materialist and Radical are strong in so far as each, while protesting against prejudice and privilege, insists on actual facts and reasonable inferences. But both Spiritualist and Tory have been too apt to load their protests with threat, claiming for their own side the monopoly of moral purity. It is high time that Spiritualism should cease its exclusive pretensions to lofty aspirations and ideal aims, and cease to assume that any other hypothesis is false because desolating. The threat is held over our heads that if we do not accept the hypothesis of Spiritualism we shall be understood to deny Conscience, Justice, Love for mankind, shall regard man as no better than a brute, and banish Poetry - Morality - from the world. ... so powerful is the effect of this incessant rhetoric that few men have the courage to avow their disbelief in an extra-organic agent; and of those who do avow it, many are provoked into an equally offensive attitude, answering with defiant epigrams and noisy paradoxes.(53)

The similarities in argument between this passage and Tyndall's essays

(50) This was a theme in a number of Lewes's obituaries, especially in the 'scientific' press - see for example that in Nature, 19 (1878), 106-07. It was also becoming a common ploy to separate Lewes - and Eliot - from Comte because of Comte's political associations. As we have seen in chapter one, William Smith did this in his review of Lewes's revised History of Philosophy for Blackwood's in 1868, and an anonymous reviewer of Lewes's Aristotle: A Chapter from the History of Science (1864) praised Lewes's 'masterly book' before proceeding to attack the irreligious political views of Comte which were so closely associated with 'French Revolutionists' across the century. The reviewer excused Lewes from such sins, but lamented his 'combative character' and warned him not to try to be too original, and not to stress the historical and social causes of phenomena. Though Lewes took his distance from Comte in some major respects (which included the vexed matter of the status of psychology as a discipline), it was precisely the application of social and historical ideas to the analysis of the mind that Problems of Life and Mind proceeded to do. See Anon., 'Lewes on Aristotle's Scientific Writings', British Quarterly Review, 40 (1864), 51-79.


(52) George Henry Lewes, 'Spiritualism and Materialism: Part 1', Fortnightly Review, 19ns (1876), 482.
are very marked - in part, of course, because they are standard arguments of the period from the 'materialist' camp. And Lewes is forceful and plainspoken about them. He is particularly fierce about the inhibitions placed on free enquiry; and the alignment of 'organicism' with the progressive and 'Radical' camp is again interesting. But the difference of tone is also striking. Tyndall is hectoring and provocative; Lewes is firm, but calm. The intention is different, and this in turn reveals something about the tone, intention and structure of Problems of Life and Mind.

The difficult structure of the Problems is related to this. It is evident, for instance, at many points - as in the splendidly clear digest of 'advanced' contemporary thinking contained in the fourth volume, The Study of Psychology - that Lewes assumes a sympathetic and at least partially-informed audience. We have seen, too, how he wishes to look to the future, and the younger generation; and we have seen how he emphasises a historicised and provisional view of human knowledge. All this, then, gives Problems of Life and Mind a conditional feel which is rather at odds with its apparently systematic, even doctrinaire, appearance in the Spencerian manner. The title of the Problems should, therefore, be taken to heart. Lewes is dealing with just that - a series of related problems within a complex field whose difficulties with scientific status and appropriate methodology, whose complex relationship to past enquiry, and fraught intellectual and social context, all make it difficult for Lewes (or anyone) to produce decisive formulations of problems, let alone answers. The result, therefore, is a text whose fragmentation and messiness is more than the result of the health problems that

(53) George Henry Lewes, 'Spiritualism and Materialism: II', Fortnightly Review, 19ns (1876), 717.
bedeviled Lewes during its production.

A possible analogy is with the poems Lewes so admired. For it really is quite difficult to see a coherent and satisfying way in which Problems of Life and Mind might have closed, even had personal circumstances permitted it. The Problems make little effort to be systematically comprehensive, or to establish a series of logically-elegant arguments which run to a conclusion. Like the long, unfinished Romantic poems of Wordsworth, Coleridge, Byron or Keats, Lewes's text raises far too many problems for a satisfying resolution to be possible. As George Eliot realised - in late essays such as 'Notes on Form in Art' (1868) - structure must be given by present circumstances if it is to respond in good faith to the material: 'what is fiction other than an arrangement of events or feigned correspondences according to the predominant feeling?', she asks. One result of this idea is the increasingly 'open' endings of her last novels, and the whole line of thinking is a late version of Coleridgean conceptions of 'organic form', given a realist twist, but continuing to be based on biological, or at least psycho-physiological, models. (The whole vocabulary of Eliot's essay is drawn from Lewes's work. 'Feeling', for instance, has an enlarged sense beyond 'passing emotion'. It is an abstract for sensory experience across the board, and acts as a kind of epistemological guarantee in Lewes's theories.)

This kind of literary problem is one we are accustomed to considering in relation to much 'modern' writing and literary theory, though in standard accounts it is rarely applied to the perennial

whipping-boy of post-structuralist argument, the Victorian novel. Indeed to stretch this parallel, it could be argued that Problems of Life and Mind contains a kind of 'modernist' argument within a nineteenth-century 'positivist' form (accepting the severely pejorative associations that term has acquired in many forms of recent theory). Certainly this way of thinking about the 'text' (and the multiple-volumed, open-ended form, with its emphasis on provisionality seems to me to invite that term as coloured by this theory), is a much more promising way of thinking about it than as somehow a 'failed' or 'minor' Victorian 'system'. The tension between the two modes provides Problems of Life and Mind with its energy and interest. Again the difficulty of thinking through the relationship between physiology and psychology provides an example.

Though Lewes insists quite categorically that psychology cannot proceed without physiology, he is not so polemically blasé - as for instance is Tyndall - to assume that this intellectual necessity abolishes, or indeed satisfactorily finesses, the real problems endemic to theorising the relationship between physiological base and human superstructure (to use a popular nineteenth-century metaphor). Nor does he believe that the language of the one is immediately applicable to the phenomena of the other. Two interesting and supportive reviews of Volumes One and Three of the Problems by Douglas Spalding, a younger psychologist, pinpoint this very helpfully. Interestingly, the reviews are not quite coherent either in argument or tone, and veer quite sharply between courteous compliment, heavy-handed irony and penetrating observation. They are in this respect the work of a young man, of course, but they are also, like Lewes's text, between generations. And the real point of interest is
Spalding's perception of the difficulties in language faced by physiological psychology. He notes that 'the popular mind' holds, as a residue from theology, that the body is the servant of the soul. Though this is an error, it is at least intelligible. Whereas the contrary proposition, as in Problems of Life and Mind, that thought is governed by feeling is, in a very real sense, unintelligible. It simply rubs common-sense up the wrong way. At the same time Spalding notes that physiological psychology is itself 'entangled in the phraselogy of exploded theories' and analogies, and in a very powerful sense, modern psychology has no adequate language at its disposal. It is with the need to remake the language of psychology, on the assumption of mind-body identity, that new work should be proceeding.(55)

Spalding was clearly as radical in politics as psychology. (The Examiner was a radical journal, and Spalding's is to be found alongside pieces on women's rights, conditions in the Paris slums, and civil liberties in Britain.) But he identifies a way in which Problems of Life and Mind looks backwards rather forwards. Pushing ahead some of the major initiatives taken by the new psychology into areas like his radical solution to the ancient mind-body problem, and his far-reaching conception of the role of society in the formation of mind, Lewes's text nonetheless came as the new psychology generally was keen to seek rapprochement with the 'Tories and Spiritualists' (as Lewes named them). Principally, they tried to make use of some of the

(55) Douglas A. Spalding, 'George Henry Lewes's Problems of Life and Mind', The Examiner, March 14 1874, 262. In 'The Physical Basis of Mind', Nature, XVI (1877), 261-63, Spalding extends this point to include the residue of metaphysical problems in scientific language. Very much against the grain of the usual accounts, Spalding charges Lewes with preserving too much metaphysical language in his work.
ideas and language that had hitherto been monopolised by reactionary writers. One can see why this should be so. As the theoretical project became more sophisticated, there was a real need to offer more nuanced accounts of human behaviour and the 'higher' faculties. The sensible, indeed perhaps the only, thing to do was to make use of existing discourse, though this might compromise the new by the language of the old. In Lewes's work this struggle for language is very evident.

The effort to make peace with spiritualism was widespread. Lewes's old positivist friend Frederic Harrison, for instance, made a bid in *The Nineteenth Century* in 1877 for the moral high-ground in the 'scientific' interest. (56) Harrison's piece is not actually very successful (he ends up sounding a bit like a crusty Tory-Spiritualist himself), but the attempt was representative. Henry Maudsley, the increasingly-celebrated clinician argued in the *Fortnightly* that materialism, far from destroying morality, actually encouraged the moral sense. Theories of Providence destroy the moral will, and therefore abnegate moral responsibility by encouraging a self-seeking obsession with personal salvation. They can also ruin a personality: 'it is not the most elevated or the most healthy business for a person to be occupied continually with anxieties and apprehensions and cares about the salvation of his own soul.' (57) He might have been thinking of Nicholas Bulstrode. In the second volume of the *Problems* (1875), Lewes begins with the proposition that the 'Universe is mystic to man, and must ever remain so', and expresses a rather over-solicitous


concern to preserve that mystery and reassure anxious readers. Science is only a re-presentation, a symbolisation, of still-awesome phenomena. But Lewes's metaphor is then interesting and typical: 'Science is seeing with other eyes.' (58) All is provisional, a way of seeing. We cannot search for 'scientific finality, and demand a cause of a cause, an origin of the origin. It is in this sense that mystery for ever accompanies our search, a shadow which recedes, but never lessens.' (59) With this apt, and very Eliot-like, image for the nature of knowledge, perception and intellectual enquiry, it is now time to turn to the substance of Lewes's development of psychological theory.

(58) Problems of Life and Mind, II, 3.
(59) Problems of Life and Mind, II, 7-8.
II. Mind, Metaphor, Biology and Man

Problems of Life and Mind is both constructive and critical. That is, it draws upon the heritage of ideas and approaches provided by the 'experience' tradition, but it also attempts to move beyond these to a different kind of model of the mind's operations. Three influences are principally at work in this. There is, first, the influence of Spencer, and in a more general sense Darwin, who could offer a model for the analysis of mind which was based on theories of general biology rather than the analysis of mental contents or speculative hypotheses about physiological processes. The second influence, a fuller account of which will be given later, comes from the need Lewes and others felt to offer a more comprehensive and humanly-nuanced account of the higher human faculties. The main area of debate here concerns the challenge offered to 'materialist' psychology by neo-Kantian thought. This was represented at its best by T. H. Green, but its presence was substantial throughout the intellectual community interested in psychological questions.

The third influence was, of course, that of Comte. As we have seen, Lewes disagreed with Comte's belief that a separate discipline of psychology was unnecessary. In addition, he could not accept Comte's ill-conceived physiological ideas. Nonetheless two of Comte's central propositions remained of abiding interest to him. The first of these was the integrational theory of knowledge implied by Comte's 'hierarchy of the sciences'. The second was the stress placed by Comte on the influence of society on the formation of mind. Comte theorised mind at the intersection of biology and sociology, which is exactly where Lewes too based his investigations. Lewes's emphasis on
the social determinations of mental phenomena, became, in the eyes of many of his contemporaries, his most distinctive - and controversial - achievement. As for the integrational model of knowledge, that is everywhere apparent in his writing, as it is in George Eliot. The theoretical bearings taken, the range of knowledge brought to bear on problems, the understanding of the functioning of society, culture, and the human personality, all these witness the acceptance of Comte's proposition that specialised knowledge is only provisionally so, and that it is necessary to look beyond speciality - and mono-causality - to understand the manifold causes of phenomena.

Yet what is also interesting is the rejection by both of Comte's concomitant proposition that the diversity of determinations can be smoothly graded into a finished hierarchy or 'system'. Lewes and Eliot may have offered nominal support to the Comteans (and probably in Lewes's case it went further than this in the 'fifties), but their actual intellectual practice could not be comfortably assimilated into Comte's system. This is apparent in the details and shape of their most mature writing: in the messy provisionality of Problems of Life and Mind, in George Eliot's continually-expressed anxiety about the sufficiency of her own analyses in Middlemarch or Daniel Deronda, and in Lewes's desire in the Problems, to get psychology out of the grip of 'authorities'.

In volume four, The Study of Psychology, Lewes offers a critique of existing schools. There are, he writes, three kinds of psychological theory. There is the school of 'Rational Psychology', which includes the leading philosophical psychologists, of whatever stamp, from Locke, through Berkeley, Hume, Hartley and the rest, to Mill. This school is non-empirical, emphasises the operation of the
conscious mind, and tends to focus on 'mysterious agents' or 'Psychical Principles' which analytically remove mind from determining or related phenomena.\(60\) The second school, the 'Empirical School' (which includes Cabanis and Gall), claims to confine itself to the data of 'Experience', but depends mainly on introspection. While often claiming to be physiological, in fact it posits a psychology which is independent of the analysis of the organism; it is only 'coquetting with Physiology'. The third - or 'compromise' school - uses physiological data when physiological facts are at issue, and psychological data when this falls short. Its leading practitioners are the Germans Lotze and Wundt, the Frenchman Taine, and Bain and Spencer in Britain. The stress in this work falls heavily on the 'two-fold aspect of phenomena'; that is, the desire to analyse the mind in both its physiological and psychological registers, and, if necessary (as in Bain), to keep these independent of each other. As we shall see Lewes himself pursues the 'two-fold' analysis, but tries to develop a much more positively integrated approach.

Several points need to be made about this anatomy of the state of psychology in the mid-seventies. Lewes is, first, trying to liberate psychology from what he calls the tyranny of 'authorities in the place of reasons', and 'systems' in the place of methods. He wishes to make psychology methodologically much more responsive to its object of investigation, and to new knowledge, and less obedient to, or caught-up in, scholastic or party disputes which are destructive of proper investigation. Psychology, in Lewes's view, needs to become more flexible, and less speculative. This explains the relatively sparse citation or direct affiliating reference in Problems of Life

\(60\) Problems of Life and Mind, IV. This and the following quotations are taken from pp. 3-6.
and Mind. An analysis of the (in the Victorian manner) rather haphazard footnotes or citations in the various volumes would produce (for English readers) a rather eccentric profile which emphasises rather out-of-the-way European work. Though Comte and Spencer are praised, Lewes takes issue with Spencer in a number of ways, and significantly leaves Comte’s work — if not some of his outline propositions — largely alone. (61) The fact is that Lewes did not want to place himself inextricably anywhere within present argument (except of course within the broadly-defined ‘materialist’ camp). Though he was not so naive to think that he could avoid the war of the psychological schools, his effort to adjust his tone, to make appeal to the moderate ground, and above all to avoid ‘system’, ‘doctrine’, or quarrelsome ‘authorities’, represents a real effort to devise a way of writing for psychology which was more supple and responsive. In so doing he seeks to reconcile the old wars between the ‘sensationalist’ and ‘a priori’ factions. (62)

Interestingly, Lewes also takes his distance from Bain and Spencer. Their ‘compromise’ position has advantages, and represents a significant development, but its limitations are equally striking. Despite their achievements, ‘the constitution of the science [of psychology] has still to be effected’. Psychology lacks, firstly, a

(61) This is not surprising; if Comte’s theories were to be placed among Lewes’s three groups, they would come among the other out-dated lumber of the ‘Empirical’ school. Lewes comments that Comte was the victim of metaphor in his notion, derived from Gall, of localised faculties sited in the brain. He leagued Comte in this respect with Kant. Both extrapolated from internal observation to the hypothesis of real entities, be it phrenological anatomy or a priori mental forms. The metaphors of ‘internal observation’ and the ‘internal eye’ misled both. Note again Lewes’s typical concern for accuracy in psychological language. (See Problems of Life and Mind, IV, 85-6.)

(62) For this argument, see Problems of Life and Mind, I, 200-47. (Problem 1, chapter 2).
sufficiently clear sense of method (including a satisfactory definition of psychology’s object and relationship to other fields of enquiry), and, secondly, the necessary clarity of intellectual effort to think about man relationally. Man is not just an individual, but a species; not just a part of nature, but of society too; not just an animal, but distinctively human; not just a body, but a mind.

To this end Lewes argues in volume one that the stony opposition between the human and the natural worlds needs supersession. Not only is the former derived from and, to an extent yet to be ascertained, determined by the latter, but both can be described in such a way that they seem more fittingly related to one another. Thus Lewes turns once more to the sophisticated ‘organicist’ metaphor which was becoming widely deployed by writers in the materialist camp such as John Tyndall. Objecting to the truncated conception of the biological world entertained by popular prejudice, Lewes confronts the ‘murder to dissect’ arguments we examined in previous chapters and accepts them: ‘Theoretically taking the organism to pieces to understand its separate parts, we fall into the error of supposing that the Organism is a mere assemblage of organs, like a machine.’ It is not. The

Organism is not made, not put together, but evolved; its parts are not juxtaposed, but differentiated; its organs are groups of minor organisms, all sharing in a common life, i.e., all sharing in a common substance constructed through a common process of simultaneous and continuous molecular composition and decomposition; precisely as the great Social Organism is a group of societies, each of which is a group of families, all sharing a common life. ... In a machine the parts are all different, and have mechanical significance only in relation to the whole. In an Organism the parts are all identical in fundamental characters, and diverse only in their superadded differentiations: each has its independence, although all co-operate.(63)

As a political description this analogy is of ancient - and rather

(63) Problems of Life and Mind, I, 113-14.
ruined - vintage, and had already come under scrutiny by Marx and others. But the structural conception is very important. It stresses process through time, a dynamic interaction of parts, and a functional equality of parts through the system. In this respect, it is theoretically homologous with Lewes's ideas about the structure and action of the nervous system proposed in his papers to the British Association in 1859, and a political scenario which stressed equality and co-operation could be, indeed was, generated from it which would be very different from the Burkean-conservative organicism which George Eliot - though not Lewes - sometimes favoured. (64)

But this is not the main point here. The major point concerns the dynamic, integrationist model with which Lewes (as indeed the later Eliot) is working. Drawing upon Claude Bernard, (65) Lewes

(64) In Problems of Life and Mind, III, Lewes makes the point that the recent growth in co-operative societies is a healthy sign because 'in the social organism' it is necessary to set certain specialised tasks apart 'which by their co-operation constitute society' (p. 66). This is the leading emphasis, but Lewes is understandably cautious about making too much of analogies drawn - in Spencerian fashion - from political economy. See for example his strictures on the physiological 'division of labour' on p. 218. Lewes points out that in the end such a theory can produce a conclusion which implies a class of worker fit only for certain tasks. This argument is interestingly related to his objections to Spencer's description of the nervous system in Principles of Biology. Lewes argues that function is dependent on structure and not the other way round. Spencer, in Lamarckian fashion, had argued that biological needs produce functions and therefore structural solutions. Lewes, as in the 1859 papers, argues that function is produced by structural location. (See pp. 69-75.) In political terms, Spencer's argument leads to the conclusion that an oppressed underclass, say, is the immediate result of biological need rather than of the structural conditions for meeting that need. In Volume One, Lewes gives a very George Eliot-like version of this drive to cooperation. In its ethical register it is altruistic compassion born from mutual, needful suffering: 'Enlightened by the intuition of our community of weakness, we share ideally the universal sorrows. Suffering humanises. Feeling the need for mutual help, we are prompted by it to labour for others.' (p. 166) For illuminating comment on the limitations of this position see Myers, The Teaching of George Eliot, Part Two.
describes an integrated structural model. On the one hand, he posits the 'Bioplasm', or 'Physiological Medium'. (66) This represents the sum of the organic conditions which determine the mode of biological existence of the organism. By analogy, Lewes then posits a 'Psychoplasm', or psychological medium. This represents the sum of the various determining influences which bear-upon the creation of psychological states. These will be found on a spectrum from virtual 'organic' conditions (as derived, say, from hereditary factors) to the pressures of social life in its various forms. The theoretical and descriptive homology between the two systems is essential, because the whole organic and mental entity is regarded as in immediate, continual, integrative and enabling contact with the particular environmental medium in which it functions. The process can be described in the same structural terms whether this medium is (for example) human society or evolutionary stock or general biological conditions. The use of similar language, whatever the phenomenon under consideration, is a key theoretical point in Lewes's work, as is the second step in Lewes's formulation of these processes. Drawing now on Spencer, Lewes argues that organic processes can be examined in either their 'statical' structural conditions, or their 'dynamical'

(65) Bernard's influence is pervasive in Problems of Life and Mind. It is explicitly recognised at various points: see I, 116-20, III, Problem 1, ch 3, and IV, 21. Sally Shuttleworth's account (George Eliot and Nineteenth-Century Science, esp. chs. 7 and 8) of Bernard's influence on Lewes is first rate. As she points out, (pp. 6, 18-19) Bernard too was influenced by Comte. See also Mendelssohn, 'Physical Models and Physiological Explanation in Nineteenth-century Biology', and C. U. M. Smith, The Problem of Life: An Essay in the Origins of Biological Thought (London, Macmillan, 1976), esp. pp. 215-17, for useful accounts of Bernard's overall significance to the development of biological thought in the period.

(66) Problems of Life and Mind, I, 116-20. Lewes later substituted the less satisfactory term 'Plasmode' because another writer had begun to use 'Bioplasm'. (Problems of Life and Mind, III, 50-9.)
developmental conditions. 'Statical' and 'dynamical' thus describe analytical operations rather like Saussure's famous synchronic and diachronic axes in the study of language, and they serve to introduce a necessary complicating addition of time - or history - into the otherwise flat analysis.

So Lewes's model respects conditions of time, structure and analytical parsimony and overlap. There are no essentially-different analytical operations which have to be performed because the phenomena to be analysed have a special form or status, or because their agency lies outside the uniform description of physical or material operations and conditions. Thus, in volume three of the Problems, Lewes offers a definition of physiology which embraces a descriptive and developmental perspective based on the idea of the evolution of higher forms in relation to their mediums, and the transition from passive to active existence. The study of physiology, Lewes writes, 'embraces the properties and functions of the tissues and organs - the primary conditions of Growth and Development out of which rise the higher functions bringing the organism into active relation with the surrounding medium.' (67) It is significant that this volume, whose title - The Physical Basis of Mind - might have been thought to imply a separation of analysis akin to that of the dualistic, two-fold aspect of the 'compromise' school, in fact opens by stressing the role of society in the formation of 'the specifically human faculties of Intellect and Conscience'. (68) In the next volume Lewes reminds us that:

[man's] higher faculties are evolved through social needs. By this recognition of the social factor as the complement

(67) Problems of Life and Mind, III, 7.
(68) Problems of Life and Mind, III, v.
to the biological factor, this recognition of the Mind as an expression of organic and social conditions, the first step is taken towards the constitution of our science. (69)

Lewes credits Comte with the 'general range' of this insight, but notes that he failed to see its detailed working-through. The devolution of psychology to evolutionary biology and the study of society entails a revision of traditional 'experience' school theory. In volume one of the Problems Lewes takes careful distance from the sensationalists: 'the doctrine of the Sensational School is wholly untenable, partly because our highest knowledge is not gained through the senses in any such way, but is gained through the psychological evolution of sociological material', and the senses therefore 'furnish only a small quota to the mass of human experience.' (70) How then does Lewes articulate the transition from one to the other?

One tactic is to maintain a parity of language through descriptive homology and analogical insistence. Thus, describing reflex action, and wanting to force home a point about the necessity of seeing physiological processes as part of a whole functioning structure, Lewes writes that 'No organ has power of control; but the Organism will control an organ. The individual man is powerless against Society; but Society can, and does, compel the individual.' (71) (The strengths and limitations of this model for understanding society are also explored in Middlemarch.) Though of course there are crucial differences between the body and society (Lewes notes that individuals are of course able to exercise choice in ways bodily organs are not), nonetheless the analogy has a rhetorical

(69) Problems of Life and Mind, IV, 6.
(70) Problems of Life and Mind, I, 134.
(71) Problems of Life and Mind, I, 139.
and theoretical efficacy. This is because the retention of the same language to describe phenomena hitherto considered unlike, both enables the preservation of theoretical regularity, and offers the opportunity to introduce complexity into theories which neglect either pole of the argument. But the retention of a unitary language and outlook, entails a redrawing of the whole topography of the mind in such a way that a much more significant role is given to unconscious or preconscious factors. The individual's unique experiences interact with an inherited constitution which is biological and evolutionary. For example, Lewes claims, the exercise of the intelligence is a matter determined in part by instinct. In volume one of the Problems instinct is described, in a rather Spencerian manner, as 'lapsed or undiscursive Intelligence'.(72) It thus forms the 'axiomatic' or unacknowledged basis of thought in which consciousness need play no part. This argument takes the pressure from the neo-Kantian 'forms of thought' objection to the 'experience' psychology, and, as Lewes says, has the theoretical advantage of bringing 'the highest intellectual process ... on a level with the process said to be its opposite'.(73) However it does so at some cost, because it demands the acceptance of the Lamarckian theory of evolution.

We will discuss Lewes's attitudes to Lamarck in detail later, but for the time being it is enough to remark that he could see the problems entailed by Lamarck's ideas very clearly. One form this took was an increasing anxiety about Spencer's psychological theories. This is rarely expressed directly (presumably for reasons of

(72) Problems of Life and Mind, I, 141.
(73) Problems of Life and Mind, I, 141.
friendship as well as intellectual politics), but the logic of Lewes's position took him away from Spencer's Lamarckian assumptions. For Lewes had substantial reservations that complex questions about the exercise of the higher faculties could be answered by biological or physiological analysis alone. In volume four he writes:

Some writers who are disposed to exaggerate the action of Heredity believe that certain specific experiences of social utility in the race become organised in descendants, and are thus transmitted as instincts. With the demonstrated wonders of heredity before us, it is rash to fix limits to the specific determinations it may include; but the evidence in this direction is obscured by the indubitable transmission through language and other social institutions. (74)

Lewes is being necessarily circumspect, and in his usual manner does not name names, but there seems little doubt that he has Spencer - as the foremost theorist of this kind of Lamarckian position - in mind here. What is equally certain is the firm setting of limits to Spencer's kind of position.

Though, as we have seen, Lewes had adopted the argument about the hereditary derivation of instincts as a bridge to the biological description of the higher faculties, he is here seriously modifying that claim. He is understandably guarded about the state of the relevant scientific findings, but he is keen to ring-fence 'pure' biological explanation. This was implicit in the earlier formulations in volume one which, very much in the manner of 'compromise school', 'double-aspect' theory, followed a section on 'The Biological Data' with one on 'The Sociological Data'. But the connection was made only at the level of the various perspectives and emphases of a developing argument, and without explicit statement. This is a crucial point of difficulty for Lewes, as for late nineteenth-century psychology.

(74) Problems of Life and Mind, IV, 152.
generally. Lamarckian theories of the hereditary transmission of acquired characteristics solved certain key theoretical difficulties. But leading thinkers were rightly beginning to doubt their validity, though without any strong sense of an alternative. One of the important differences between Lewes and Spencer, therefore, was Lewes acceptance of theoretical make-shift in this crucial area, and his abandonment of a doctrinaire position on the matter. As a result Lewes’s work relies much more heavily on language-activity and structural revision in the texts to render the problem. This makes his work both more unstable and potentially contradictory, but it also makes it more forward-looking, engaged and modern.

What is also striking is Lewes’s political distance from Spencer. Spencer had hitched the new biological language to utilitarianism, and it is this – along with its old psychological baggage of self-interest and the pleasure-pain calculation – which is being rejected by Lewes in his circumscription of Spencerian psychological materialism in the passage just quoted. Lewes wants little to do with Spencer’s derivation of ‘certain specific experiences of social utility’ from biological processes. This position is by no means surprising, because neither Lewes nor George Eliot had ever embraced utilitarian arguments or perspectives. As William Myers rightly argues, utilitarian theory could not provide George Eliot with any significant grip on ethical or social issues, and Eliot ‘insists that suffering cannot be comfortably disposed of in a book-keeping exercise’ such as the felicific calculus.(75)

Instead both Lewes and Eliot insist on a much more complex language for describing complex human phenomena, and Lewes continued to try to marry biological to other sorts of discourse. Thus in volume four he writes of history as biology and vice versa: the 'shifting panorama of History represents a continuous evolution, a fuller and more luminous tradition, an intenser consciousness of a wider life.' (76) The phrase 'the wider life' could come from George Eliot (as indeed could the whole idea), and other of Lewes's characteristic uses of language overlap with that to be found in her work. Consider this proposition, also from volume four:

We find the impersonal experiences of Tradition accumulating for each individual a fund of Knowledge, an instrument of Power which magnifies his existence. (77)

What is noticeable here is the variety of metaphor in play in a single two-clause sentence. The idea of accumulation and a 'fund of Knowledge' is drawn from economics; the idea of magnifying instruments is drawn from scientific optics (a favourite image); and the idea of Power is, less-happily, drawn from a nebulous area where physics, history, politics and theology intersect. My point is not immediately concerned with the truth-value of this language. Rather, I am interested in it as a language performance designed to elicit a complex, diffuse and questioning response. This is quite deliberate and sustained in both Lewes and Eliot. It is one of the significantly impressive things about their work, and it mirrors an emphasis in Lewes on the importance of language for culture, and therefore for psychology. Cultural transmission, largely through language, plays a part equally significant to that of biology in the establishment of

(76) Problems of Life and Mind, IV, 153.
(77) Problems of Life and Mind. IV, 80.
the psychological characteristics of the individual or group. This idea is especially emphasised in the last two volumes of Problems of Life and Mind, and the under-development of it is perhaps the main regret we have that the Problems were ended prematurely.

Such language activity is a realisation of theoretical proposals made by both Lewes and Eliot. It is first of all an epistemological issue, as in the extraordinarily complex idea of the 'double change of self and beholder' of which Eliot writes in Middlemarch. But it mainly concerns the understanding of long-term, biologically-orientated processes. Virtually the closing remarks of the (unfinished) volume five of Problems of Life and Mind concern the relationship between biology, society and language. At the close, Lewes writes that 'Language is to the Social Organism very much what the Nervous System is to the Body - a connecting medium which enhances all its functions.' (78) Such ideas are not peculiar to Lewes. (They are to be found early in Eliot’s career in the famous 1859 essay on 'The Natural History of German Life' for instance, and she of course was elaborating a founding proposition of Romantic organicism.) But Lewes is keen to stress the activity of language, not just in terms of dynamic process, but also in terms of human agency, and this prevents his thinking sliding into metaphorical commonplace. Lewes is using a conventional notion, but he is adding to it a refreshingly new sense of the particular human possibilities in creative language use. Language is no longer only a metonymy for other abstract, trans-individual processes like nation, race or (upper-case) Culture operating with remote indifference to the activities of the individuals or groups which compose social units. Language is a

(78) Problems of Life and Mind, V, 495.
matter of human use and historical opportunity. It connects individual to individual, nation to nation, epoch to epoch, 'indeed, the history of culture may serve to convince us that we have still only a rudimentary understanding of the reach and potency of symbols.' (79)

Fittingly, therefore, Lewes closes the unfinished Problems not with an account of biological processes, but with a salute to human empowerment and achievement. The stress had to fall on the biological substrata of human behaviour. Knowledge could not progress without this crucial realignment of thinking, but

having shown the continuity and uniformity of sensible and ideal states as regards the neural processes which are their organic substrata, and thus excluded the hypothesis of separate organs for Thought and Feeling, we shall have to expound the operation of the Social Factor, the introduction of which is the real cause of the elevation of Animal Psychology into Human Psychology, the sensible into the ideal world, Knowledge into Science, Emotion into Sentiment, and Appetite into Morality. (80)

Lewes thought of this as his distinctive achievement, as did a number of his contemporaries,(81) and there is no doubt that Lewes significantly re-worked the methodological orientation and theoretical implications of mid-to-late nineteenth-century psychology in this respect. For Lewes's consistently integrationist view of the interlocking processes of organic and social life has a number of consequences, among the most important of which is his proposal for a radical solution to the ancient dualism with which psychology struggled throughout the period covered by this study. This dualism is, of course, the ancient difficulty of the 'mind-body' problem which, in various versions and with much political strife, has been at

(79) Problems of Life and Mind, V, 495.
(80) Problems of Life and Mind, V, 443.
the centre of most of the arguments analysed in this thesis.

Lewes's solution to this problem is bold, and strikingly anticipates some very recent formulations of it. Simply put, he refuses to accept the problem as anything other than an analytical fiction, a product of a certain way of seeing psychological phenomena. Just as the language used to describe social and biological systems can transcend its two-way metaphoric status and become adequate to each object once the whole nature of the process-based relationship between mind and medium becomes clear, so Lewes believes that the habitual dualism of mind-and-body is also a matter of convention and language. Like Professor J. Z. Young, the eminent modern-day writer on brain systems, Lewes claims that the dualism inherent in our perceptions of the mind-body problem reflects a larger cultural condition. The problem stems, Lewes argues, from the habit of thinking about mind as an entity separate from the organism and society, and sovereign over each. (82) The mind-body problem is thus itself a function of a general intellectual-cultural bias. Similarly

(81) Even a hostile critic like Carveth Read thought that Lewes's emphasis on the relationship between Mind and the Social Medium was 'his signal and crowning achievement' (Read, 'G. H. Lewes's Posthumous Volumes', Mind, 6 (1881), 498), and George Croom Robertson, an enthusiast for Lewes's work, felt that his stress on the social context of psychological development marked his advance over both Spencer and Bain ('How We Come By Our Knowledge', The Nineteenth Century, 1 [1877], 113-21). Théodule Ribot, in English Psychology, also stressed Lewes's innovations in this respect, as did Frederic Harrison in 'The Social Factor in Psychology' (1879) (reprinted in Harrison, The Philosophy of Common Sense (London, Macmillan, 1907), pp. 122-30). Lewes's ideas on the relations between mind, biology and society were also prominently credited by the anonymous reviewers in the Saturday Review in 1873 ('Lewes's Problems of Life and Mind', 758) and The Atheneum in 1879 ('Current Philosophy', 398). The conservative writer on 'Lewes and Metaphysics' in the Westminster, however, thought it a 'somewhat strange theory' and attacked the 'excessive weight' Lewes gave to social influences (pp. 110-11).

(82) Problems of Life and Mind, IV, 7.
Young begins his recent Philosophy and the Brain by noting that many still claim ‘that there are problems of philosophy and theology that can be solved without reference to the brain’, but this merely displays ‘the weakness produced by our intellectual and social system that separates thinkers from observers, philosophers from scientists.’ The problem, Young argues, is primarily a problem of language. The philosopher and the scientist use different languages; and the difficulty with the philosopher’s language is that it is imprecise and contaminated by cultural biases. The philosopher ‘uses mentalistic words, often of common speech.’ But it ‘is very difficult to agree about the use of these, because of the privacy and variety of their subject-matter’. Thus it is necessary to reformulate the language for discussing such problems using the relatively-neutral ‘scientific discourse [which] almost by definition depends upon words that can be confirmed and agreed by all appropriately trained humans.’

Young might be thought to overestimate the neutrality and clarity of scientific discourse, and I do not think Lewes would have entertained this. But the strength of Young’s case does not rest there, and there is a way of extending the argument which both takes account of this difficulty and preserves the advantages of Lewes’s general proposition. In his 1984 Reith lectures on ‘Minds, Brains and Science’, the American philosopher John Searle attacks both the conventional way of putting the mind-body problem, and the narrowly scientific solutions to it by recent researchers. Taking the latter problem first, Searle argues that contemporary scientific models of human behaviour - such as the various efforts to understand the brain in terms of the operations performed by computers - in fact ignore

what is distinctive about human intelligence. This includes its creativity, which in turn is part of a general human ability to think 'semantically' (as Searle puts it, drawing on Chomsky's account of language usage) as well as 'formally or syntactically', which are the principles on which computers work.\(^{(84)}\) In recent computer-based models, ostensibly neutral scientific language (in Young's terms) is in fact unhelpful because the proposed analogy - within the framework of which the 'scientific' language operates - is not adequate to the task. (We shall return to this problem in relation to Lewes's biological model in due course.)

Despite these reservations about the adequacy of recent conceptual modelling for the mind, Searle is not proposing a return to dualistic theories - far from it. In fact his solution to the problem is thoroughly monistic and, in its simplicity and conclusions, is remarkably similar to that offered by Lewes a hundred years earlier. Searle proposes that instead of thinking about two distinct entities (mind and body, or brain), we think about 'surface' and 'deep' features which have a necessary, because causal, identity. This proposition however requires some re-adjustment of our sense of causation, and Searle invites us to think about cause not as a relation between two different and separate phenomena (that is, involving some notion of change in the passage from 'brain' to 'mind', or cause to effect), but as an alteration in perspective and circumstances. We should understand cause as a process of realisation, not alteration, because there is a fundamental identity between processes at a micro-level and those at an experiential or

surface level. The same phenomena, that is to say, are 'realised in' different forms. An example Searle gives is the experience of the liquidity of water at what he calls the 'macro' level of 'ordinary' experience. This experience may be different from the understanding of its chemical structure (the 'micro' level), but it does not alter the fundamental identity of the two phenomena. The same is true for brain and mind. What is more, the whole has to be understood as an interacting system whose nature is more than that of its components or individual properties:

Though we can say of a system of particles that it's ten degrees centigrade, or solid or liquid, we can't say of any given particle that this particle is solid, this particle is liquid; this particle is ten degrees centigrade. I can't reach into this glass, pull out a molecule and say this one's wet. (85)

Searle thus concludes that 'the way, in short, to dispel the mystery is to understand the processes', and that what he self-depreciatingly calls his own 'naive mentalism' and 'naive physicalism' are both compatible and true. (86)

I have spent some time introducing these ideas through modern writers because it seems to me that the success, clarity and modernity of Lewes's thought in this respect is best brought-forward in this way. Lewes's science (of course) is disabled by age and error; but his methodological and philosophical grasp is startlingly similar to that of John Searle (and less completely to that of J. Z. Young), and the simplicity and elegance of his formulation of this ancient problem seems to me compelling. In Problems of Life and Mind Lewes conceives of the mind-body relationship in these terms:

(85) Searle, 'Minds, Brains and Science': Lecture 1: A Froth on Reality', The Listener, 8 November 1984, 15.

(86) Searle, 'A Froth on Reality', 16.
every mental phenomenon has its corresponding neural phenomenon (the two being as convex and concave surfaces of the same sphere, distinguishable yet identical), and ... every neural phenomenon involves the whole Organism; by which alone the influence of the body on the mind, and the mind on the body, can be explained. (87)

Searle uses metaphors of surface and depth, or whole and structuring parts (macro and micro). These images are suggestive in that they express both integral connection and determining power. Lewes, here, uses a metaphor of two surfaces of the same shape, different yet identical.

This is probably Lewes's favourite image (though it is not his only one by any means), and it probably loses something of the sense of determination offered by Searle. But it does preserve a handy sense of the analytic project on which Lewes felt himself to be embarked - that is, to give no inevitable analytic priority to either physiological or psychological events. Like Searle Lewes is careful to underline the importance of process and integral connection. The concave/convex metaphor therefore offers both an admirable circumspection and a methodological advantage, because it allows Lewes to try to integrate both aspects of his analysis, and to avoid the pitfalls of reductionism so graphically before him in the intellectual culture of his period. As Lewes says, the idea of 'the two-fold aspect' (another of the visual or optical images so common in Lewes's and Eliot's writing in this period(88)) enables the integration of different ways of perceiving, and organises the various binary structures which feature so heavily in his analysis: subject and

(87) Problems of Life and Mind, I, 112.

(88) In Problems of Life and Mind, II, 13 Lewes uses vision as itself the key example of the interaction of the subjective and objective in mental activity.
object, mind and matter, static and dynamic, (89) experience and existence, feeling and describing. (90) (The feeling-describing distinction corresponds to one Lewes makes between Perception - the consciousness of 'Reals' - and Conception - their articulation in symbols. We will return to this matter later.) All this replaces 'the old Dualism' with a 'Monism, in which only one existence, under different forms is conceived.' (91) It dissolves, Lewes claims, the Cartesian paradox of a mechanically, functioning body to which is added a divine soul. (92) At the same time, though, it contests the militant materialism of 'automatists' like Huxley and Tyndall.

Problems of Life and Mind is uncompromisingly opposed to automatist theories. If Lewes had begun to explore the limits of Spencer's biological paradigm, to which he was much closer, then he had no hesitation in taking his distance from Huxley. He attacks the propositions Huxley had advanced in the early 'seventies (on which we have commented in chapter one) in the third volume of the Problems. Huxley's ideas are a 'legitimate expression' of 'Reflex Theory', but exaggerate the claims of that theory. (93) Specifically, Huxley's conception of reflex action is too mechanical, and he fails to offer an adequate account of consciousness. Huxley's apparent monism, in fact, is a covert dualism. By arguing that anything performed unconsciously must be automatic, and that only the brain is capable of sentience, Huxley is actually constructing a model in which

(89) Problems of Life and Mind, I, 69 and 76; III, 3, and 313.
(90) Problems of Life and Mind, II, 16 and 27; V, 229-30.
(91) Problems of Life and Mind, I, 122.
(93) Problems of Life and Mind, III, 403.
consciousness is separated from the rest of the organism. Whether, like Cartesian spiritualists, consciousness is regarded as sovereign, or, like Huxley (as we have seen in chapter one), it is regarded as mysterious, temporary and circumscribed, matters little. The structural model is still essentially dualistic because based on a misleading analogy - that human beings are like machines. As a result there has been an oscillation between automatism and idealism; the one corrects the over-emphases of the other, but neither is able to get a satisfactory purchase on the problem to by-pass their antagonism.(94)

By contrast, Lewes wishes to see consciousness as directive, but only in the sense that the relationship between it and the rest of the organism (and hence the environment) is pictured as a sequential, ever more complicated determining process. One movement in the sequence, that is to say, causes another: 'the collateral product of one movement becomes a directing factor in the succeeding movement.'(95)
The word 'factor' is particularly important here, because we are not dealing with an exclusive, but an 'overdetermined' phenomenon here, one in which acts of consciousness can play a part as cause as well as result. The significant difference is, again, made by history - that is the power to learn from experience, to become an agent in one's own processes. Whereas a machine has 'no historical factor manifest in its functions ... no experience', (96) the significant thing about

(94) Problems of Life and Mind, III, 309-21. This kind of argument seems to me much more powerful than the standard 'spiritualist' outcry against automatism. For an example of this manner see Henry Calderwood, 'The Present Relations of Physical Science to Mental Philosophy', Contemporary Review, 16 (1871), 225-38. Calderwood, a follower of Reid and Hamilton, was Professor of Moral Philosophy at Edinburgh.

(95) Problems of Life and Mind, III, 407.

(96) Problems of Life and Mind, III, 326.
humans is that their 'primary' tendencies can be modified or even suppressed:

I need not dwell on the profound modifications which the human inherited mechanism undergoes in the course of experience - how social influences and moral and religious teachings redirect, or even suppress, many primary tendencies; so that 'moral habits' become organised, and replace the original tendency of the organism. (97)

This is followed by a nuanced and quite sophisticated account of the graduated and alterable relationship between automatic, 'secondarily automatic', and voluntary processes.

However the perspective of this analysis is clearly Lamarckian, and as a result Lewes is again back in something of the theoretical impasse this problem regularly produced. Lamarck could provide a bridge from one part of the theory to the next, but he only enabled writers like Spencer, and here Lewes, to finesse a problem, not to solve it. Lamarck was convenient because his theories enabled unitary explanation across the mental/physical divide, and seemed to do so without sacrificing significant attention to the 'higher' psychological faculties. However this unitary theory did not make the detailed descriptive difficulties disappear. Here is Lewes's account of the will, for example. The will is 'the abstract generalised expression of the impulses which determine actions, when those impulses have an ideal origin.' General Volition is a 'still more generalised expression of all impulses which determine actions.' (98)

All Lewes is doing here however is substituting a taxonomic for a genetic account, in a way that is familiar from the history of associationist psychology.

(97) Problems of Life and Mind, III, 329.

The difficulty concerns the adequacy of language to represent experience in both 'mental' and 'physiological' registers simultaneously. In volume five of the *Problems*, when Lewes again turns to the problem of the will, he seizes gleefully on the happy double meaning of the word 'Reflection'. According to Lewes it signifies both the action of the reflex system, and an intellectual act, that is, 'the lowest and the highest psychical phenomena'.(99) In a way this represents his ideal psychological language, in which there is a seamless movement between the physical and the mental, the convex and concave surfaces. 'The intellectual life,' he writes, 'is the outcome of the affective; it is only a mode of representation of the feelings [my emphasis], which afterwards becomes their substitute'.(100) As for the freedom of the will, Lewes came up with a handy metaphor for a flexible statement of the determinist position. Man is like a sailing ship. He is driven by nature ultimately, but he has the power to manipulate the diverse forces in play, and therefore has an absolute freedom within sets of limiting constraints.(101) The weakness of this argument, though, is entailed in its metaphorical nature. Another way of interpreting the metaphor would make an equally good 'spiritualist' case (the captain's relationship to the vessel is as the soul's to the body), and Lewes would certainly not want that. As John Searle also recognised, the account of the will is the weakest part of this way of conceiving of the mind-body problem because it seems to entail more than a revision of formal descriptions of behaviour.(102) It involves, in fact, the assessment of conduct, the establishment of rules for conduct, and an account of the

(99) *Problems of Life and Mind*, V, 399.

(100) *Problems of Life and Mind*, V, 407.

(101) *Problems of Life and Mind*, IV, 103-09.
psychological conditions under which such conduct is possible or not possible. Hence, again, the appeal of Lamarck’s theory, which can side-step the issue rather neatly because it entails a teleological definition of right conduct. For Spencer, the assessment of conduct can be reserved as a biological matter: the evolutionarily successful must, by definition, inherit and pass-forward moral as well as physical attributes, and these attributes must, by the test of history, be right - that is, successful. For all Spencer’s neo-utilitarian opposition to the status quo, his is a deeply conservative theory in many respects.

Lewes’s critics and commentators at the time were not slow to seize on his refusal to posit an ontological distinction between physical and mental acts, nor his difficulties in giving a satisfactory account of the transition from the one to the other. For some - like Douglas Spalding - Lewes did not pursue the implications of his monistic explanation far enough, nor argue sufficiently fiercely for the absolute elision of the mental and the physical. (103) Others, like the neo-Kantian philosopher Shadworth Hodgson in Mind, protested at what he took to be Lewes’s assimilation of the philosophy of mind to material science, the mental to the physical. Hodgson argued that the two needed to be kept distinct because mental philosophy has a method and object of its own. This method and object is the analysis of the nature and quality of consciousness, not its origins or functions. Science was the objective analysis of mind,


philosophy its subjective analysis, and the two needed to be kept
distinct. (104) Hodgson’s piece is therefore a kind of last-ditch
defence of introspection without the combative, critical edge that
made T. H. Green’s arguments for the same kind of position so much
more powerful. In the event Hodgson’s essays were comfortably refuted
by Alexander Main - the editor of Wise, Witty and Tender Sayings of
George Eliot (1871) - in a piece for Mind which pleased Lewes. (105)

Other objectors to Lewes’s formulations were less easy to
dismiss, however, because less willing to concede the ground that
Hodgson so prematurely does in his over-respectful account of the new
psychology. Among sterner critics, the burden of the argument fell
upon what became known as the ‘transformation problem’, or the
‘problem of the gap’ in John Searle’s terms. The gap in question is
the supposition that the transition from neurological or brain
activity to mental events in consciousness involves a shift in
ontological status. For thinkers like Lewes or Searle there is no
such problem. Searle says that, ‘some of the greatest intellectual
efforts of the 20th century have been attempts to fill this gap, to
get a science of human behaviour which was not just commonsense
grandmother psychology, but was not scientific neurophysiology either.
... [But] all the gap-filling efforts fail because there isn’t any
gap to fill.’ (106) Lewes says: ‘all the evidence points to the ...

(104) Shadworth H. Hodgson, ‘Philosophy and Science: I - As Regards
the Special Sciences’, Mind, 1 (1876), 67-81; ‘Philosophy of
Mind: II - As Regards Psychology’, 223-35; ‘Philosophy and
Mind: III - As Regards Ontology’, 351-62. Hodgson’s is a
generalising essay but primarily addresses itself to Problems of
Life and Mind.

(105) Alexander Main, ‘Mr. Hodgson on Mr. Lewes’s View of Philosophy’,
Mind, 1 (1876), 292-94. For Lewes’s comments on the piece see
Letters, VI, 218. Main was more usually known to Eliot and
Lewes as ‘the Gusher’.
fact that the neural process and the feeling are one and the same process viewed under different aspects. Viewed from the physical or objective side, it is a neural process; viewed from the psychological or subjective side, it is a sentient process.'(107) Nonetheless throughout its history psychology has been plagued by the problem. Even in ostensibly 'materialist' accounts, very often the deployment of analogies and models from other kinds of processes - such as computers or other machines - in fact produce (as Searle again says) a 'residual dualism', as found for example among partisans of artificial intelligence theories: 'AI partisans believe that the mind is more than a part of the natural biological world; they believe that the mind is purely formally specifiable.' Though AI specialists themselves fulminate against 'dualism', in fact their reluctance to remain content with biological accounts of the mind inevitably introduces a transformation problem.(108) Searle's point could be comfortably transferred to Huxleyan automatism theories.

However, from the standpoint of psychological theory in the 1870s the problem was yet more acute. To common sense and experience, it indeed seems the case that there is a clear difference between the description of neural activity, however sophisticated, and the experience of the exercise of the higher human faculties in and through consciousness. There does seem to be, at very least, the need to add something to the neurological description which can make the phenomenon recognisable and comprehensible in human terms, and in the late nineteenth century, the perception of this problem was

(106) Searle, 'Grandmother Knew Best', 16.

(107) Problems of Life and Mind, II, 459.

overdetermined by lively religious, cultural and political contexts. Though a handful of commentators on Problems of Life and Mind - like the perceptive reviewer of the second volume in the Saturday Review(109) - applauded Lewes's efforts to think about the continuities of phenomena, most were antagonistic. Even among Lewes's supporters the issue divided opinion. James Sully was quite definite that there is a transformational problem, and that Lewes confused 'aspects' with 'conditions'. Sully argued that nerve-processes do not themselves 'feel'; states of feeling are distinct and special acts of consciousness. Lewes's refusal to accept any distinction between subject and object issued in a 'scientific monism' which was to all intents and purposes itself metaphysical because it made truth-claims of a general, unverifiable and reductionist kind.(110)

Théodule Ribot, on the other hand, recognised the strength and originality of Lewes's arguments. He saw how they advanced beyond the epistemological impasse reached by extremist physiologists (we might think of Huxley or Tyndall as examples) who could not generate a satisfactory transition from states of 'interiority' to those of 'exteriority, or objectivity' on the basis of which a scientist would be able to make defensibly-objective claims about the world. (We have examined this problem in relation to Huxley's later thought in chapter one. It is the 'materialist' version of the 'transformation problem'.) For Ribot, Lewes solved the problem by refusing to accept the terms on which it is posed. There is for him no transformation problem: 'the only transformation which takes place ... is that of

(109) Anon., 'Lewes's Problems of Life and Mind', Saturday Review, 4 September 1875, pp. 301-02. Lewes found the review 'very gratifying'. (Letters, VI, 202.)

(110) Sully, 'Problems of Life and Mind. Third Series.', 309.
certain analytic factors into a synthetic fact.'(111) In other words, it is a purely formal, analytical operation. Whereas Sully wished to preserve an ontological distinction, Ribot maintains that it 'is most important to see clearly that the logical distinction between the conditions of a phenomenon, and the phenomenon itself, is simply an artifice.' This means that, when applied to psycho-physiological questions, 'we shall see that the nervous process is not the antecedent of the sensation, but that both are identical.'(112) Following Lewes (and like Searle), Ribot stresses process, and locates the nub of the problem in the kind of formal analytical operation one chooses to perform. The problem, therefore, is not essentially ontological; it is epistemological and descriptive. What language does one choose?

Among the more aggressive of Lewes’s critics, however, the transformation problem was a source of real difficulty. Inevitably the anonymous Westminster reviewer saw the issue in religious terms. For him, certain metaphysical propositions were self-evidently true (on grounds of common sense and custom), but if Lewes’s path were followed, religion and metaphysics would no longer have a language available to them, and the reviewer deplored the anti-religious aggression he detected running through the Problems. However he, like Sully and a number of other writers, does hit upon a weak-spot in Lewes’s theory - that is the inadequacy of physiological knowledge to describe the processes of which so much is made. He notes that, in fact, Lewes tries to bridge the gaps in available knowledge by 'throwing-out dim metaphysical phrases in the hope, it would seem,
that they may congeal and stiffen into some phantom bridge to span the
gulf between the consciousness which consists in "neural tremors", and
the real consciousness of the inner life."(113) As we have seen this
is a real difficulty for Lewes, and kindred theorists, and it is one
reason why the language question is so crucial. However, in this
case, the criticism is unfairly extended to support other kinds of
assertion, and the writer's conclusion (that the status quo is
therefore valid) does not necessarily follow from the observation.
What is more, this problem bedeviled all work - some of it much better
science - in this area in the period. Darwin, for instance, also
lacked a satisfactory description of the biological mechanism his
general theory demanded.

Other writers focused on the same problem. E. Hamilton (Sir
William's daughter), in arguments reminiscent of both her father and
T. H. Green, contended, in a piece for Mind, that Lewes's ostensible
differences from the 'automaton' or mechanistic theories of the
radical materialists were in fact only nominal. There was still a
huge gap between 'sentience' and 'sensibility' and

[w]e fail, therefore, to see that Mr. Lewes's theory, in
replacing a mechanical by an organic view of the production
of action, or rather in setting up a sensitive instead of a
material mechanism, differs in any essential respect from
that against which he contends; or that the word sensitive
has any particular value, when sensibility is reduced to a
purely vital property, and the springs of action are traced
to the harmonious play of parts in a complicated
organism.(114)

The argument is both strong and weak with respect to its critique of
the language of physiology. It is true that an alteration in wording

(113) Anon., 'Mr. Lewes and Metaphysics', 130.

(114) E. Hamilton, 'Mr. Lewes's Doctrine of Sensibility', Mind, 4
(1879), 257.
does not change a process, but nor does a failure in wording mean that that process does not exist. Like many such arguments in the period (as John Tyndall recognised to his fury), Hamilton's rests on the status quo. It passes the burden of proof from its own assertions to the more novel assertions of its opponents. The argument also suffers from a version of the problem John Searle identified with respect to models drawn from artificial intelligence. Hamilton refuses to accept biological language as sufficient to describe biological phenomena. Biology is for her an inert area in human terms. Like the 'automaton materialists' she opposes, Hamilton cannot see the difference between machines and bodies, and for her, by definition, it is impossible to generate human experience, and acts of consciousness, from machine parts. T. H. Green's argument - that consciousness must imply the existence of a self independent of the processes that constitute it - follows from this assumption of course, but it does not necessarily follow from these phenomena. Lewes's position was that both sets of phenomena are biological.

Hamilton's argument was commonly made though. 'Between the two processes, the physical and the psychical,' wrote the Congregationalist divine Thomas Herbert in 1874, 'there is a clear distinction.' (115) Indeed each had its separate form of energy; a 'radical diversity seems to exist between all the forms of physical and psychical energy'. (116) The 'double aspect' solution, argues Herbert, 'does but vary our difficulties'. (117) Similarly, in an unfriendly review of the last two volumes of Problems of Life and

Mind, Carveth Read, Professor of Psychology and Philosophy at the University of London (and a Millite clearly cross with Lewes for what he takes to be Lewes's criticisms of Mill), chided Lewes with failing to make clear how it was that 'sentience' could be generated from 'neurility', particularly because Lewes refused to speak in terms of cause and effect. Making the whole system homologous produces an inadvertent argument for dualism, because Lewes's monism (pace the neo-Kantian critiques of the new psychology) cannot get to grips with the problem of consciousness. (118)

Even moderate opinion rested its case on a dualistic ontology. William Smith's sensible, intelligent pieces for The Contemporary Review in 1870 on 'Knowing and Feeling' quite deliberately adopt the language of two authors close to Lewes's heart - Shelley and George Eliot - to describe the relationship between sentience and intellect. He concludes, however, that, despite the massive advances in recent knowledge, and the powerful arguments for understanding these as related phenomena, consciousness cannot be reduced to sensation. There is too massive a problem in 'tracing the threads of that delicate machinery by means of which the world of space, the world of form, and motion, transforms itself through the sensibilities of man, into a world of thought, of beauty, of intelligence.' (119) Liberal theological opinion, then, represented by Smith and the Contemporary, conceded a little ground, but insisted on maintaining a dualism. Smith is tolerant towards evolutionary theory, though he recoups the concession by taking the course several of Spencer's religious supporters also took; that is, to identify the evolutionary process with a sophisticated natural theology: 'To us evolution is but a name

(118) Read, 'Lewes's Posthumous Volumes', 483-98.
for the method of creation, and the nature of the created.' (120) Smith also makes use of the adjacent quasi-Spencerian argument concerning ultimate unknowables. The processes and forces at the bottom of things are imponderable. They can therefore, in all significant respects, be identified with God. The chancy, regulated-chaotic world of the Darwinian paradigm had not yet been revealed to some mainstream opinion.

(119) William Smith, 'Knowing and Feeling: A Contribution to Psychology', Contemporary Review, 14 (1870), 342. The echo of the language of George Eliot in this quotation is very marked, and Eliot is quoted twice in the second part of the essay 'Knowing and Feeling: Part II. - Some Further Discussion of the Will', Contemporary Review, 15 (1870), 424-39. Both Smith and Lewes had been champions of Shelley in the 'forties, and had remained friendly. George Eliot described Smith as 'morally and intellectually sympathetic', and speaks of Lewes's 'peculiar attachment' to him in 1872. (George Eliot to Mrs Taylor, 19 November 1872, Letters, V, 328.) Smith deploys the imagery of Shelley's well-known lyric 'When the lamp is shattered' in his argument for the integral, independent existence of a self separate from organic processes. He also uses Tennyson and Shakespeare. Smith (who was, among other things, a poet) is putting a late, liberal version of the 'literary' case against 'materialist' psychology whose harder edge we have examined in earlier chapters. Indeed some of his conclusions look forward to the Henry James-Leavis-New Critical account of Eliot which dominated responses to her work in the early-to-mid twentieth century.

(120) Smith, 'Knowing and Feeling: I', 351.
III. Epistemology and Ontology in Problems of Life and Mind

If Lewes’s opponents insisted upon an ontological dualism how did Lewes himself conceive of ontological questions? The direction of his argument goes something like this: the interaction of the world (the ‘external medium’) with our biological being (the ‘internal medium’) determines our mental structures. But because human consciousness acts with relative independence from those determining processes, and because mental experience is in a different mode from physical experience, consciousness appears to be a distinctive, separate, relatively-autonomous entity. Ontologically, however, it is identical. What are usually considered ontological questions are in fact epistemological questions. These are essentially concerned with the descriptive adequacy of our chosen language to represent the real state of affairs, bearing in mind that human knowledge is circumscribed and historically-determined, and therefore all language always struggles to be comprehensive.

This is a coherent and persuasive position. However, the argument suffers from difficulties. It concedes that human knowledge is relative, so one problem for Lewes (and Eliot) is to determine the degree of that relativism and assess its significance. When does relativism become a corrosive scepticism? Another problem concerns the establishment of criteria on the basis of which knowledge is to be considered reliable and accurate (this is essentially a problem of scientific method and empirical procedure, and need not detain us long). A third, related problem concerns the instruments of knowledge: is there anything in the conditions of language or consciousness which would lead us to question their sufficiency or
reliability? The fourth and last problem concerns the difficulty of generating abiding rules or principles (for example moral rules or principles) which might guide conduct beyond the historical or personal moment of their conception. In other words, if knowledge is historical, does that not compromise truths which one might wish to recommended for their intrinsic virtues? (As we have seen, this - or a version of this - was a charge regularly levelled at the new psychology.)

Lewes's epistemology has two essential features. The first is that humans have unarguably direct, but necessarily limited, access to a reality outside consciousness and language. His epistemology is thus at bottom a direct, sensory realism. The second feature, however, concerns man's mode of representation, and here Lewes is less obviously a direct realist. Indeed he is conscious of both the provisionality and potential waywardness of knowledge propositions represented in language. These two features of the theory, which run in parallel in all of Lewes's accounts of them, are called by him the 'Logic of Feeling' and the 'Logic of Signs'. Lewes's epistemology is based on the intersection of the two, the dialogue of certainty and limitation, confidence and provisionality.

The Logic of Feeling is the immediate sensory experience of the world. The Logic of Signs is the encoding or representation of that experience by language or other means. However the one is not merely reflectively adequate to the other as in a simple correspondence theory. This is because, first, the means of representation is ultimately unreliable (that is, it is historically limited), and, second, human perception is itself circumscribed in both its range and efficiency. The one limitation can influence the other. The
conventional means of interpreting the world that prevails in any
epoch will determine what most people see and believe. What is seen
may not be the real case (that the sun goes round the earth, for
example). Alternatively, we may simply be unable to see enough to
offer an adequate notion of what constitutes an event or phenomenon.
In other words it is inevitable that hypotheses (or as Lewes more
generally calls them 'inferences') are formed and these may run-free
of their empirical or experiential basis.

There are thus two orders of phenomena, a 'Twofold Aspect' to
truth: that of Perception, and that of Conception. The former deals
with the correspondence between objects and consciousness; the latter
between objects in consciousness.(121) This theory is developed
throughout volumes one and two of Problems of Life and Mind. Which of
these two aspects Lewes chooses to emphasise at any given time depends
upon which purpose he has in view. (Is he interested in a
'scientific' or a 'historical-cultural' proposition for instance?) Of
course such a position can itself become unstable and unsatisfying,
but this is the risk Lewes runs throughout, and for interesting
reasons. His weaknesses and his strengths are again related.

The separation of the two parts of Lewes's theory is essential to
anchor the potential instability of the latter part. Thus a portion
of Lewes's efforts in his epistemology is to keep the two separate.
Once the former in invaded by the uncertainties of the latter then the
materialist-realist edifice threatens to crumble, and a realist
epistemology would have to fall back on a 'Symbolical or Transfigured
Realism' of the kind advocated by Spencer.(122) Lewes is unhappy with

(121) Problems of Life and Mind, II, 70.
(122) Problems of Life and Mind, I, 177.
this prospect because it is but one step from the quasi-intuitionist arguments offered by the neo-Kantians. Spencer accepts that the world is ultimately unknowable, but insists that theories about it can be formed asymptotically, and that their validity is falsifiable at any point. ‘Truth’ is therefore a matter of the survival of the fittest theory, an act of intuition based on a prevailing idea. Lewes, however, recognises the proximity of this to a priori or neo-idealist theories, and wishes to retain a more thorough purchase on the sensory and experiential elements that form our knowledge. Thus, for him, perception is more of a ‘resultant’ than a ‘symbolical’ rendering of the world. Initially, these arguments may seem only matters of gradation and emphasis, but the stakes are very high. They are, for instance, related to the big contradiction in Spencer’s work: that which exists between a systemised, truth-demanding, totalised account of the world, and an epistemology which stresses provisionality and falsifiability. Lewes, as we have said, is much more committed to the ‘mess’ of sensory experience; hence the inelegant structure of his texts, and the more tortured epistemological theorising contained in them. Hence, too, the hesitations, slippages, revisions and potential contradictions in his arguments.

Lewes needs to make a strong case for the sensory aspect of his epistemology to maintain his particular realist claims, but he also needs to acknowledge the force of the Logic of Signs because his theory has been directed towards the historicisation of knowledge.

(123) Lewes argues that Spencer’s ‘transcendental postulate’ is akin to ‘the abiding mystery which is at the root of all religion’. It opens the gates to theorising noumena behind phenomena. Spencer, that is to say, sees the world as necessarily unknown, rather than potentially knowable. Problems of Life and Mind, II, 443–52 and 487.

Inevitably, the latter feature engages our modern interests more compellingly than the former. But, though Lewes’s claims about our experiential apprehension of the world are subject to knock-down arguments of a sceptical kind, and though some contemporary commentators – such as Bain for instance(125) – doubted that Lewes’s conception of experience was exacting enough, the set of claims about the Logic of Feeling have to be provisionally accepted before any sort of progress with the more developed theories can be made, and their limits properly determined. We need to accept therefore that knowledge claims are anchored at some level in sensory experience; that they are verifiable by reference to it; and that the means of such verification become more exacting as history - and science - progresses.

Lewes is very firm about the historicality of the Logic of Signs:

The language we think in, and the conceptions we employ, the attitude of our minds, and the means of investigation, are social products determined by the activities of the Collective Life. The laws of intellectual process are to be read in History, not in the individual experience.(126)

Yet this passage is interesting. The ostensible opposition between individual and historical experience is, from a nineteenth-century evolutionary - and especially a Lamarckian - perspective, not quite as abrupt as at first seems. The proposition is that the individual’s experience is limited by the individual’s historical location. But any individual is also the inheritor of the past through culture,

(125) Alexander Bain, ‘Mr. G. H. Lewes on the Postulates of Experience’, Mind, 1 (1876), 146. Lewes replied in the same volume, see G. H. Lewes, ‘The Uniformity of Nature’, Mind, 1 (1876), 283-84. There is an succinct and intelligent discussion of the general issue by the anonymous reviewer of the second volume of Problems of Life and Mind in the Saturday Review, 4 Sept 1875, 301.

(126) Problems of Life and Mind, I, 174.
intellectual tradition, and, in Lamarckian or Spencerian theory, biology. In the same way that the individual inherits the past, he or she also points to the future because our intellectual life is changing and developing. Thus the individual’s historicality is both a source of limitation, and a source of strength. In epistemological terms, the individual is circumscribed by the prevailing ethos and conventions, but these conventions have been questioned in the past, and are in dynamic development in the present. Lewes’s sense of the positive features of historicality are evident in his language. The stress on limitation at the beginning of the passage gives way to confident talk of ‘the laws of intellectual process’ (my emphasis) at the end. And Lewes’s Germanic habit of capitalising abstract nouns gives them a rhetorical force which suggests a confident general sense of progress (or Progress) which is rather teleologically inflected. Thus the passage is expressing both reservation and confidence simultaneously, and it is easy to relate this to a similar bi-focality in the attitude to historical locatedness to be found in Middlemarch for example.

So there are the beginnings of a contradiction, or uncertainty, here. If the Problems of Life and Mind convert ontological questions into epistemological or historical questions, then that sense of history, or of epistemological or representational uncertainty, is not functioning as a kind of radical Derridean or Nietzschean unsettlement of order which dissolves all truth propositions into the actions of a discursive or political hegemony. Occasionally this perspective is opened up, however. A little later in volume one, Lewes considers the question of point-of-view, or cultural relativism, in acts of perception. He imagines ‘a citizen’ and ‘a savage’ looking at each
other's religious ceremonies or political assemblies. Each, of course, would have a very different sense of what was going on in each case. But this does not mean that one of them is wrong. The differences in understanding are due to the social component of their cognitive processes, and in a quite modern sense these are arbitrary. (That is, they are based on convention.) Nor does it mean that both are wrong, and that somehow there is a third perception which is right and not subject to cultural bias: there is no 'objective existence independent of all, and unlike each; I hold, on the contrary,' Lewes writes, 'that the objective existence is to each what it is felt to be.' (127) Lewes then contrasts the experience of a village labourer with that of a philosopher living in the same village, to illustrate the 'Relativity of Knowledge'. (The scenario resembles a theme in Middlemarch then being written.) Epistemological questions, therefore, have to be decided on grounds quite other than those of a supposed neutrality or independence of viewpoint. There are no ultimately satisfying accounts or causes: 'as the object is truly its embodied history ... the How and the Why are essentially the same.' (128) Epistemologically, causes and conditions are identical. Cause and effect are not two different entities, and there is no point in seeking beyond history. (129)

Such a view commits Lewes to both relativism and complexity. Truths are not ultimate, they are merely, if anything, methodological. Thus Lewes has a very sophisticated sense of complex determination, of

(127) Problems of Life and Mind, I, 191.

(128) Problems of Life and Mind, I, 364.

(129) See also Problems of Life and Mind, II, 376-422 for further argument along these lines. Once more this view is very close to the amended account of causation offered by John Searle.
the multiple, overdetermining factors in play in any given event. In Lewes's own word, events or phenomena are 'conjunctural', 'the coalescence of co-operant conditions'. (130) Our common conception of cause is singular (and is often hypostasised into abstract singularities like the Will(131)). But in fact causation is complex and diversely interactive, just like the conditions of a phenomenon or event. These conditions we then abstract into the 'logical artifice' of theories of causation. (132) Similarly, an adequate methodology must respect the different levels of operation at which we might consider the structure of an event or phenomenon. There is no point in trying to abstract or digest complexity beyond a certain point because the regress results in unhelpful reductionism. For instance, the answer to the question 'what causes the sensation of sweetness?' can be given at different levels: psychological, physiological, or chemical for instance. But there is no point in blurring the relevant levels at which the answer might be formulated. 'It is possible for research to pursue this regress of causation to great lengths, but at each stage it shifts the problem; and no success in solving other problems can add one iota of causal illumination to the particular problem from which we start.' (133) This hierarchy of levels of explanation is reminiscent of the methodology recommended by modern psycho-biologists like Steven Rose, whose work we introduced in the previous chapter. But it is also reminiscent of the multiple, complex, layered account of the world to be found in Eliot's best fiction such as Middlemarch. The principles involved here are just those epistemological principles

(130) Problems of Life and Mind, II, 389.
(131) Problems of Life and Mind, II, 401.
(132) Problems of Life and Mind, II, 388.
(133) Problems of Life and Mind, II, 363.
at work in a passage like the 'double change of self and beholder' passage examined earlier.

Lewes directly confronts the problem of epistemological relativism which this theory presents. But his response to the problem is entailed in the historical method, and the refusal to accept a distinction between cause and conditions to which several contemporary commentators - like James Sully - objected. Lewes argues that because we cannot search for 'scientific finality, and demand a cause of the cause, an origin of the origin', (134) it is necessary to accept that knowledge is both (merely) descriptive and (necessarily) circumscribed: scientists do not 'pretend to explain Existence in itself - that is to say, apart from its relations to Consciousness - the explanation is of Things as groups of Relations.' (135) This last term is crucial to Lewes. Knowledge consists of the establishment, or description, of the connections - or 'relations' - between phenomena, and cognitive activity consists of the 'correlation' of observed phenomena in (always provisional) 'groupings'. Knowledge is therefore, indeed, 'relative' in two senses: it is both knowledge of relations, and it is relative in the (usually pejorative) sense that it cannot be absolute. But the fact that it is limited (a better term than relative perhaps), does not mean that it is any less sure, because even limited knowledge is referable back to experience, the Logic of Feeling, by empirical verification. Nor does the fact that knowledge is conditional (that is, it is revisable with changed conditions) mean that it is any less reliable, or that things are unknowable in an absolute sense. It merely means that they are

(134) Problems of Life and Mind, II, 8.
(135) Problems of Life and Mind, II, 9.
capable of other relations. The positing of an 'essence' or 'noumen' behind phenomena merely reveals an insecurity about living in the world as it is with its changes and fluctuations. Interestingly, and revealingly, Lewes's illustrating analogy is drawn from language: words are dependent for their meanings on their relationship with other language features, 'the meaning lies in the context'.

The stress on complexity and relationship is the key to Lewes's epistemology and the source of his best arguments in this area. But it still remains that scientific propositions, for example, are discursive and not experiential:

Science deals with conceptions, not with perceptions; with ideal not real figures. Its laboratory is not the outer world of Nature, but the inner sanctuary of Mind. It draws indeed its material from Nature, but fashions this anew according to its own laws; and having thus constructed a microcosm, half objective half subjective, it is enabled to enlarge its construction by taking in more and more of the macrocosm.

Science everywhere aims at transforming isolated perceptions into connected conceptions, - facts into laws. Out of the manifold irregularities presented to Sense it abstracts an ideal regularity; out of the chaos, order.

It is this kind of statement that has sometimes led commentators to read Lewes's work as moving towards an idealist position in so far as it centres its account of science upon mental constructions rather than the immediate sensory apprehension of the world. And it is certainly true that Lewes engages in a full critique of the epistemology of the 'sensational' school. For him it is reductive and misleading to claim that all our knowledge is generated from sense experience (though it is ultimately referable to it). It is the constructive operation of the mind which formulates knowledge.

(136) Problems of Life and Mind, II, 44.

(137) Problems of Life and Mind, I, 431-42.
propositions. In other words, hypothesis-construction, or (more broadly) the ability to both make and test fictions is a central part, not just of epistemological operations, but also of the whole experience of being human, including moral and affective experience.(138)

What Lewes envisages is a self-checking system which is able to rely on the empirical basis of knowledge, but is guarded and circumspect about its extension. Inferences (signs, hypotheses or fictions) are checked against facts (feelings or verifications). The key to all this is the idea of difference, and the dimension in which this idea operates is that of change through time. It is the differences between things, either in themselves, or as they change across time, that enables reliable cognition to occur. We can be confident in our sense of things because they change. Science would 'tumble into chaos if this firm hold of Difference were loosened and Identity allowed to take its place.'(139) Idealism suggests that things exist independent of history, or that phenomenal history is the form in which noumenal essence reveals itself. But for Lewes 'Things exist just so long as their conditions exist.'(140) We know things because they directly impact upon our senses; we know their properties because of the variety of conditions in which we find them; and we know of conditions and laws because of change of circumstance and process.


(139) Problems of Life and Mind, II, 435.

(140) Problems of Life and Mind, II, 435.
This is the epistemology that Lewes had been working towards since the mid-sixties (it is first set-out in the lengthy 'Prolegomena' to the third edition of *A History of Philosophy from Thales to Comte* in 1867), and it is most fully explored in volume two of *Problems of Life and Mind*. It depends upon a complex, dialectical interaction of various factors. The whole depends upon difference and change; but, in order to constitute significant knowledge, the various elements of that knowledge need to be organised. This represents the significant point of disagreement between Lewes and modern theorists of 'difference' such as Jacques Derrida. For the deconstructionists, the inevitable kicking-loose of representation ('writing') from reference is not matched by a concomitant wish to reorder knowledge in a more significant agreement with it. Analysis in this mode instead revels in the discursive disarray and vertigo so produced. For Lewes, however, though difference is essential for cognition, knowledge is produced by the reconstruction of cognitions into structured propositions, and the desire to establish the (always ultimately undiscovered) 'fluent identity throughout the manifold diversity.' The 'aim is to unify knowledge; and this can only be done by setting aside diversities.' (141) But the danger of this, is that it 'converts its own distinctions into objects, and supplies each object with a logical subject.' (142) Lewes thus acknowledges, and makes fruitful, the structural double-bind his epistemology implies.

Lewes's epistemology is both an expression of limitation, and a guarantee of progress. In psychological terms it pictures human beings as both desirous of establishing satisfactory and settled theoretical

(141) *Problems of Life and Mind*, II, 435.

(142) *Problems of Life and Mind*, II, 436.
accounts of the world, and as cautious of their too exorbitant or complacent extension into propositions which become remote from experience. This psychological action is mirrored by the dialectic at work between difference and identity. Explanations seek to unify disparate phenomena (identity), but not at the cost of abstracting from complexity and the world's 'thick description' (difference). The key idea here is what Lewes terms the activity of 'grouping' and the 'Principle of Equivalence'. Knowledge grows by grouping and classification as new experiences are added to earlier and substantiate or replace older hypotheses, (143) which were themselves formed by acts of grouping whereby various data is brought into relationship. (144) The 'Principle of Equivalence' is Lewes's title for the process whereby 'logical' truth (that is, a statement in the 'Logic of Signs') is matched with a 'real' or 'material' truth. (145) Lewes contrasts this with Spencer's 'Universal Postulate': it is the 'positive statement of the negative formula advanced by Mr Herbert Spencer, as the Universal Postulate'. (146) In other words Lewes is again keen to insist on the constructive ability of humans to obtain positive knowledge in a world of circumstance and provisionality. The 'positive statement' implies a desire to emphasise human agency as well as human limitation.

Once more, one of Lewes's key images for this process is drawn from language, in particular the formation of meaningful sentences. Words themselves are simply sounds until they are organised by

(143) Problems of Life and Mind, II, 23.
(144) Problems of Life and Mind, II, 65.
(145) Problems of Life and Mind, II, 79.
(146) Problems of Life and Mind, II, 89.
grammar, and especially by verbs:

The words float suspended, soulless, mere sound. No sooner are these floating sounds grasped by the copula, than in that grasp they are grouped into significance: they start into life, as a supersaturated saline solution crystallises on being touched by a needle-point. (147)

The same kind of image was of course used by George Eliot in Middlemarch to describe the moment of realised love between Lydgate and Rosamond. But this dual usage is instructive, for such ‘groupings into significance’ can deceive as much as they can reward. In historical terms this is evinced in the long (Comtean) march through the epochs of human culture from the theological, through the metaphysical to the scientific. But it is a significant danger in all knowledge-creation that an abstracted assumption will betray things as they really are, just as both Lydgate and Rosamond’s assumptions about love and each other, are products of fancy and complacent egoistic desire and not of significant human contact.

What is true in the affective life is also true intellectually, even in modern science. Lewes, for example, protests against the popular abstraction of ‘Force’ by some contemporary writers on physics (including Spencer). For Lewes, this idea is a damaging abstraction because in careless hands ‘it transforms a logical into a physical distinction’. The category error (the confusion of a ‘real’ with a ‘logical’ truth in terms of the ‘Principle of Equivalence’) thus reintroduces the old Dualism in which matter is passive, destitute of qualities though capable of receiving motion, capable of housing qualities, and of becoming the temporary tenement of wandering Forces. In this scheme qualities are merely superadded’, and therefore metaphysical entities entertained. (148) The problem for

(147) Problems of Life and Mind, II, 145.
Lewes is similar to that presented by vitalistic theories in biology (which are regularly attacked throughout Problems of Life and Mind, (149)) or the hypothesis of an immaterial 'spirit' or 'soul' in psychology. Whereas for Lewes, as we have seen, genuine knowledge, like the world itself, is much more complex, demanding and contingent:

The structure is for ever changing: the assimilation of new material and destruction of the old are incessant; and among the consequences of this incessant change there are inequalities which lead to differentiations, and these finally to Death. (150)

It is interesting that the process envisioned here is similar to that offered by George Eliot in her account of the 'constantly shifting', 'double change of self and beholder' which constitutes knowledge of the town of Middlemarch. But it is also interesting that, were the passage from Lewes to be quoted without a context, one would probably assume that it referred not to the formation of knowledge, but the processes of biology. It is another example of his desire to seek a language which is operative in diverse contexts to heal the epistemological wounds of dualistic psychological theory.


(149) For example, Problems of Life and Mind, III, 14, where Lewes juxtaposes the vitalist to the 'organicist' - that is a scientist concerned with organic relations. See also the long discussion of the general problem in II, 460-502, where one of the objects of Lewes's attack is Spencer's hypothesis of an 'Unknowable Force' (see p. 487 especially).

(150) Problems of Life and Mind, II, 183.
IV. Lewes, Darwin and Lamarck

Lewes was consistently concerned with the adjustment of modern scientific knowledge, and we have made regular mention thus far of his hesitating investment in Lamarckian theory. For Spencer, Lamarck's ideas provided not only an account of psychological development, they also anchored his epistemology and ethics. If ideas survive, the argument goes, they are 'true'. Lewes, too, used Lamarck's theory in this way from time to time, as, for example, in this analogy: 'just as what is organised in the individual becomes transmitted to offspring, and determines the mode in which the offspring will react upon stimulus, so what is registered in the social organism determines the mode in which succeeding generations feel and think.' (151) However the analogical nature of the argument here is indicative of a much more circumspect, and much more critical, attitude overall, and it is one of the points of contradiction in his theory that he should maintain this dual, or hesitating, response to Lamarck. In this he was, however, once again quite typical of his time. It is also worth noticing that Lewes did not - unlike Spencer - invest fully in Lamarck. His ideas therefore do not suffer as massively if the mistake is exposed. Finally, it is also true that, to his credit, Lewes understood very early the import and significance of Darwin, and made a considerable and original effort to work through the challenge represented by The Origin of Species, as some recent commentators have established. (152)

(151) Problems of Life and Mind, I, 124. For similar usages see also: I, 163, 241 and 476ff; II, 11 and 15; and V, 16 and 104 (where there is an explicit commendation of Spencer on the 'evolution of Life and Mind').
Lewes’s initial investment in Lamarck is very clear in the early work. In ‘Hereditary Influence, animal and human’ (1856), for example, written immediately after the publication of the first edition of The Principles of Psychology, and strongly under its influence, Lewes accepts the Spencerian account wholesale and casts his vision of history in its terms:

History is one magnificent corollary on the laws of transmission. Were it not for these laws, civilisation would be impossible. We inherit the acquired experience of our forefathers - their tendencies, their aptitudes, their habits, their improvements. It is because what is organically acquired becomes organically transmitted that the brain of a European is twenty or thirty cubic inches greater than the brain of a Papuan, and that the European is born with aptitudes of which the Papuan has not the remotest indication. (153)

This is excitable, offensive rubbish, but Lewes does insist that it is individuals who transmit hereditary characteristics, not the species. This, while confirming his Lamarckianism, could exonerate him from the deterministic racism that Spencer favoured from time to time. The distinction, between the individual and the species as the medium for biological processes, remained a key issue for Lewes.

Lewes maintained similar ideas into the 'sixties. In The Physiology of Common Life (1860) - which won much respect in the scientific community - he challenged Buckle’s contention in Civilisation in England that there is no evidence for the hereditary transmission of characteristics. Citing Spencer, he claimed there was abundant evidence:


(153) [G. H. Lewes], 'Hereditary Influence, animal and human', Westminster Review, 10ns (1856), 160.
The organisation of the parent is transmitted, and with that organisation all those characteristics and tendencies which the organisation in activity would naturally manifest. A habit, a trick, which has been acquired, and so long established that it may be said to be organised in the individual - whose mechanism has grown in performance - will stand the same chance of being inherited, as the bulk of bone and muscle, or the sensibility of the nervous system. An idiosyncrasy which results from some organic disposition - say, for example, the repugnance to animal food - may as easily be inherited as a good constitution, or a scrofulus tendency. Explain it as we may, there is no fact more certain than that a habit once firmly fixed, once 'organised' in the individual, becomes almost as susceptible of transmission as any normal tendency.(154)

This is unequivocal. Yet by the end of the decade, having read Darwin, Lewes had begun to amend his views considerably. The turning point was a four-part account of 'Mr. Darwin’s Hypotheses' Lewes wrote for the Fortnightly in 1868 at John Morley’s request.(155) In it Lewes starts to come to terms with the challenge to Lamarckianism offered by Darwin.

Lewes’s articles are an attack on 'metaphysical' uses of the 'development' theory; that is, the effort by many Victorian intellectuals to assimilate evolutionary thought into conventional world-views. (We have seen several examples of this, principally the efforts by liberal Christian opinion - unwittingly encouraged by Spencer’s work - to read evolutionary thought as a kind of natural theology.(156)) For Lewes, evolutionary theory contradicts 'metaphysical' understanding not only in its content, but also in its manner. Darwin’s work, he argues, is not a finished theory, but the latest - and best - in 'an immense series of tentative gropings' whose


(155) See Letters, IV, 424.

(156) The essays in Young's Darwin's Metaphor are a fascinating discussion of this area.
implications are 'revolutionary'. (157) That is to say, Lewes pictures the development of evolutionary theory as a scientific and not a totalising (Lewes would say 'metaphysical') project — rather, indeed, in the manner of his long-meditated Problems of Life and Mind which he had just begun. The difference between scientific and totalising work lies in the former's provisionality, openness, revisability and collective endeavour. Darwin is contributing to a developing scientific argument, even though this is itself part of a continuing battle between monism and dualism fought throughout the history of human enquiry. (Lewes of course is both contradictory and historically typical in his effort to combat totalising theories by means of totalised historical schemas.)

Lewes's objections to the dualistic, 'metaphysical' reading of evolutionary thought are to be expected. Briefly, he thinks that it offers a hostage to fortune. By positing apparently agential entities ('natural selection' or 'the inheritance of characteristics'), the mechanism is separated from the process and the terms of debate are focused there, rather than on a developing body of investigation. The construction of the argument thus favours, say, a 'religious' world-view accustomed to dealing with essentially mono-causal structures, rather than a contingent, messy and provisional sense of the world's density and over-determination. In terms of the intellectual politics of the period, that is to say, 'metaphysical' evolutionary theory can be disarmed by a gradual nudging sideways of the real terms of discussion. (158) Ironically, as things turned out, this was in fact what happened to Lewes, and his articles on Darwin were attacked on 'metaphysical' grounds by J. B. Mozley, the Regius

(157) George Henry Lewes, 'Mr. Darwin's Hypotheses: Part 1', Fortnightly Review, 3ns (1868), 353.
Professor of Divinity at Oxford and a leading member of the Oxford Movement.

Mozley's were mainly knock-down arguments typical of the period: evolutionary theory was 'spun out of our brain' whereas the argument from design was attested by 2000 years of conviction; man's reason demands a sense of hierarchy which in turn reflects the hierarchical structure of the world; man's self-consciousness proves that he has an identity separate from the 'mechanisms' which form his being; his spirituality is a real presence in the world which attests to the truth of all of these.(159) Yet Mozley was also a careful reader of Darwin and did point to an important fact about Darwin's language. He noticed that 'Natural selection figures in [evolutionary] language, indeed, as an active and creative power' undertaking tasks and carrying-through processes. What is more it is pictured as a 'designing agent'. So a cause is created that is really a result, and the argument lacks a mechanism: 'Whence does Mr. Darwin get that succession of favourable variations which is necessary for the ultimate formation of regular and highly organised species?'(160)

In contemporary context, as Robert Young notes, Mozley's are worthy and important points.(161) Darwin's metaphor does indeed imply

(158) Lewes, 'Darwin's Hypotheses: 1', 355. Lewes noted the fundamental equivocation in the 'natural theologising' of evolution (he offers James Martineau as an example). Such writers either argue for a 'separation of agencies' (biology and divinity), or they elide the distinction, in which case 'the hypothesis of Creation and the hypothesis of Evolution becomes only a difference of terms' (p. 364). 'Integrationist' writers, in other words, want things both ways.

(159) [J. B. Mozley], 'The Argument of Design', Quarterly Review, 127 (1869), 134-76. Mozley's piece was a reply to Lewes's articles and a review of Per Paul Janet's Le Matérialisme Contemporain.

this kind of agency, and his theory does indeed lack a mechanism, and Lewes was alert to the problem in Darwin’s language. He notes in volume three of Problems of Life and Mind that Darwin tends to see natural selection in a hypostasised way: ‘the metaphorical nature of the term is not always borne in mind, so that ... Natural Selection is said to “act on and modify organic beings”, as if it were a positive condition and not the expression of the modifying process. ... Mr. Darwin’s language ... is misleading.’(162) In other words, the ‘metaphysical’ terms of the argument are not merely a result of appropriation by evolutionary theory’s opponents. They are a condition of its discourse in the period: hence the need for continuing linguistic vigilance.

It is quite characteristic of Lewes’s thought that this subtle sense of the pressure of cultural and intellectual context should lead him to a major revision of his substantive scientific propositions. In ‘Darwin’s Hypotheses’ Lewes quite clearly sees that Lamarck’s ideas are subject to the same pressures, and will not, in their Spencerian form at least, sustain scrutiny in this spirit. Though ‘we should not ... underrate the singular importance of Lamarck’s hypothesis in calling attention to the modifiability of structure through modifications of adaptation’, nonetheless he was lead into ‘exaggerations by a one-sided view, which made him attribute too great an influence to one set of external conditions’.(163) In Problems of Life and Mind the use made of Lamarck is therefore balanced by certain important reservations, and the position eventually offered is, as


(162) Problems of Life and Mind, III, 108.

Srilekha Bell remarks, 'a strange mixture of Lamarck and Darwin'. (164)

This mixture, however, is explicable as a result of the conditions of discourse on these questions in the period. What makes 'Mr. Darwin's Hypotheses' such a text of its time is the way it pits the various forms of evolutionary theory against each other. Darwin's value, therefore, for Lewes is not that he offers 'the truth', but that he crystalises certain objections Lewes had to existing theories. His own ideas, he says, were 'very indefinite until Mr. Darwin's work came to give it shape, both by what it furnished of direct instruction, and what it suggested indirectly.' (165) And just as Lewes is reserved about the apparent mono-causality of Lamarck's proposition, so too he thinks that the 'a priori simplicity' of radical Darwinian theory dangerously skirts metaphysical absolutes. (166) It has a 'seductive', 'speculative beauty' as a theory which threatens to cancel variety and diversity by converting the argument into essentialist terms. (167)

The grounds of Lewes's argument are, as might be expected, historical. 'Darwin's Hypotheses' argues for a radical historicising of biological processes whereby biological structures are seen as a response to environmental conditions rather than the result of inner drives or processes. This was the importance of retaining some investment in Lamarck (at the risk, perhaps, from a late twentieth-century point of view, of sounding like Lysenko). From Lewes's perspective in the late 1860s, Darwin's theory, with its

(164) Bell, 'Lewes: A Man of His Time', 296.

(165) Lewes, 'Mr. Darwin's Hypotheses: Part III', Fortnightly Review, 4ns (1868), 74.

(166) Lewes, 'Mr. Darwin's Hypotheses: Part IV', Fortnightly Review, 4ns (1868), 492.

lapses of language into a voluntarist, quasi-theological register, could sound suspiciously as though mysterious agents were driving natural process. At the same time, some Lamarckian or Spencerian theories could also sound as though the cart was put before the horse, or, more technically, the structure before the function. As we have seen, Lewes consistently stressed the importance of understanding living entities as environmentally-determined. Hence biological events were the result of interlocking conditions both internal and external. The theory of the inheritance of acquired characteristics seemed to offer a clear illustration of the principle that environment could determine biological structure, and this was Lamarck's appeal. But Spencer's conclusion seemed to be that function could exist independent of its structural manifestations and relationships, which was a species of error paradoxically shared by the 'materialist' psychologists' old enemies the vitalists, who posited the existence of 'Life' independent of actual living bodies. How could this paradox come about?

Lewes understood this very clearly. Spencer 'doesn't always bear in mind the distinction between General and Special Function'. (168) That is, he stops thinking about particular functions and, in the process of devising and articulating a hypothesis, devotes all his attention to an abstract and generalised reduction. Lewes illustrates his point with an analogy from mechanics: Spencer (as it were) thinks only about the energy-properties of steam in general and not about its material manifestations in kettles or engines or anything else. (169) In time these verbal slippages towards abstraction become category

(168) Lewes, 'Darwin's Hypotheses: III', 70.
conversions, and eventually a kind of intellectual about-turn is performed. What began as a theory about material forms and processes becomes one of increasing abstraction, so that material forms appear to be shadowed by abstract (and potentially immaterial) entities. This general alarm about the ways in which the forms of articulation surrender the original insight and deform knowledge, is a regular theme of Lewes’s work. In 'Darwin’s Hypotheses', Lewes shows the same anxiety over the ideas of Species or Type, and his discussion of this forms a real continuity with his earlier work. (170)

Lewes is troubled by the formulation of general entities because these threaten to become substantive and not descriptive. His reservations about the notions of Type and Species are of this kind. A Type, he says, 'is not a thing but a relation' (171) and one of his anxieties about Darwin is that Darwin’s discussion of species threatens to convert a classification into a biological entity. In so doing Darwin could lose sight of the variety of forces and factors in play. Lewes’s difficulty with Darwin, that is to say, is part of his long war with reductionism. Darwin, Lewes writes, lays 'perhaps too much stress on community of blood, and not enough on community of conditions.' (172) The environmental factors which inhibit or give effect to any biological process are the important factors. The concentration on general categories like 'species', which do not take these factors into account, threatens to undo the materialist project. The fixed, taxonomic language allows entry for notions of General Plan, Type or Mind. (173) There are also potentially-grave social

(170) Bell, 'Lewes: A Man of His Time', 290.


(172) Lewes, 'Mr. Darwin’s Hypotheses: Part II', Fortnightly Review, 3ns (1868), 628.
consequences. A notion of racial type might imply, for example, that, because negroes have been used as slaves from the time of the Egyptian pharaohs to that of the Alabama plantation-owners (Lewes's articles were written in the wake of the American Civil War and the Governor Eyre incident), negro slavery is inevitable. In fact, all it implies is 'the concurrence of conditions which have been sufficiently uniform'.(174)

As ever, Lewes is concerned to stress environmental and historical processes as well as 'biological' ones. This looks forward to Problems of Life and Mind. In volume three, Lewes's criticism of Darwin's language comes during a dramatic attempt by him to historicise all biological processes; even organs and histological structures owe some part of their constitution to historically-operative conditions. Even when 'purely biological' factors (as it were) can be apparently distinguished, 'we should only see an historical distinction, that is to say, one between effects produced by particular causes now in operation, and effects produced by very complex and obscure causes in operation during ancestral development.'(175) This, of course, is the importance of Lamarck, for Lamarck's theory expressed most fully for Lewes's generation of atheistically-inclined, scientifically-informed intellectuals the possibility of understanding life as a cumulative event involving important human dimensions as well as larger, more humanly-anonymous processes.

(175) Problems of Life and Mind, III, 107.
For Spencer, Lamarck provided an essential part of his mapping of
the human world. For Lewes, however, the case was more difficult. He
could see pretty clearly the difficulties in Lamarck's ideas, and his
work contains several substantial criticisms, but he, like most of his
generation, could not see the next step through Darwinism back to the
humanly-centred world which is the foundation and object of all his
work. In the meantime the Problems of Life and Mind are an effort to
grapple with complexity. They emphasise consciousness, will and
agency, and yet work within a determinist model and a knowledge of the
fragility of consciousness itself. They set-out to constitute a
science, and articulate the products of human reason, yet they also
stress the limitations of human understanding and the waywardness of
language. They wish to respect the individuality and distinctiveness
of the human faculties and human endeavour, yet they recognise too
that big processes shape small lives, that man is animal as well as
human, and part of a species as well as a singular, particular self.
V. Problems of Mind and Conceptual Organisation

The intriguing picture of the mind that emerges from Lewes's work is highly culturally-specific, but strongly forward-looking. As a number of his contemporaries noted, Lewes was unusually aware of psychological dysfunction and abnormality, and Problems of Life and Mind recognises the importance of hallucinations, insanity and other clinical material for psychological investigation. Lewes's work in this area was unsystematic but clearly considered, and he was similarly interested in developmental perspectives, and the significance of unconscious mental processes.

Lewes was suspicious of modish ideas of 'the unconscious' by popular writers such as Eduard von Hartmann whose Philosophy of the Unconscious Lewes read in both 1869 and 1872 and which sold 50,000 copies across Europe. He was well-aware of the need to stress mental processes that occur below consciousness, but he was also concerned that 'the unconscious' might come to be seen as a separate entity independent of other psychological processes. Like Freud in his very different way, Lewes was keen to see the unconscious as a structure with a history, not as a nebulous free-standing entity like the soul or spirit. In volume five of the Problems he speaks of the 'silent growth' of character and disposition within the mind-body.

(176) See, for example, Problems of Life and Mind, V, 388ff, 394 and 460. James Sully comments generally on this aspect of Lewes's work in his review of this volume in The Academy, 309-10.

(177) For example, Problems of Life and Mind, V, 354-55.


system, and much of this, he argues, is unconscious. These dispositions and processes form the proper ‘centre’ of mental life. (180) He usually preferred to term these ‘sub-conscious’ rather than unconscious because this implied a firmer sense of connection with (rather than an alternative to) the conscious mind. (181) It is the relays between conscious and unconscious life that hold his attention. In volume four, he attacks traditional ways of conceptualising this problem, using Sir William Hamilton’s work as an example. Traditional psychology has acknowledged phenomena outside the range of consciousness, but it then dismisses them to the limbo of unconsciousness. (182) The unconscious in this theory, therefore, is used as a kind of conceptual waste-disposal for processes and phenomena it does not want to consider. Once more the effect is to separate the two strata of mental life.

Throughout Problems of Life and Mind, Lewes is rigorously sensitive to the conceptual organisation and verbal and rhetorical strategies his contemporaries used to model the mind’s operations. We therefore need to examine Lewes’s own practice in this respect. We have from time to time examined some of his metaphors and models, but these are only part of a larger pattern of description in Problems of Life and Mind, perhaps the most striking feature of which is its calculated diversity. The rhetorical organisation of the Problems, that is to say, is a complex mixture of clear-minded exposition underlying which there is a studious refusal to settle into a stable set of images or models. The metaphors are jumbled-up, the pattern is

(180) Problems of Life and Mind, V, 139-41.
(181) Problems of Life and Mind, I, 141-42.
(182) Problems of Life and Mind, IV, 7-8.
continually shifting, and the whole text engages in a critique or deliberate overturning or twisting of received images. Each usage partly acts as a corrective modification of the last, and the whole is designed to encourage the reader to develop a complex, multi-faceted analysis. What the individual metaphors and analogies tend to share, however, and what the overall structure is designed to enact, is a mobile, quicksilver and (most important) energy-filled system. Lewes is not, that is to say, much interested in designing a mental topography in the way, for example, Freud and other psychoanalysts were to be. Such a model would, for him, imply a somewhat static system. Instead, he was alert, not just to the need to be cautious with metaphor and analogy lest it become substantive and not illustrative (183), but also to the desireability of incorporating change, process and provisionality into his images to express a mental system, not of 'fixed relations' (as he put it), but 'essentially a fluctuating [system], its elements being combined, recombined, and resolved under infinite variations of stimulation.' (184)

It is therefore worth recalling that it was Lewes (in The Physiology of Common Life) and not (as is often believed) William James who coined the term 'stream of consciousness'. It was an image that appealed to him, and it is elaborated in Problems of Life and Mind. In volume one, Lewes sets-out to describe consciousness not as a sovereign entity, but as a shifting and energy-based process.

(183) For example: 'Once more I warn the reader not to suppose that these physical illustrations are advanced as proofs. They are simply ways of facilitating our analogical construction of psychological processes. We do not know the real nature of these processes, but we are forced to imagine them under the forms of processes that are familiar.' (Problems of Life and Mind, V, 260.)

(184) Problems of Life and Mind, V, 52.
Consciousness is pictured as a 'mass of stationary waves formed out of the individual waves of neural tremors'.(185) This uses a pair of traditional metaphors - nervous action is like an energy wave, and thought processes are like the movements of water - popular with physiologically-inclined associationists (and, indeed, writers such as George Eliot, or Wordsworth for that matter). But Lewes gives these an elaborate twist. He asks us to think of consciousness as a lake into which diverse currents are feeding. Stationary waves are produced when these currents inhibit and hold each other up. As new currents develop and new patterns emerge, ever-shifting configurations are produced. This 'fluctuating figure', as Lewes calls it, is a way of representing the 'psychical mood or attitude' which takes its tone from the dominant and regular configuration.(186)

This image is rather like the kinds of images early twentieth-century writers and theorists (such as, for instance, both William and Henry James or the major literary modernists) produced, which reminds us again that the break between 'the Victorian' and 'the Modern' was neither abrupt nor sharp. But it might also be noticed that, while this image has the virtue of expressing complexity and process, and of including development in time, it is less satisfactory as a way of suggesting determination, of, as Lewes puts it a little later, 'having necessarily a history at [one's] back'.(187) Lewes therefore turned to other kinds of metaphor. Sometimes he uses architectural metaphors of base and superstructure, or of the 'mechanical laws' which both enable and limit a building's

(185) Problems of Life and Mind, I, 150.
(186) Problems of Life and Mind, I, 151.
(187) Problems of Life and Mind, I, 162.
construction. (188) But such 'mechanical' metaphors can also mislead. In the same volume, therefore, Lewes also attacks the use of metaphors drawn from mechanics and chemistry. 'Organic functions, we must often insist, are unlike the functions of machines'. Sensibility, or any other psycho-physiological property, 'cannot be linked to steam, or any other external motor'. (189) Experience is not 'a mosaic', but 'a living, developing, manifold unity'. (190) Metaphors, therefore, which suggest that the parts of mental life can be decomposed or reduced to components are misleading. Lewes's example is the well-known - because popularised by Mill - metaphor of 'mental chemistry', which suggests that psychological processes can be divided into their elements; but a feeling, says Lewes, 'cannot be taken to pieces like a salt'. (191) However, it is an interesting illustration of the rhetorical structure of the Problems that Lewes had already used this metaphor positively in volume two to illustrate a better way of thinking about the mind than that implied by traditional hierarchical models. (192) Lewes's justification for this apparent contradiction would claim that metaphors are used opportunistically and illustratively, not as fixed models. Sometimes it was necessary to insist on integrational models, sometimes on the need to separate analytically the various elements of a process. Psychology is, therefore, comparable to a spectrum (another metaphor), the colours of which shade into one another but are nonetheless analytically separable. (193)

(188) Problems of Life and Mind, IV, 109.
(189) Problems of Life and Mind, IV, 180.
(190) Problems of Life and Mind, IV, 181.
(191) Problems of Life and Mind, IV, 180.
(192) Problems of Life and Mind, II, 146-47.
Lewes had similar reservations about the language used by Bain. As we have seen, Bain used up-to-the-minute technological metaphors, but for Lewes such ideas again distort the nature of mental life. Psychological processes are not like the steam railway. Nor is the nervous system like the electric telegraph (Bain had pictured the brain as the central bureau, the ganglia as stations and the nerves as wires), because such a metaphor implies a sender independent of structure and process. (194) Lewes prefers a wholly organic model:

The current hypothesis, which assumes that the brain is the sole organ of the mind, the sole seat of the sensations, is a remnant of the ancient hypothesis respecting the Soul and its seat; and on the whole I think the ancient hypothesis is the more rational of the two. ... It is the man, and not the brain, that thinks: it is the organism as a whole, and not one organ, that feels and acts. (195)

Just as consciousness is a mode and not a centre of the psychological life, so particular faculties and functions cannot be localised, and Lewes resisted on principle — and quite wrongly as it turned out — the various efforts in the period to localise brain functions in particular parts of the cerebrum. (196)

(193) Problems of Life and Mind, IV, 185; V, 247.
(194) Problems of Life and Mind, III, 179-83.
(195) Problems of Life and Mind, III, 439 and 441.
(196) In volume five Lewes protests against the reduction of psychology to 'Cerebral Physiology' (Problems of Life and Mind, V, 370), just as he had resisted the phrenological theories of Gall or Comte. The localisation of sensation, thought and volition in the cerebral hemispheres, and sometimes 'particular convolutions', even 'particular cells', of them, is contested on the grounds that 'All such localisations, unless interpreted as short-hand expressions for the action of the whole organism with special reference to these organs, seem to me essentially unphysiological; and even with this very important correction they are wholly hypothetical.' (p. 409) This last is a fair point, and the principle itself is clear. It stopped being a fair point, however, and the principle would need to be amended, when such localisation began to be validated within a few years of Lewes writing this.
Lewes's organicism was thorough-going, but he was also alert to the possible misapprehension of this. He wanted to insist on unity, but at the same time he did not want to suggest the 'vague mysticism' and 'formless haze' of the quasi-mystical 'Panpsychism' then popular. Panpsychism, says Lewes dismissively, appeals only to minds 'eager for unity, and above all charmed by certain poetic vistas of a Cosmos no longer alienated from man.' (197) It was a throw-back to older notions of the sensorium commune, and, he might have added, to certain versions of Romantic Naturphilosophie whose biology had influenced Coleridge and others. In the rhetorical structure, therefore, such ideas are counteracted by others drawn from different registers. There is a sequence which uses economics, for example, thus looking, as it were, to Bentham rather than Coleridge. Lewes compares the nervous system to the division of labour within economic production, or the growth of co-operative societies. (198) In volume four, Lewes speaks, in a repeated phrase, of discovering the 'conditions of production' of psychological facts. (199) In volume five, physiology is 'the theory of the conditions of production, and Psychology, the theory of the relations of the products.' (200) Lewes, of course, is adapting both a standard metaphor, and a standard discourse (that of political economy) of the period. As George Croom Robertson noted, however, this idea pulled against the main direction of Lewes's theory. It contradicted the general effort to see the mind as seamless activity, and separated the product from the means of production. (201)

(197) Problems of Life and Mind, V, 34.
(198) Problems of Life and Mind, III, 66 and 73.
(199) For example, Problems of Life and Mind, IV, 14.
(200) Problems of Life and Mind, V, 41.
But the main strand in the metaphorical organisation of *Problems of Life and Mind* concerns Lewes’s deployment of images that suggest energy systems rather than fixed entities. Thus the psycho-physiological system is compared to the transmission of waves in a liquid, or a trail of gunpowder which can be ignited anywhere along its length,(202) or forces within a magnetic field,(203) or the internal workings of a sailing ship or an engine,(204) or the facilitation of energy discharges,(205) or the movements of atoms and molecules in energy exchanges like heat loss or chemical decomposition.(206) At other points Lewes could express reservations about these images, and insist again that they are heuristic illustrations and not representational models.(207) But the basic pattern is clear. In volume five he criticises conventional ways of representing memory. The litter of conventional metaphors - pictures in a gallery, the photographer’s plate, the specific arrangement of the nervous cells or fibres or chemical elements to facilitate certain vibrations - are all static and ‘only a form of the spiritualistic hypothesis that the revival of past feelings is the unveiling of veiled images.’(208) All fail to give a sense of the mind as a complex and dynamic structure; all fail to give a sufficient sense of the


(202) *Problems of Life and Mind*, III, 284. Lewes was fond of this image.

(203) *Problems of Life and Mind*, IV, 148.

(204) *Problems of Life and Mind*, IV, 103; V, 89 and 95.

(205) *Problems of Life and Mind*, V, 43.

(206) *Problems of Life and Mind*, V, 253ff.

(207) For example, *Problems of Life and Mind*, V, 290.

(208) *Problems of Life and Mind*, V, 57.
organic processes from which mind is made; all, in seeking to stabilise organic processes in other systems, reinforce the conventional sense of the mind as a special entity transformed from and raised above its mere biology.

Problems of Life and Mind, then, is a performance in language and a performance on language. It is engaged in working with, and working upon, the 'shifting mass of truth and error' which is the condition of human knowledge,

for ever becoming more and more sifted and organised into permanent structures of germinating fertility or of fossilised barrenness. Our mental furniture shows the bric-à-brac of prejudice beside the fashion of the hour; our opinions are made up of shadowy associations, imperfect memories, echoes of other men's voices, mingling with the reactions of our own sensibility.(209)

Reason jostles with custom and folly; fact with desire and prejudice. In its complexity, therefore, Problems of Life and Mind has a quite different verbal organisation to any of the other psychological texts we have examined. Its verbal self-consciousness and rhetorical organisation is a result of Lewes's preferred model of mind, his epistemology, his perception of the historicality of discourse, and of the power of culture to deform and enable ideas. But it is also comparable with wider shifts in language and rhetorical organisation in writing in the period, as recent critics of George Eliot have pointed-out. A reading of Sally Shuttleworth's chapter on Middlemarch in George Eliot and Nineteenth-Century Science will make clear the homologies in organic modeling between that novel and the account of Problems of Life and Mind given here, and we have seen how the language of Eliot's fiction also records this polyvalent, multi-aspected world.

(209) Problems of Life and Mind, IV, 167.
The linguistic organisation of *Middlemarch* and *Problems of Life* and *Mind* are related responses to a changing intellectual culture. As Gillian Beer's work has shown, similar features are shared by Hardy and Darwin too. Darwin's emphasis on 'the multiple materiality of the world' (in Beer's striking phrase) is reflected in his texts' structures. It is a profuse world organised by multiple metaphors which are mimetic of its nature. 'It is essential for Darwin's theory', comments Beer, 'that the multitudinousness and variety of the natural world should flood through his language.' (210) The same could be said for Lewes's work, and it is this that makes it so distinctive, and so modern, in the perspective of this thesis.

VI. Back to the Future: Lewes's Convictions and Appropriations

Of all Lewes's critics perhaps the most formidable was T. H. Green. Green's commitment to a refurbished neo-Kantianism found an institutional base at the University of Oxford, and made him an important and influential opponent who, as we have already seen, is representative of the opposition to the new psychology in the 1870s. Green, like many of the major figures examined in this thesis, looks both backwards and forwards in the history of psychological theory. His arguments consolidate the various objections to the new psychology made through the period. But, at the same time, they look interestingly forward to developments in our own century. The final section of this chapter therefore also forms the conclusion to the whole thesis. Lewes died in 1878, his Problems of Life and Mind unfinished, but in a way this was historically apt. For the tradition of enquiry in which that work participated, and the historical moment in which it flourished, were coming to an end also. Henceforth, and for at least the next 50 years, psychological theory was to be developed within very different paradigms.

Of these at least two are visible in the specialist literature of the 'seventies and 'eighties. There is first an increasing desire to reformulate psychology on a more rigorously experimental basis. In a piece for Mind in 1886, Joseph Jacobs described 'The Need of a Society for Experimental Psychology' to combat the 'fundamental and inherent defect of subjectivity' which damages philosophically-orientated theories. (202) This of course was the inevitable direction of

physiologically-derived work. But a glance at the array of investigation indicated in Jacobs' opening pages reveals the sharply different sense his generation had of psychology's scope. He stresses the contributions of, not just physiologists and biologists, but 'mad-doctors', social statisticians, anthropologists, sociologists, philologists and folklorists, and he goes on to recommend the study of infant psychology - just begun in earnest by Darwin - and of fiction (especially George Eliot and Meredith). Interests of this kind are to be found casually strewn through work by Bain, Spencer and Lewes. But here is a demand to re-found psychology with this material at its centre and the protocols of rigorous testing as a method. (Jacobs, incidentally, remarks that advances in female education will mean a regular supply of intelligent and leisured subjects for observation.)

However the second development remained firmly opposed to such narrow science. If experimental psychology became the mainstream development in the long run, the short-term victor was the more old-fashioned body of idealist theory for which Green was the most important spokesman. But Green's work was essentially critical; that is, it is more concerned with the demolition of rival 'empiricist' theories, than with constructing a psychological programme. Green assumes that such a programme is already available, and it was left to others to re-draw an 'idealist' psychology for the new age. The most important development here was the analysis of modes of consciousness by James Ward in Britain and William James in America, and Ward's work represented for many - including James at one point (203) - the most interesting and coherent statements of the new thought. Some indication of Ward's work and influence will therefore be offered
here. Other developments - of which the most important is undoubtedly psycho-analysis, just then being developed by Freud into a mature theory - lie beyond the scope of this study. This section, therefore, will attempt to draw together the various strands of argument which have run through the thesis.

A confrontation between Green and Lewes was to be expected. Favourable reviewers of the early volumes of *Problems of Life and Mind* noted that the work constituted a substantial challenge to neo-Kantianism. Green himself thought that Lewes's arguments were better in this respect than those of Spencer,(204) and he was himself already engaged in a campaign against the new psychology. His long introduction to Hume's *Treatise*, published in 1874, attacked the whole Lockean tradition of which Hume was the sceptical limit, and Lewes and Spencer the latest manifestations. The corrosion of ethical and spiritual values in empiricism, Green argues, follows directly from an intellectual confusion at its centre:

the physiologist, when he claims that his science should succeed metaphysic, is not dispensing with it, but rendering it in a preposterous way. He accounts for the formal conceptions in question, in other words for thought as it is common to all the sciences, as sequent upon the accidental facts which his science ascertains - the facts of animal organisation. But these conceptions - the relations of cause and effect, &c - are necessary to constitute the facts. They are not an *ex post facto* interpretation of them, but an interpretation without which there would be no ascertainable facts at all.(205)

Green's central ideas are gathered here - the defence of the primacy

(203) Ward's celebrated *Encyclopaedia Britannica* essay on 'Psychology' (1886) seemed to James to be 'on the whole, the deepest and subtlest collective view of the subject which has appeared in any language'. William James, 'The Perception of Space (II)', *Mind*, 12 (1887), 183.

(204) T. H. Green, 'Mr. Lewes' Account of Experience', *Works*, I, 446.
of human consciousness, the rejection of science as the principal mode of human enquiry, the attack on realist epistemology - and Green's essays on Spencer and Lewes are detailed elaborations of these central propositions. Their essentially polemical and critical spirit is emphasised at the close of the Introduction to Hume. Like Lewes, Green was bidding for the new generation. 'If ... the attention of Englishmen "under five-and-twenty" may be diverted from the anachronistic systems hitherto prevalent among us to the study of Kant and Hegel, an irksome labour [by Green on Hume] will not have been in vain.'

The stakes were not merely intellectual. Commentators and participants alike saw wider conflicts. In a piece on 'Philosophy at Oxford' for Mind (increasingly the forum for such debates), Mark Pattison attacked the backwardness of Oxford philosophy, and its take-over by academics like Green who were uninspired 'by progressive knowledge'. The leading British thinkers of recent years - Mill, Spencer, Lewes, Bain and Jevons are cited - had all emerged elsewhere, leaving Oxford intellectuals out-of-step with the times. Pattison therefore attacked the anti-rationalism of the Oxford Movement, and the anti-democratic, political authoritarianism of much of the work produced in the university.(207) He regretted the ingrown, 'forcing-house' atmosphere, and the attitudes of the new career intellectual - his 'mental pallor, moral indifferentism, the cynical sneer at other's efforts, the absence in himself of any high ideal.' The younger generation were infected by the institutional


(206) Green, Introduction to Hume, 371.

(207) Mark Pattison, 'Philosophy at Oxford', Mind, 1 (1876), 84-6.
conservatism, and bright minds were crushed between 'ecclesiatical terror' and 'the competition machine'.

Pattison's piece pleased both Lewes and Eliot. It defended independent, 'provincial' intellectual culture against orthodoxy; it looked to science and 'progressive knowledge' for the future; and it concluded with a pointed and flattering comparison between Lewes and Green. Green's essay on Hume was 'elaborate and destructive', but

In the guise of an introduction, Mr. Green has in fact issued a declaration of war, from an idealist point of view, against the reigning empirical logic. To this challenge, Mr. Lewes's Problems of Life and Mind may serve as the ready-made rejoinder.

It was therefore no surprise that Green should turn his attention to Lewes's work. The stakes were intellectual, institutional and political.

Green's essay on Lewes was published in the liberal, Anglican Contemporary Review, which continued its campaign against the new psychology in a series of essays attacking leading writers or 'materialistic' arguments generally. But if the substance of the essay is familiar, its language - turgid and arcane, imitating the

(208) Pattison, 'Philosophy at Oxford', 94.
(209) Lewes to Pattison, 27 December 1875, Letters, VI, 202.
(211) Green's essays on Spencer also appeared in the Contemporary. A second essay on Lewes was written, but withdrawn when Lewes died in 1878. It was first published in the Works of 1885. T. Collyns Simon's 'The Present State of Metaphysics in Great Britain' (Contemporary Review, 8 (1868), 246-61) is an example of the pro-Kantian/Hegelian manner. It attacks Spencer specifically. For a representative, non-Kantian example of the attack on the 'materialistic' psychology see Alfred Barry, 'Battle of the Philosophies', Contemporary Review, 12 (1869), 232-44. Barry was a theological tutor at King's College, London and later Deacon of Windsor and Primate of Australia.
Germanic manner in tortuous slow-motion - is less so. The tone places it in its period. The assumed audience is specialised, and his constituency is quite unlike that envisaged by, say, Lewes or Eliot who maintained admirable proportion between intellectual range and seriousness, and a belief in plain communication to as wide a public as possible.

Green's essay is argumentatively shrewd however. Its chief tactic is to seize on the transitional points in Lewes's discussion, the points of maximum difficulty and vulnerability. Thus the 'gap' between the 'physical' and the 'mental' is much emphasised. When Lewes made use of ambiguities in language to stress a unitary process (feeling could refer to either a mental or physical state, for example), Green found confusion and indecision. For Lewes these ambiguities were a necessary result of 'multi-aspect' analysis, but Green demanded fast ontological distinctions. He takes the terms which Lewes uses to mediate between the various biological, personal and socio-historical levels of his argument - experience, feeling, sense, society, history, 'medium', subjective and objective - and explores their complexities, and Lewes's equivocations.

For example, is 'experience' an analytic construction or a series of raw physical events? If it is the former then we can ask what mental power or faculty it is that synthesises raw data, and forms analytic abstractions. If it is the latter, we can wonder how consciousness is generated and what status it has in relation to raw experience. Lewes's arguments therefore, Green claims, like all those within the Lockean tradition, are fundamentally equivocal. While insisting that mental life is formed from raw events, they also wish to maintain faith in the power of analytical consciousness in relation
to this material. But on what basis can the discovery of 'relations' between events (of which Lewes makes so much) be generated? These kind of events - apprehensions of relationship - 'would not be events but something not an event', because 'if there were nothing but events passing in time, there could be no relations'.(212) Therefore, Green claims, the consciousness of relations must be produced independent of sense experience and must be ontologically distinct from it. What is it that synthesises experience? The whole is an argument for independent, Kantian 'forms of thought', and the positing of a 'self-conscious subject' separate from sense.

Such arguments were familiar. What distinguishes Green's use of them is the rigour of their application. For he extends the account to other areas of Lewes's analysis. He makes the good point that Lewes regularly blurs the distinction between perception and conception and coincidence and inference.(213) He also maintains that Lewes's conception of 'the real' is problematic and ambiguous, though this argument - essentially that made in the Introduction to Hume - is more tendentious. He argues that the 'objective' is unknowable except through the 'subjective'. To posit therefore a 'real' independent of the forms of human perception is to posit a fiction. There can be no 'world "outside consciousness"'. What could that be but a 'blank nothing, which we delude ourselves into supposing to be something by stocking it with abstractions from the actual content of consciousness, called "things-in-themselves"'.(214) The arguments

(212) Green, 'Lewes on Experience', 443.

(213) T. H. Green, 'Mr. Lewes's Account of the "Social Medium"', Works, I, 515-16. This is the essay withdrawn from the Contemporary after Lewes's death.

(214) Green, 'Lewes's "Social Medium"', 482.
about the ambiguities of the 'real' and the ambiguities of 'feeling' are bound together. Green asserts that hallucinatory phenomena embarrass Lewes's claims for the primacy of sense experience, and, more convincingly (the point about hallucinations might equally apply to Green's theory), that all feeling is a mental construction. The 'truth' of any perception therefore has little to do with externality but with the 'interpretation of feeling'. (215)

Green's own arguments might be used against him however. He does not so much blur perception and conception, as conflate them. But he does have a good point about Lewes's theory of the Logic of Feeling and the Logic of Signs. As he remarks, Lewes makes the same distinction as Green himself, only Lewes remains residually attached to the Logic of Feeling. Lewes's apparent sophistication of the sensationalist-realistic epistemology is still caught in the schema of 'fact' on the one hand, and 'copy' on the other. Green manages to imply that Lewes is in fact an idealist without the courage to admit it. (216) As we shall see, Lewes has often been misunderstood in this way.

The assumption that runs through Green's essay is that the 'biological' is incapable of generating the 'mental'. The nervous system cannot conceivably generate or operate sophisticated mental systems. There is an unbridgable gap in both credulity and ontology: 'physiological processes are not continued into consciousness as chemical processes are into life'.

(215) Green, 'Lewes's "Social Medium"', 495. There was increasing interest in hallucinations and illusions in the period. James Sully - who was to write a book on the subject - wrote interestingly on the 'Illusions of Introspection' in Mind, 6 (1881), 1-18.

(216) Green, 'Lewes on Experience', 447-54.
Nothing that the physiologist can detect - no irritation, or irradication, or affection of a sensitive organ - enters into it [consciousness] at all. The relations which these terms represent are all of a kind absolutely heterogeneous to and incompatible with the mutual determinations of ideas in the unity of consciousness. (217)

In other words, acts of consciousness are entirely self-generating, self-regulating entities.

Underpinning this line of thought is an essentially religious faith in the benign providence of natural creation and the sovereignty of the individual subject within it. In explaining this Green reaches for the sublime cadence:

A world which is a system of relations implies a unit, self-distinguished from all the terms related, yet determining all as the equal presence through relation to which they are related to each other; and such a unit is a conscious subject. (218)

This quotation is accurate incidentally, and it reveals Green struggling to create a mysticism of the sovereign, self-conscious subject. The language attempts to render the technical vocabulary and syntax of idealist philosophy into an assertive poetry. The effect, to my ear, is of a failed hymn. It is a kind of effort at the Carlylean sublime without Carlyle's rhetorical flair or (admittedly intermittent) ironical self-consciousness.

The connection with Carlyle, and the earlier generation of British intellectuals influenced by German idealism, is important. There is a real similarity between the psychological arguments of Coleridge, Carlyle and Green, and Green's work developed the momentum of the 'idealist revival' in Britain from the 1860s. As some scholars

(217) Green, "Lewes's "Social Medium"", 476.

(218) Green, "Lewes's "Social Medium"", 500.
have pointed out, this revival of interest in idealist thought was motivated by domestic concerns, often political, and major writers often read Kant and Hegel to suit their own needs. (219) In particular German idealism was thought to provide a persuasive version of the 'spiritualist' case. J. H. Stirling, a Hegel-enthusiast and friend of Carlyle, claimed in The Secret of Hegel (1865) that:

What we all long for is Christian simplicity, the Christian happiness of our forefathers - the simple pious soul, on the green earth, in the bright fresh air, patiently industrious, patiently loving .... Hegel indeed has no object but - reconciling and neutralizing atomism - once again to restore us - and in new light and thought - immortality and freewill, Christianity and God. (220)

The jubilant, revivalist syntax is unmistakeable, and these ideas were widely shared.

For Green, Stirling's book 'contrasted with everything that had been published as sense with nonsense', (221) and an essay for the North British Review in 1868 drew the political analogy. Green

(219) Aston, The German Idea: Four English Writers and the Reception of German Thought. For comment on Coleridge and Carlyle's uses - and misunderstandings - of Kant, see pp. 42-3 and 70ff. Ashton notes that Lewes - one of her four writers - had rejected idealist philosophy by 1843 (p. 126: though I think this date is a bit early), and that he was very cool on the idealist revival (p. 211). For the political context of Coleridge's championship of idealist thought see Butler, Romantics, Rebels and Reactionaries. Hearnshaw in his History of British Psychology comments on the habit among 'anti-materialist' writers of turning to German idealism throughout the period. His is a useful, succinct discussion of the idealist revival and its impact on psychological thought. René Wellek also gives some detail on this history but, interestingly, ends by saluting Green in vigorous terms: 'at last in Thomas Hill Green England has born a genius whose thought breathes the very spirit of Kant.' (René Wellek, Immanuel Kant in England 1793-1838 (Princeton, Princeton University Press, 1931), p. 262.) It is another interesting thread of connection between New Criticism and the opponents of the new psychology in the late nineteenth century.

associated the Lockean tradition with scepticism and revolution and
looked to the Romantic-conservative tradition in thought and
literature - especially the 'mature' Wordsworth - for remedy. (222)
T. Collyns Simon, another partisan, argued (again in the Contemporary,
which was particularly encouraging to revivalists) that Hegel restored
a sense of the Universal. But he did so only through the autonomous
Ego. This was the key term. The individual Ego (Green's
'self-conscious subject') was directly and necessarily related to the
'Superhuman Ego', or God, though no Universal has any value other than
'such as it derives from the Individual'. (223)

The individualist bias is very pronounced, and it contrasts
sharply with the emphasis Lewes places of the role of society, culture
and history in the formation of minds. Green's psychology, indeed, is
almost totally without a sense of history or society at all. Though
he began his second essay on Lewes with the accusation that Lewes
makes too little of the 'social medium', and the achievements of human
culture, it quickly emerges that Green understands something very
different by these terms. Culture for him is the product of 'an
active self-consciousness'. (224) The effects of culture on that

(221) Quoted by J. H. Muirhead, 'How Hegel Came to England', Mind, 36
(1927), 444. Many of the accounts of first reading Hegel which
Muirhead cites read like quasi- (or explicitly) religious
initiations into a mystery or ritual. They often deploy - as in
the very title of Stirling's The Secret of Hegel - the language
of revelation. Given this, and the notorious complexity of
Hegel himself, it is not difficult to see why the language of
Green or Stirling should be as it is. The secret of Hegel in
Stirling's account, by the way, is revealed by Muirhead to be
Kant's old principle of the a priori forms (p. 443).
(222) [T. H. Green], 'Popular Philosophy in its Relation to Life',
North British Review, 9ns (1868), 133-162.
(223) T. Collyns Simon, 'Hegel and his Connexion with British Thought:
Part I', Contemporary Review, 13 (1870), 77.
(224) Green, 'Lewes's "Social Medium"', 472.
consciousness are ignored.

The lack of any attention to history or society in Green’s psychology is one objection that can be made to it, but this is part of a larger problem. Green’s model of mind is deliberately static. He is not interested in what he terms ‘psychogeny’ (the study of the origins of mental life), only with its free-standing agency. He thus neglects change and difference in a way which is damaging for his critique of Lewes. Many of his objections only stand if the initial premises are accepted—for instance that consciousness cannot be understood neurologically. In a complex discussion, Green maintains that one cannot hold that consciousness is determined by physiological processes because consciousness is not an ‘event’ of the same order. The laws of causality apply only to phenomena of the same ontological type: ‘consciousness of an event is not itself an event’, he says. But it is clear—and was clear to many of Green’s contemporaries—that neurological activity does accompany conscious activity. Green’s separation of the two—which follows directly from the ontological gap he assumes—leads him into some awkward corners. The ‘self-conscious subject’, he claims, cannot be continuous with the biological subject, ‘it cannot be physically explained because it conditions the possibility of all physical explanation’, which is a bit like saying that you cannot experience the taste of food because you cook it first.

It is easy to see the fundamental incompatibility of this kind of position with that of Lewes. Lewes himself was wearily dismissive. In volume four of Problems of Life and Mind he comments that Green

(225) Green, ‘Lewes’s "Social Medium”’, 476.
(226) Green, ‘Lewes’s "Social Medium”’, 472.
simply fails to understand what modern psychology is saying and ends up denying that the 'objective' exists at all. (227) But the central difference is not just a matter of one accepting the importance of physiology, and the other not. The acceptance of physiology necessitates a different model. In it the mind is not autonomous. It is relational to the biological and social environments, determined by these environments and subject to process and change. Indeed the latter is in many ways the key feature of the model, for it is this dynamic structure - articulated by Lewes and modern writers like J. Z. Young alike (228) - which drives the subject to development and growth.

Nonetheless it is worth wondering why Green's critiques of Lewes and Spencer were widely supported. At one level, of course, they articulate traditional conservative objections in a way, and a language, that seems both briskly new and comfortable old. But there is an argumentative strength too. We have noted that Lewes in Problems of Life and Mind was trying hard to get away from the reductiveness that was always a difficulty for the new psychology. In his increasingly sophisticated attempts to develop the model he was, at that level, partly successful. But in his detailed analyses, and for all his populist gifts, there is - as with Spencer and Bain - a feeling sometimes of remoteness from common experience, a sense that important areas of life are not being fully engaged.

This was certainly felt by James Ward. Ward was in many respects a figure rather similar to many of the new psychologists. He too came from a provincial non-conformist background (Birmingham (227) Problems of Life and Mind, IV, 157.

(228) See Young, Philosophy and the Brain, pp. 79ff.
Congregationalist), and was educated in dissenting academies and in Germany, where he studied, among other things, experimental physiology. However after the collapse of his faith, and his resignation from the ministry (he had become a Congregationalist minister in Cambridge in 1871), he became an academic, enrolling at the university in 1872 and becoming a lecturer, under the patronage of Henry Sidgwick, ten years later. The entry into Cambridge, of course, marks the significant difference between his career and those of the principal writers examined in this thesis, and it produced an enormously influential critique of the dominant thinking in psychology.(229)

Ward rejected the new psychology because it did not engage fully enough with actual, living consciousness and, more pressingly for a spiritually-troubled man, with problems of conscience. Associationism seemed to him arid, physiology remote from significant individual experience.(230) Ward therefore looked to reformulate psychology in such a way that it became more responsive to these concerns. His position resembles that of his mentor Henry Sidgwick on ethics. Writing in Mind, Sidgwick argued that evolutionary theory made no difference to the essentials of ethical debate. Unless one assumed that evolutionary development inevitably produced 'the good', arguments about morals remained where they always had been.(231) Similarly, for Ward, wanting to recover a sense of psychology's

(229) These and other details on Ward's career are taken from the chapter on Ward in Frank Miller Turner, Between Science and Religion: The Reaction to Scientific Naturalism In Late Victorian England (London, Yale University Press, 1974). Turner's is the fullest and best account of Ward I have found.


responsiveness to individual living, most of the new psychological apparatus seemed irrelevant. Despite the formal rejection of his faith, he remained preoccupied by religious issues, and his intellectual work became, in a representative way, (232) a displaced means for discussing unfinished business.

Ward, then, brings together an interest in the psychology of individual consciousness (which draws upon the idealist revival) with an informed rejection of the languages of the new psychology. His work was developed by a number of contemporaries and successors - like William James, the philosopher F. H. Bradley, and (most importantly for psychological theory in Britain) G. F. Stout. Stout came under Ward’s influence at Cambridge and, through his academic appointments (at Cambridge, Aberdeen, Oxford and St Andrews), lengthy editorship of Mind (1891-1920), and psychological books (especially the Manual of Psychology (1898), which was used as a textbook until the ’thirties), did much to influence the development of psychological theory on Wardian lines. (233)

Ward partly created, partly caught, the general anti-associationist, anti-physiological mood of the period. (234) His most famous piece, the Encyclopaedia Britannica essay of 1886, opens with a call to rethink the number of counters in the psychological game. There is, he says, another sense as important as the conventional physical senses. This is the ‘internal sense’, and it is

(232) Turner makes an interesting comparison with Matthew Arnold in this respect: Between Science and Religion, p. 203.

(233) Turner, Between Science and Religion; Hearnshaw, History of British Psychology; Brett, Brett’s History of Psychology.

(234) In 1893 Bradley actually accused Ward of not going far enough in his attacks on associationism. See F. H. Bradley, ‘Consciousness and Experience’, Mind, 2ns (1893), 211-16.
in major respects the most important. Unlike the passive, ordinary
senses, the 'internal sense' actively recognises and organises the
data produced by the other senses. Consciousness and the 'internal
sense' are qualitatively different additions to mental experience,
despite the physiologists insistence that there is no 'organ' or
'centre' in which it can be located.(235) Associationism has in its
time usefully cleared-out the language of psychology, but it is now
time to recognise its limitations.(236)

Ward’s strongest arguments, and best theoretical developments,
are concerned with remodelling our picture of mental activity.
Without acknowledgement, he supported Lewes’s enlargement of the
mental topography and freer acknowledgement of subconscious
processes,(237) but most persuasively he argued for an end to
associationism’s rigid categorisation of mental life and a
reconsideration of it in a modal way. The three principal modes of
mental life were attention, feeling and presentation (or the
recognition or cognition of objects). These modes took various forms,
but the advantage of thinking about psychology in this way was that
the mind was pictured at work as it were, rather than bound by
analytical categories or taxonomic disputes.(238) Of the three modes,
Ward gave most attention to attention. Partly because it was the most

(235) James Ward, 'Psychology', Encyclopaedia Britannica, 9th edn., 24
vols. (Edinburgh, Adam and Charles Black, 1886), XX, 37.
(236) Ward, 'Psychology', 41.
(237) Ward, 'Psychology', 47. Ward’s sketch here is almost identical
to that in Problems of Life and Mind which Ward had read
carefully as we shall see. Lewes, however, would not have been
a helpful author to cite in terms of the intellectual politics
of the period, and such arguments had been made elsewhere with
different nuances.
(238) Ward, 'Psychology', 44.
distinctive and original, but partly also because it made clear the implications of this way of thinking: that is, that in order to exercise attention one needs to posit a self or subject to do the attending, and this, following Green, was the main burden of Ward's argument. (239)

So Ward partly plays a 'modernisation' card, and with some justification. Associationist method had become dogmatic and obstructive. But Bain, writing in defence of a life's work against Ward's instantly successful attack, had a point too. Ward's insistence on returning to a specifically psychological language freed from physiological or experimentalist jargon was to be welcomed, he wrote, but it was necessary to recognise how backward-looking Ward's project actually was. Bain could see nothing but Kantianism, with some changes in nomenclature, (240) and Ward's psychology did indeed carry some quite explicit traditional and conservative features. The best way of understanding these is, as ever, in context.

Ward was offered the Encyclopaedia Britannica essay very late after George Croom Robertson, the original choice, became ill, and Sully, the second choice, refused the task. (241) By the time he was commissioned - in 1884 - Ward had already locked himself into controversy. (Though this phase of psychological controversy seems to have been particularly courteous. Both Ward and Bain, for example,

(239) Ward's argument about feeling follows Green's very closely. Criticising both Mill and Spencer, Ward argues that the only solution to the paradox, identified by Mill, that 'a series of feelings, can be aware of itself as a series', is to posit a subjectivity independent of sensory processes. (Ward, 'Psychology', 39-40 and 83.)


(241) Turner, Between Science and Religion, p. 211.
are very polite, even complimentary, to each other.) Robertson had decided to use an editorial piece in *Mind* on the journal’s seventh anniversary, to survey developments thus far. He expressed disappointment at the lack of progress in specifically psychological science, and contrasted Britain unfavourably with Germany and France in this respect. He bemoaned the lack of an institutional basis for the discipline, and its neglect by traditional institutions. He then settled to his main theme: the retrograde effect of Green’s critiques of Spencer and Lewes and the tradition of empirical psychology. As a result of these attacks, Robertson believed that it was now necessary to sever psychology from philosophy completely. The philosophical climate was so unconducive it was inhibiting scientific enquiry. Robertson wanted psychology, not a weakly psychologised Kantianism:

There is nothing in Kant’s philosophical analysis of either fact or cognition - nothing, that is to say, which from the point of view he places himself at may be unquestionably maintained - for which a positive psychological warrant cannot now be assigned; while it is psychology that gives the clearest demonstration of the limits that should be placed upon his assertions . . . . If that be so, Psychology is amply revenged upon him for his despite. (242)

Like Lewes, Robertson was exasperated by the neo-Kantians’ wish to drag psychology back fifty years.

Ward’s *Encyclopaedia Britannica* essay was thus an intervention in an argument, but it was a very particular intervention. The style of the piece is dictated by the occasion (it is aloof, and rather bloodless, in the *Britannica* manner), but Ward includes in it lengthy passages extracted from earlier pieces published in *Mind* in 1883 which are much more polemically pointed. Ward’s two essays (a third was added in 1887 in reply to Bain’s critique) are called ‘Psychological

Principles', and the first is the most directly polemical. 'Psychological Principles I: The Standpoint of Psychology' attacks the idea that psychology can be considered exclusively a science. It rejects the role of physiology, insists that introspection is a, perhaps the, principal psychological method, and places the self and the individual at the centre of psychology’s attention. Psychology is philosophical, and philosophy is metaphysical. The discipline can be neither a concrete science like minerology or botany, nor an abstract science like mathematics, because its matter consists of 'what Kant calls judgments of experience', and psychology 'never transcends the limits of the individual.' (243) Psychology 'seems in fact far more intimately related to Metaphysics, that is to theories about Being and Becoming' than it is to either epistemology or 'mechanical' science. (244) Its concerns, that is to say, are ontological, and Ward closes his essay with an explicit attack on Lewes's 'double-aspect' theory in Problems of Life and Mind as actually only physiological.

So major features of Ward’s psychology looked backwards to the future. Many of the central arguments could have been taken wholesale from more or less any decade of the previous ten; and some of the rhetorical strategies too were very familiar. Literature is used as a powerful argumentative cypher for precious, sensitive, ‘whole’ experience threatened by meddling science. In 'Psychology' Keats is quoted, from Lamia: ‘Do not all charms fly / At the mere touch of cold philosophy?’ and a general moral is drawn about our ‘repugnance’ at the ‘common mistake of supposing that the real is obtained by pulling to pieces rather than building up.’ (245) In a later essay, an


attack on Wundt's Physiologische Psychologie, he accuses Wundt of omitting that part of life Kant 'left to poetry or to speculation to contemplate the universe dramatically as a concrete unfolding', and he ended comparing modern psychology to the study of Homer as 'an arrangement of gutturals, dentals, labials and the like'. It is 'simply brain turned inside out'. (246) This might be James Martineau writing.

In the history of psychology, it is often those who are most ambitious who are most scientifically abused. Spencer is a case in point. His biological errors are scorned routinely. On the other hand, those like Ward or Green who reject science are rarely attacked with the same energy. It is interesting therefore that Ward did commit himself to a biological speculation, and that it is identical to Spencer's. In 'Psychology' he gives some thought to racial evolution. Here was a potential problem for him because it might invite collectivist considerations which would distract from his essentially individualist premises. Ward's solution was to resort to a kind of Lamarckian evolutionism wherein the race could be treated not as a group, but a sort of massive individual:

it is proposed to assume that we are dealing with one individual which has continuously advanced from the beginning of psychical life, and not with a series of individuals of which all save the first have inherited certain capacities from its progenitors. The life-history of such an imaginary individual, that is to say, would correspond with all that was new, all that could be called evolution or development, in a certain series of individuals each of whom advanced a certain stage in mental differentiation. (247)

This has a clear similarity to other conservative-religious

(245) Ward, 'Psychology', 72.

(246) J. Ward, 'Modern' Psychology: A Reflexion', Mind, 2ns (1893), 73, 75 and 79.
appropriations of the Lamarck-Spencer theory. It apparently accepts biology, but in fact ignores it. It preserves the individualist emphasis, but disregards all the messy detail of existence and circumstance. Here is the major point of disagreement with Lewes. In Problems of Life and Mind Lewes took issue with the neo-Lamarckian belief in the transmission of collective experience which was taken to support a priori doctrines such as the 'forms of thought'. Such a theory was, he believed, interested in products and not production, and in the hands of the neo-Kantians the argument was merely verbal and abstract. (248)

Lewes's is a provisional, fluctuating world. That of Ward and Green is smooth and confined. In the name of a sensitive response to mental detail, Ward in fact only describes a world in the head which omits those difficulties of circumstance and complexities of determination that Lewes and Eliot's 'thick description' both relished and realised. It was no wonder that Green criticised Lewes for sticking to his 'Logic of Feeling' instead of siding wholly with the 'Logic of Signs'. And it is no accident, also, that, through F. H. Bradley, there is a connection with one version of twentieth-century modernism - the agonised, solitary accidie of T. S. Eliot. Eliot wrote his doctorate on Bradley and became expert, first, in portraying subjectivities painfully cut-off from social life, and, second, similar subjectivities reconciled to religious purpose through acts of solitary, trans-historical communion. Either way, one deals with processes in consciousness abstracted from the lives of others.


(248) Problems of Life and Mind, IV, 171-74.
These are large, speculative issues, well-beyond the remit of this thesis. But the connections are real enough, though tentative. In 1887 Bain wrote a polemical essay attacking the Hamilton-Ward-Bradley development of psychological theory. He ends taking Bradley to task for picturing mental life as operating only by universals and not by details. The issue was a technical problem within associationism, but it has wider ramifications. Bradley holds (Bain maintains) ‘that particulars can never be associated, and that what is reproduced is universal’. But

in common parlance we should say that our knowledge of a concrete thing is improved by repetition, and attains its very best when we have viewed it times without number, so as to detach the picture from special dates and circumstances. This is the particularity of all our familiar surroundings; it does not make the objects general in any received sense of the word; they are still looked upon by us as particulars, and when we conceive them in idea, we do so with all the more vividness for the interaction and the absence of reference to special moments of observation. (249)

Bain stresses the importance of personal, particular history. And it is hard not to think of George Eliot and Lewes in reading his discussion of the relationship between particular and general memory: so much of her fiction is couched in this vein, so much of it deals with this very issue, so much of his work rests on the uneasy but necessary dialogue of feeling and signs.

* * * * * * *

G. H. Lewes and George Eliot were fond of the idea of the ‘epoch’. It is a key word in his histories of thought and her histories of personal and social development. The nineteenth-century

(249) A. Bain, ‘On Association Controversies’, Mind, 12 (1887), 171.
habit of epochal thinking - the Positivist or Marxist stages of social development, the conservative nostalgia for better epochs, even the stages of ontogenetic development in Freud - all these are key features of the way men and women of the period understood time and history. But often in Lewes and Eliot there is also the recognition that process continues, change is slow, history evolves irrespective of epochal divisions. The tension provides some of the energy for their work and is a central feature of their achievement.

The history traced in this thesis is bounded by specific dates: 1850 - 1880. Most of the material examined in it was published in the thirty years between them, and the thesis has focused on the cultural circumstances of this period. Yet a discourse builds upon earlier work, and attitudes persist and are supported and managed into the future. The development of psychological theory was a specialised working-out of specific intellectual and scientific problems. But it was also formed by intellectual, spiritual and political attitudes which at first sight had little to do with the details of that theory. Looking back, many of its concerns have 'only historical' interest. The language of associationism, the ins-and-outs of Lamarckian theory, the emphasis on God at the core of the world's material management, the lack of knowledge of genetics or the constitution of the nervous system or brain structure, the limitations in understanding of race or gender - all of these require some effort by most of us to comprehend. Yet the formation of this knowledge within its own cultural circumstances is a process that continues, and many of the attitudes and problems faced by the new psychology in the period 1850 - 1880, are faced, some in detail, some in outline, in other periods, including our own.
Famously we live in a bi-furcated culture, the 'two cultures' of endless quarrel. Perhaps it is possible to see in the mid-to-late nineteenth century a culture that was not so thoroughly split. Yet no nostalgia should attach to this, for it has to be recognised that modern science is far more complicated, and much too professional and specialised for an amateur intellectual, that cultural and intellectual arrangements are different, that intellectuals have a different relationship to their institutions, the state and each other, that the means of production and distribution of ideas is vastly different, that the world is more encompassingly international. Yet there is also a spirit of ambition and an eagerness of enquiry that is laudible in these old nineteenth-century quarrels, and an admirable effort (from my own particular position) to understand the world and people in material ways without leaving behind their humanity or their distinctive qualities as living, cultured beings. That spirit, I think, is best represented in the best work of Eliot and Lewes, and the latter has been terribly neglected.

The reasons for that neglect have already been indicated. But it is interesting how old attitudes persist. Lewes's work was opposed by the idealists of his day, and he made no bones about his opposition to them. Idealism, he wrote in the second volume of *Problems of Life and Mind*, 'regards things as if they had no history, and would have no future.' Whereas in reality, 'things exist just so long as their conditions exist.' Idealism was 'only theory', and Lewes sketched a critique of the purely theoretical intelligence.(250) In the same volume he dismissed Hegel in equally strong terms in arguments similar to those of Bain against Bradley. Hegel abstracts from concrete

(250) *Problems of Life and Mind*, II, 435-36.
experience and emphasises symbols and universals. In other words, Lewes says, he splits the Logic of Signs from the Logic of Feeling. (251) This is followed by a powerful passage on the ways in which 'error sustains itself for centuries.' We are unable to see 'perceptions' because of the power of prevailing 'conceptions' which are 'compendiously embedded in these judgements, assumptions, and superstitions.' In other words what we would now call hegemony or ideology:

the mere enunciation of a casual connection suffices to impress the uncritical hearer with a belief of its truth; and this belief, transmitted from family to family, from generation to generation, comes to be the heritage of men who pique themselves on their rationality. Round this nucleus of fancy cluster the notions and the interests, till the fiction becomes a very serious part of life. Holy awe and abject terror guard fictions from investigation. (252)

These interests, 'philosophical no less than religious', are protected by churches, temples, mosques and pagodas against 'the dissolving agency of Doubt, the disturbing anarchy of Investigation', and we forget the labour in thought as we forget the labour which produces the toast-rack, The Times, and the other items of the breakfast table: 'the planations of China, factories of Sheffield, potteries of Staffordshire, or the epitomised nation of Printing-House Square'. (253)

Clearly then, idealism (in Oxford and Cambridge) is understood hegemonically by Lewes. It is orthodoxy, the reigning, interested

(251) Problems of Life and Mind, II, 127.

(252) Problems of Life and Mind, II, 131.

(253) Problems of Life and Mind, II, 131 and 136. This passage is very similar to the one in The Mill on the Floss when Eliot turns on her cultured readers and asks them to remember, amid the graceful ironies and cushions, 'the emphasis of want' in factories, mines and fields. (The Mill on the Floss, ed. A. S. Byatt (Harmondsworth, Penguin, 1979), pp. 385-87.)
fiction of the age. In an appendix to the same volume Lewes devotes further pages to ‘Lagrange and Hegel: the Speculative Method’. Hegel’s errors are listed and Stirling’s *Secret of Hegel* attacked. Process is forgotten, science ignored, thought rules over feeling and things, the universe is reduced to the single operation of the dialectical unfolding of Spirit. To return to Hegel or Kant, he concludes, would be to give-up ‘all the results of research since Bichat and Lavoisier’. (254) Kant usually fares somewhat better than Hegel in *Problems of Life and Mind*, (255) but the general tenor of the analysis remains the same. Kant was the founder of modern ‘Metempirical’ thinking. He was disabled by the state of biology and psychology in the late eighteenth century, but he had an impoverished sense of Experience. (256) Lewes pictures Kant as caught in a double-bind produced by his times:

The truth is that Kant tried to hold contradictory positions. The whole drift of his polemic against the ontologists was to show that knowledge was limited, relative, and could not extend beyond the sphere of possible Experience; but while thus cutting the ground from under the ontologists, he was also anxious to cut the ground from the sensationalists and sceptics, and therefore tried to prove that the mind brought with it an *a priori* fund of knowledge. (257)

Lewes, then, could find little in Kant, and nothing in the

(254) *Problems of Life and Mind*, II, 535.

(255) I am aware that Lewes was earlier more enthusiastic about Hegel, and had a lively interest in Hegel’s aesthetics. (See [Lewes], ‘Hegel’s Aesthetics’, *British and Foreign Review*, 13 (1842), 1-49.) But even at the beginning of his career Lewes was no disciple. A critique of Schlegel from the same period anticipates some of the later objections to idealism ([Lewes], ‘August William Schlegel’, *Foreign Quarterly Review*, 32 (1843-44), 160-81), and a review of Hamilton from 1859 indicates the settled position: Lewes wishes Hamilton’s *Lectures on Metaphysics* had been published earlier. It is now too late. ([Lewes], ‘Philosophy as an Element of Culture’, *Universal Review*, 1 (1859), 266-77.)

(256) *Problems of Life and Mind*, I, 437-40.
neo-Kantians. Yet the idea that Lewes was at a heart a Kantian has persisted.

Much of the commentary Lewes's work has received, particularly in America, has not fully understood the context in which that work was produced. Hock Guan Tjoa, the writer of the fullest monograph on Lewes, is unnecessarily slighting of his ideas because due allowance is not given to context and too much given to received images. Thus Tjoa pictures Lewes trying to ape a type of Victorian culture-hero, the discoverer, by fruitlessly speculating on evolutionary or physiological themes. His real 'forte was exposition and popularization and his sallies into "original" ground served mainly to spice up an otherwise boring genre'. Lewes could not, Tjoa comments, 'refrain from adding his own embellishments' on reading Darwin's Origin of Species. (258) Tjoa's comments are small-minded but representative. He has failed to appreciate the volatile, uncertain context in which evolutionary ideas were being developed, and projects a vision of Darwin's book which assumes it was immediately perceived as correct. As we have seen, Lewes actually understood the force of the book better than most.

But there are other sources for Tjoa's false image of Lewes. Although he gives useful attention to Lewes's early political interests he assumes in effect that Lewes stopped being interested in social or political issues after, say, 1850. Indeed he encourages the view that Lewes's early reading in Carlyle and Kant acted as a useful antidote to what another contemporary in the Carlyle circle, Francis Espinasse, called the 'mechanisms and Atheisms' of French Problems of Life and Mind, I, 453-54. (257)

(258) Tjoa, George Henry Lewes, p. 89.
materialism. (259) The effect is to draw Lewes after Carlyle, as it were, and misunderstand the larger picture. The coverage of Problems of Life and Mind shows similar features. The Problems, Tjoa argues, try to reconcile the claims of Lewes's 'seasoned empiricism' (which receives little attention) with his 'swelling need for a kind of "religious nationalism", a meaningful vision of man and things'. (260) The weight of attention falls on the latter, but this seems to me an extrapolation from certain features of George Eliot's later ideas, and not a very certain reading of Lewes's complex text. It does however reveal a symptomatic trait. Lewes is read, in rather clichéd terms, as seeking 'millenarian' explanations of things. He is on a 'quest for certainty'. His work is 'displaced religion'. (261) The effect, in philosophical terms, is to pull it towards idealism; the cause, one cannot help think, is the gravitational pull of American New Criticism.

It has been customary to think of Lewes in this way. For Jack Kaminsky, Lewes writes 'Empirical Metaphysics', and a similar line is taken by the British critic Michael York Mason. (262) More recently Peter Alan Dale has read him as a displaced Hegelian. Starting with Lewes's literary-critical work, Dale points to (but wildly overestimates) Lewes's 'continual fascination' with Hegel and suggests that, for Lewes, biology becomes like the Romantic Spirit or Imagination. It is a founding and structuring essence. Later, Dale


(260) Tjoa, George Henry Lewes, p. 117-18.

(261) Tjoa, George Henry Lewes, pp. 84, 107 and 112-15.

(262) Kaminsky, 'The Empirical Metaphysics of George Henry Lewes'; Mason, 'Middlemarch and Science: Problems of Life and Mind'. Both of these essays, however, are helpful accounts of Lewes.
argues, Lewes found support for this position in the work of the German scientist, and student of Kant, Herman Helmholtz who stressed the constructive powers of mind in the formation of knowledge propositions. As a result Problems of Life and Mind posits a radically new role for symbolisation over perception in scientific discovery (signs over feeling, that is). Lewes thus anticipates Cassirer, and overlaps with Derrida. (263)

Dale's is an idealist recovery of Lewes which goes against Lewes's own opposition to idealist thought, the way he was understood by his contemporaries (idealist or materialist alike), and much of the textual evidence and contextual circumstances. Problems of Life and Mind has not been read very carefully; nor has Helmholtz. Helmholtz was influential on Lewes, and Helmoltz did read Kant with interest (so did Lewes). But Helmholtz also, again like Lewes, wrote in this vein (the essay was first published in Britain in Mind in 1878):

the assumption of knowledge of axioms from transcendental intuition is:

(1) an unproved hypothesis

(2) an unnecessary hypothesis, because it does not assert that it explains anything in our real world of concepts that could be explained without its aid, and

(3) a hypothesis completely without use in explaining our knowledge of the real world, since the propositions produced by it may be applied to the conditions of the real world only after their objective validity has been tested and established empirically. (264)

Lewes himself could not have been more forthright. In another late essay Helmholtz wrote that, though '[i]n the development of concepts, inductive conclusions acquired by the unconscious action of memory

play a predominant role’, it ‘seems doubtful whether the ideational realm of the adult includes any forms of cognition not derived from these sources.’ (265) Lewes would have been very happy with this idea. It follows coherently from his own efforts to re-define the relationship between conscious and unconscious life. But it is difficult to see how it is related to the popular idealism of the period. Kant, Helmholtz concluded generally, had not been ‘critical enough in his critique’. (266)

Undoubtedly Lewes was working against reductive materialism and naive sensationalist realism and as such his investigations are complex and subtle. Sometimes, too, they are hesitant and provisional as we have seen, and some aspects of his thinking - such as that on the moral sense - can sometimes contradict the general tenor of his outlook and conclusions. (267) He was also interested in the complex processes involved in hypothesis formation, and was not a Millite on such subjects. But Dale’s misreading of Lewes’s conclusions is not really a product of his ambiguities. It is a projection of a wish that he conform to type. This construction of Lewes is also detectable in Tjoa’s book and in much criticism of George Eliot until quite recently. Where Green objected to the materialism of *Problems of Life and Mind*, now Lewes is recruited to the cause. Where Lewes rejected Kant, he is now made, in important respects, to follow him. Historical perspectives are reversed. I think this is partly a


(266) *Helmholtz on Perception*, p. 246.
product of the literary half of the two cultures' disinclination to confront scientific or materialistic beliefs. I also think, especially in America, that it is the result of the close relationship in outlook between, on the one hand, the opponents of the new psychology in the second half of the nineteenth century (particularly the neo-Kantians), and, on the other, the very influential literary critics associated with New Criticism.

We have noted these connections from time to time, but it is worth making another, larger point. The formalistic orientation of New Criticism has probably been more influential than its political and intellectual conservatism. It is resumed today among 'radical' avant-garde textualists associated with post-structuralism and deconstruction. The kind of textual formalism practised by both these movements is, unless in very intellectually agile hands, unlikely to encourage historically-contextualising study. As a result the concerns and interests of the present are projected onto the past.

(267) In much the best single essay on Lewes, K. K. Collins has looked closely at some of the manuscript material pertaining to George Eliot's editing of the final volume of Problems of Life and Mind. Collins (also an American, incidentally) has an expert grasp of the issues, and brings out very well how Eliot's revisions nudged Lewes's text closer to Kant. She seems to have been alarmed that Lewes's theory, though strong on genetic accounts of moral belief, could not generate an independently-acting moral sense which would give 'the authority necessary to ground moral obligation'. (K. K. Collins, 'G. H. Lewes Revised: George Eliot and the Moral Sense', Victorian Studies, 21 (1978), 475.) This is in fact one of the ambiguous areas of the Problems. Sometimes Lewes gives a solely genetic account of moral or value choices (that is, why these choices are made rather than those). But he himself seems to have been unsettled by the implications of this. He therefore writes at other points as though there were a moral sense driving through nature towards efficacious ends, 'the growing good of the world', as it were. (See for instance, Problems of Life and Mind, IV, 150-51 where Lewes describes the evolution of moral ideas from primitive needs, but implies that this growth is inevitable and necessary.) This conflict is one very typical of the epoch in which Eliot and Lewes wrote.
While this kind of projection always occurs in historical enquiry, the recreation of context checks the conception of the past as only a hall of mirrors. At the same time, and as an odd replica of this process, the standard treatment of psychology's history to be found in the orthodox, synoptic histories of the subject also usually leaves out the grain and texture of argument, the cultural pressures bearing upon writers, and the political and religious milieu in which ideas were formed. In this history, discourse is also construed in the light of present interests ('scientific successes'). This study has tried to respond to text in context, and therefore close these divisions a little.
I. Texts by Bain, Lewes and Spencer

i. Bain

Bain, Alexander

The Senses and the Intellect (London, Parker and Son, 1855)

The Senses and the Intellect 3rd edn. (London, Longman's, Green, and Co., 1868)

The Emotions and the Will (London, John W. Parker & Son, 1859)

The Emotions and the Will, 2nd edn. (London, Longmans, Green, and Co., 1865)

The Emotions and the Will, 3rd edn., (Longmans, Green, and Co., 1875)

On the Study of Character including an Estimate of Phrenology (London, Parker, Son, and Bourn, 1861)


Mental and Moral Science: A Compendium of Psychology and Ethics, 2nd edn. (London,
Longman's, Green, and Co., 1868)

Mental and Moral Science: A Compendium of Psychology and Ethics, 3rd edn. (London, Longman's, Green, and Co., 1879)


Mind and Body: The Theories of Their Relation (London, H. S. King and Co., 1873)

'Mr. G. H. Lewes on the Postulates of Experience', Mind, 1 (1876), 146.

'Mr. Spencer's Psychological "Congruities"', Mind, 6 (1881), 266-70 and 394-406.

Practical Essays (London, Longmans, Green, and Co., 1884)

'Mr. James Ward's "Psychology"', Mind, 11 (1886), 457-77.

'On Association Controversies', Mind, 12 (1887), 161-82.

'The Respective Spheres and Mutual Helps of Introspection and Psycho-Physical Experiment in Psychology', Mind, 2ns (1893), 42-53.

ii. Lewes

Lewes, George Henry

'Hegel’s Aesthetics', British and Foreign Review, 13 (1842), 1-49.


Comte’s Philosophy of the Sciences (London, Bohn, 1853)

'Bain on The Senses and the Intellect', The Leader, 6 (1855), 771-72.

'Herbert Spencer’s Psychology', The Leader 6 (1855), 1012-13.

'History of Psychological Method', The Leader 6 (1855), 1036-37.

'Life and Mind', The Leader 6 (1855), 1062-63.


'Brodie’s Psychological Inquiries', Saturday Review, 1 (1856), 422-23.


A Biographical History of Philosophy from its Origin in Greece down to the Present Day, 2nd
edn. (London, John W. Parker and Son, 1857)

'Philosophy as an Element of Culture',
Universal Review, 1 (1859), 266-77.

'Voluntary and Involuntary Actions',
Blackwood's Edinburgh Magazine, 86 (1859),
295-306.

The Physiology of Common Life, 2 vols.,
(London, Blackwood, 1860)

critical notice of The Senses and the
Intellect and The Emotions and the Will by
Alexander Bain, Fortnightly Review, 4 (1866),
767.

'Mr. Darwin's Hypotheses: Part 1',
Fortnightly Review, 3ns (1868), 353-73.

'Mr. Darwin's Hypotheses: Part 2',
Fortnightly Review, 3ns (1868), 611-28.

'Mr. Darwin's Hypotheses: Part 3',
Fortnightly Review, 4ns (1868), 61-80.

'Mr. Darwin's Hypotheses: Part 4',
Fortnightly Review, 4ns (1868), 492-509.

'Popular Lectures on Physiology', Nature,
1(1870), 353.

The History of Philosophy from Thales to
Comte, 2 vols., 4th edn. (London, Longman's,
Green, and Co., 1871)

'Spiritualism and Materialism: Part 1',
Fortnightly Review, 19ns (1876), 479-93.

'Spiritualism and Materialism: II',
Fortnightly Review, 19ns (1876), 707-19.

'The Uniformity of Nature’, Mind, 1 (1876), 283-84.

Problems of Life and Mind: First Series:

Problems of Life and Mind: Second Series:
The Physical Basis of Mind (London, Trubner and Co., 1877)

Problems of Life and Mind: Third Series:

iii. Spencer

Spencer, Herbert

Notice of Principles of Physiology, General and Comparative by W. B. Carpenter,
Westminster Review, 1ns (1852), 274-75.

The Principles of Psychology (London, Longman, Brown, Green and Longman's, 1855)

The Principles of Psychology, 3rd edn., 2
vols. (London, Williams and Norgate, 1881)

'Morals and Moral Sentiments', *Fortnightly Review*, 9ns (1871), 419-32.

'Mr Martineau on Evolution', *Contemporary Review*, 20 (1872), 141-54.


II. Further Nineteenth-Century And Other Sources


Anon. 'Mr. Herbert Spencer’s First Principles', British Quarterly Review, 37 (1863), 84-121.

Anon. 'Lewes on Aristotle’s Scientific Writings', British Quarterly Review, 40 (1864), 51-79.


Anon. 'Mr Lewes and Metaphysics', Westminster Review, 46ns (1874), 109-37.

Anon. 'Lewes’s Problems of Life and Mind', Saturday Review, XL (1875), 301-02.


Arnold, Matthew Culture and Anarchy, ed. Ian Gregor (Indianapolis, Bobbs-Merrill, 1971)
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barry, Alfred</td>
<td>'Battle of the Philosophies', Contemporary Review, 12 (1869), 232-44.</td>
</tr>
<tr>
<td>Barton, F. B.</td>
<td>'Spencer's &quot;Principles of Psychology&quot;', The Reasoner, 13 (30 March 1856), 99.</td>
</tr>
<tr>
<td>Birks, Thomas Rawson</td>
<td>Modern Physical Fatalism and the Doctrine of Evolution, including an examination of Mr. H. Spencer's First Principles (London, Macmillan, 1876)</td>
</tr>
<tr>
<td>Bradley, F. H.</td>
<td>'Consciousness and Experience', Mind, 2ns (1893), 211-16.</td>
</tr>
<tr>
<td>Calderwood, Henry</td>
<td>'The Present Relations of Physical Science to Mental Philosophy', Contemporary Review, 16 (1871), 225-38.</td>
</tr>
<tr>
<td></td>
<td>The Scientific Spirit of the Age: And Other</td>
</tr>
</tbody>
</table>
Pleas and Discussions (London, Smith, Elder and Co., 1888)

Coleridge, Samuel Taylor

Collier, James

Comte, Auguste

Courtney, William L.

Darwin, Charles

The Descent of Man in Relation to Sex (London, Pickering, 1989)

Davidson, William L.
'Professor Bain's Philosophy', Mind, 13ns (1904), 79-161.

Dawkins, W. Boyd

de Bury, Marie Blaze
'Victor Cousin', North British Review, 7ns (1867), 162-71.

Eliot, George
The Mill on the Floss, ed. A. S. Byatt


Green, T. H. ‘Popular Philosophy in its Relation to Life’, North British Review, 9ns (1868), 133-162.


Hamilton, E. ‘Mr. Lewes’s Doctrine of Sensibility’, Mind, 4 (1879), 256-61.

The Philosophy of Common Sense (London, Macmillan, 1907)

Hartley, David

Observations on Man: His Frame, His Duty, and His Expectations, 6th edn. (London, Joseph Johnson, 1834)

Heath, D. D.

‘Professor Bain on the Doctrine of the Correlation of Force in its Bearing on the Mind’, Contemporary Review, 8 (1868), 57-78.


Henderson, James Scott

‘Positivism’, North British Review, 10ns (1868), 209-56.

Hodgson, Shadworth H.

‘Philosophy and Science: I - As Regards the Special Sciences’, Mind, 1 (1876), 67-81.


Holland, Henry

Chapters in Mental Physiology (London, Longman, Brown, Green, and Longman’s, 1852)

Holyoake, G. J.

Hume, David


Hutton, R. H.

'Atheism', National Review, 2 (1856), 97-123.


'Mr. Herbert Spencer on Moral Intuitions and Moral Sentiments', Contemporary Review, 17 (1871), 463-72.

'Mr Lewes's "Problems of Life and Mind"', The Spectator, 28 February 1874, 271-73.


Huxley, T. H.

'On the Physical Basis of Life', Fortnightly Review, 5ns (1869), 129-45.

'The Scientific Aspects of Positivism', Fortnightly Review, 5ns (1869), 653-70.

Lessons in Elementary Physiology, 6th edn. (London, Macmillan, 1872)

Science and Culture and Other Essays (London, Macmillan, 1892)

Evolution and Ethics and Other Essays
Jacobs, Joseph

'The Need for a Society for Experimental Psychology', *Mind*, 11 (1886), 49-54.

James, William

'The Perception of Space (I)', *Mind*, 12 (1887), 1-30.

'... of Space (II)', *Mind*, 12 (1887), 183-211.

MacCall, William

The *Principles of Psychology*, 3 vols.


Locke, John


MacCall, William


Main, Alexander

'Mr. Hodgson on Mr. Lewes's View of Philosophy', *Mind*, 1 (1876), 292-94.

Mallock, W. H.

The *New Republic: Culture, Faith, and Philosophy in an English Country House* (Leicester, Leicester University Press, 1975)

Martineau, James


'... of Mind and Intuition in Man', *Contemporary Review*, 19 (1872), 606-23.
Masson, David


Maudsley, Henry

'Materialism and Its Lessons', Fortnightly Review, 26ns (1879), 244-60.

Mill, James

The History of British India, 3rd edn., 6 vols. (London, Baldwin, Craddock and Joy, 1826)


Mill, John Stuart

Auguste Comte and Positivism, 2nd edn. (London, Trubner, 1866)

A System of Logic, 8th edn. (London, Longman's, Green, and Co., 1884)

Mill on Bentham and Coleridge, ed. F. R. Leavis (London, Chatto and Windus, 1950)

Autobiography (Oxford, OUP, 1971)


Mivart, St. George

'Herbert Spencer', Quarterly Review, 135 (1873), 509-39.

'An Examination of Mr. Herbert Spencer's

An Examination of Mr. Herbert Spencer's Psychology: Part II', Dublin Review, 25ns (1875), 143-72.

An Examination of Mr. Herbert Spencer's Psychology: Part III', Dublin Review, 28ns (1877), 192-219.

An Examination of Mr. Herbert Spencer's Psychology: Part IV', Dublin Review, 28ns (1877), 479-502.

An Examination of Mr. Herbert Spencer's Psychology: Part V', Dublin Review, 30ns (1878), 157-94.

An Examination of Mr. Herbert Spencer's Psychology: Part VI', Dublin Review, 31ns (1878), 412-39.

An Examination of Mr. Herbert Spencer's Psychology: Part VII', Dublin Review, 32ns (1879), 141-63.

An Examination of Mr. Herbert Spencer's Psychology: Part VIII', Dublin Review, 33ns (1879), 268-96.

An Examination of Mr. Herbert Spencer's Psychology: Part IX', Dublin Review, 34ns
(1880), 26-73.


Morley, John 'Modern Catholics and Scientific Freedom', Nineteenth Century, 18 (1885), 30-47.


Pattison, Mark 'Herbert Spencer', British Quarterly Review, 58 (1873), 472-504.

<table>
<thead>
<tr>
<th>Author, Title</th>
<th>Source</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robertson, George Croom</td>
<td>'Philosophy in France', <em>Mind</em>, 2 (1877), 366-86.</td>
<td>1877</td>
</tr>
<tr>
<td>Robertson, George Croom</td>
<td>'Prefatory Words', <em>Mind</em>, 1 (1875), 3-6.</td>
<td>1875</td>
</tr>
<tr>
<td>Robertson, George Croom</td>
<td>'How We Come By Our Knowledge', <em>The Nineteenth Century</em>, 1 (1877), 113-21.</td>
<td>1877</td>
</tr>
<tr>
<td>Robertson, George Croom</td>
<td>'The Physical Basis of Mind', <em>Mind</em>, 3 (1878), 24-43.</td>
<td>1878</td>
</tr>
<tr>
<td>Robertson, George Croom</td>
<td>'Psychology and Philosophy', <em>Mind</em>, 8 (1883), 1-21.</td>
<td>1883</td>
</tr>
<tr>
<td>Shairp, J. C.</td>
<td>'Moral Theories and Christian Ethics', <em>North British Review</em>, 8ns (1867), 1-46.</td>
<td>1867</td>
</tr>
<tr>
<td>Sidgwick, Henry</td>
<td>'The Theory of Evolution in its Application to Practice', <em>Mind</em>, 1 (1876), 52-67.</td>
<td>1876</td>
</tr>
<tr>
<td></td>
<td>'Hegel and his Connexion with British Thought: Part 1', <em>Contemporary Review</em>, 13 (1870), 47-79.</td>
<td>1870</td>
</tr>
<tr>
<td></td>
<td>'Hegel and his Connexion with British Thought: Part 2', <em>Contemporary Review</em>, 398-421.</td>
<td>1870</td>
</tr>
</tbody>
</table>
Smiles, Samuel

Self-Help; with illustrations of Conduct and Perseverance, 2nd edn. (London, John Murray, 1866)

Character (London, John Murray, 1871)

Smith, William Henry


'Spalding, Douglas A.


Spalding, Douglas A.


'Sully, James


'George Henry Lewes’, New Quarterly Review, 2ns (1879), 356-76.

'Illusions of Introspection' Mind, 6 (1881), 1-18.


Tennyson, Alfred
The Poems of Tennyson, ed. Christopher Ricks (London, Longman and Norton, 1969)

Tulloch, John

Movements of Religious Thought in Britain During the Nineteenth Century (Leicester, Leicester University Press, 1971)

'Morality without Metaphysics', Edinburgh Review, 144 (1876), 470-500.

Tyndall, John

'Science and Man', Fortnightly Review, 22ns (1877), 593-617.

Ward, James


'Psychology', *Encyclopaedia Britannica*, 9th edn., 24 vols. (Edinburgh, Adam and Charles Black, 1886)

"'Modern" Psychology: A Reflexion', *Mind*, 2ns (1893), 54-82.

Wilson, H. B.

'Theology and Philosophy', *Westminster Review*, 9ns (1856), 221-42.

Wordsworth, William and Coleridge, Samuel


Wordsworth, William

SECONDARY SOURCES

Aarsleff, Hans
The Study of Language in England, 1780-1860

Altick, Richard

Ashton, Rosemary
The German Idea: Four English Writers and the Reception of German Thought 1800-1860
(Cambridge, CUP, 1980)

Baker, William

Baldick, Chris

Beer, Gillian

Bell, Srilekha

Biddiss, Michael D., ed. Images of Race (Leicester, Leicester University Press, 1979)

Block, Ed
'T. H. Huxley's Rhetoric and the
Boddy, John

Brain Systems and Psychological Concepts
(Chichester, John Wiley, 1978)

Boring, Edwin G.

Sensation and Perception in the History of Experimental Psychology
(New York, Appleton-Century-Crofts, 1942)

Brett, G.S.

A History of Experimental Psychology
2nd edn.
(New York, Appleton-Century-Crofts, 1950)

Burrow, J. W.

Evolution and Society: A Study of Victorian Social Theory
(Cambridge, CUP, 1966)

Butler, Marilyn

Romantics, Rebels, and Reactionaries: English Literature and its Background
1760-1830

Cantor, G. N.


Cardno, J. A.


Carroll, David, ed.

George Eliot: The Critical Heritage
(London,
RKP, 1971)


Denton, George Bion 'Early Psychological Theories of Herbert Spencer', *American Journal of Psychology*, 32 (1921), 5-15.


<table>
<thead>
<tr>
<th>Author</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figlio, Karl M.</td>
<td>'Theories of Perception and the Physiology of Mind in the Late Eighteenth Century', History of Science, XII (1975), 177-212.</td>
</tr>
<tr>
<td>Goldmann, Lucien</td>
<td>The Hidden God: A Study of Tragic Vision in the ‘Pensées’ of Pascal and the Tragedies of</td>
</tr>
</tbody>
</table>
Racine, trans. Philip Thody (London, RKP, 1964)


Haigh, Elizabeth 'The Roots of the Vitalism of Xavier Bichat', Bulletin of the History of Medicine, 49 (1975), 72-86.


Hearnshaw, L. S. A Short History of British Psychology 1840-1940 (London, Methuen, 1964)


Irvine, William


__________


Jacyna, L. S.


Jordanova, L. J.

*Lamarck* (Oxford, OUP, 1984)

Kent, Christopher

*Brains and Numbers: Elitism, Comtism and Democracy in Mid-Victorian England* (Toronto, University of Toronto Press, 1978)

Kitchel, Anna Theresa

*George Lewes and George Eliot: A Review of the Records* (New York, John Day, 1933)

Klein, D. B.


<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Publisher and Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leahey, Thomas Hardy</td>
<td>A History of Psychology: Main Currents in Psychological Thought</td>
<td>(Englewood Cliffs, New Jersey, Prentice Hall, 1980)</td>
</tr>
<tr>
<td></td>
<td>One Culture: Essays in Science and Literature</td>
<td>(London, University of Wisconsin Press, 1987)</td>
</tr>
<tr>
<td>Medewar, P. B.</td>
<td>The Art of the Soluble</td>
<td>(London, Methuen, 1967)</td>
</tr>
<tr>
<td>Mischel, Theodore</td>
<td>&quot;Emotion&quot; and &quot;Motivation&quot; in the Development of English Psychology: D.</td>
<td></td>
</tr>
</tbody>
</table>


Murphy, Gardner Historical Introduction to Modern Psychology, 5th edn. (London, RKP, 1949)


Myers, William The Teaching of George Eliot (Leicester, Leicester University Press, 1984)

Newman, Charles The Evolution of Medical Education in the Nineteenth Century (Oxford, OUP, 1957)


Ockenden, R. E. ‘George Henry Lewes (1817 - 1878)’, Isis, 32 (1940), 70-86.


Peel, J. D. Y. Herbert Spencer: the Evolution of a
Sociologist (London, Heinemann, 1971)

Reé, Jonathan

Proletarian Philosophers: Problems in Socialist Culture in Britain, 1900-1940

Richards, Robert J.

Darwin and the Emergence of Evolutionary Theories of Mind and Behaviour (London, University of Chicago Press, 1987)

Richter, Melvin

The Politics of Conscience: T. H. Green and His Age (London, Weidenfeld and Nicolson, 1964)

Rose, Steven


Ruse, Michael


Scull, Andrew T.


Searle, John

'Minds, Brains and Science: Lecture 1: A Froth on Reality', The Listener, 8 November 1984, 15.

'Minds, Brains and Science: Lecture 2: Beer Cans and Meat Machines', The Listener, 15 November 1984, 14-16.

'Minds, Brains and Science: Lecture 4: A Walk to Patagonia', The Listener, 29 November 1984, 8-11.


Semmel, Bernard

The Governor Eyre Controversy (London, MacGibbon and Kee, 1962)

Sharlin, H. I.


Showalter, Elaine

Shuttleworth, Sally


Smith, C. U. M.


Smith, R. E.


Smith, Roger

'Physiological Psychology and the Philosophy of Nature in Mid-Nineteenth-Century Britain' (PhD Diss., Cambridge, 1970)

'The Background of Physiological Psychology in Natural Philosophy', History of Science, XI (1973), 75-123.

Stepan, Nancy


Sutton, Geoffrey

'The Physical and Chemical Path to Vitalism: Xavier Bichat's Physiological Researches on
Thompson, E. P.  The Making of the English Working Class
(Harmondsworth, Penguin, 1967)

Tjoa, Hock Guan  George Henry Lewes: A Victorian Mind

Turner, Frank Miller  Between Science and Religion: The Reaction
to Scientific Naturalism in Late Victorian

Warren, Howard C.  A History of the Association Psychology
(New York, Charles Scribner's Sons, 1921)

Weiner, Martin J.  English Culture and the Decline of the

Wellek, René  Immanuel Kant in England 1793-1838
(Princeton, Princeton University Press, 1931)

West, Ray B., ed.  Essays in Modern Literary Criticism
(New York, Holt, Rinehart and Winston, 1952)

Williams, David  Mr George Eliot: A Biography of George Henry
Lewes (London, Hodder and Stoughton, 1983)

Williams, Raymond  Keywords: A Vocabulary of Culture and

_________________  Problems in Materialism and Culture:
Selected Essays (London, Verso, 1980)
Young, J. Z.

*Philosophy and the Brain* (Oxford, OUP, 1987)

Young, Robert M.
