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THE USES OF ANTIQUITY
*The Scientific Revolution and the
Classical Tradition*

Edited by

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1 **The Soft Underbelly of Reason**
Edited by Stephen Gaukroger

The Soft Underbelly of Reason

The Passions in the Seventeenth Century

Edited by Stephen Gaukroger



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FOREWORD

The institutionalization of History and Philosophy of Science as a distinct field of scholarly endeavour began comparatively early — though not always under that name — in the Australasian region. An initial lecturing appointment was made at the University of Melbourne immediately after the Second World War, in 1946, and other appointments followed as the subject underwent an expansion during the 1950s and 1960s similar to that which took place in other parts of the world. Today there are major Departments at the University of Melbourne, the University of New South Wales and the University of Wollongong, and smaller groups active in many other parts of Australia and in New Zealand.

'Australasian Studies in History and Philosophy of Science' aims to provide a distinctive publication outlet for Australian and New Zealand scholars working in the general area of history, philosophy and social studies of science. Each volume comprises a group of essays on a connected theme, edited by an Australian or a New Zealander with special expertise in that particular area. Papers address general issues, however, rather than local ones; parochial topics are avoided. Furthermore, though in each volume a majority of the contributors is from Australia or New Zealand, contributions from elsewhere are by no means ruled out. Quite the reverse, in fact — they are actively encouraged wherever appropriate to the balance of the volume in question.

R. W. Home
General Editor
*Australasian Studies in History
and Philosophy of Science*

TABLE OF CONTENTS

STEPHEN GAUKROGER / Introduction: The Idea of Antiquity	ix
KEITH HUTCHISON / Copernicus, Apollo, and Herakles	1
JOHN SUTTON / Religion and the Failures of Determinism	25
JAMIE C. KASSLER / The Paradox of Power: Hobbes and Stoic Naturalism	53
UDO THIEL / Cudworth and Seventeenth-Century Theories of Consciousness	79
ALEXANDER JACOB / The Neoplatonic Conception of Nature in More, Cudworth, and Berkeley	101
JAMES FRANKLIN / The Ancient Legal Sources of Seventeenth-Century Probability	123
KIRSTEN BIRKETT and DAVID OLDROYD / Robert Hooke, Physico-Mythology, Knowledge of the World of the Ancients and Knowledge of the Ancient World	145
JOHN GASCOIGNE / 'The Wisdom of the Egyptians' and the Secularisation of History in the Age of Newton	171
GARRY W. TROMPF / On Newtonian History	213
NOTES ON CONTRIBUTORS	251
INDEX OF MYTHICAL AND HISTORICAL FIGURES	253

JOHN SUTTON*

RELIGION AND THE FAILURES OF DETERMINISM

Fate's a spaniel,
We cannot beat it from us.

John Webster, *The White Devil*¹

INTRODUCTION

To trace a path from Pico della Mirandola's Renaissance man to the Jacobean malcontents of Marston or Webster is to document not an inflation of hopes for dominion over the natural world, but rather a loss of confidence in the possibility of control over even human affairs. 'For I am going into a wilderness, /Where I shall find nor path, nor friendly clew/To be my guide'.² The bleak consequences of this lack of direction, leaving traces through into the Restoration period in England, are particularly evident in the free will debate: of Milton's angels,

Others apart sat on a hill retired,
In thoughts more elevate, and reasoned high
Of Providence, Foreknowledge, Will, and Fate-
Fixed fate, free will, foreknowledge absolute-
And found no end, in wandering mazes lost.³

For Pico, man is of intermediary status, unique among earthly creatures in being linked to the divine mind. This is the source of his glory, an optimistic encouragement to try to ascend the chain of being. But, a generation after Pico's *Oration on the Dignity of Man*, the same reflection is for Pomponazzi a source of confusion as much as of confidence: man is of a nature 'not simple but multiple, not certain but ambiguous, in between mortal and immortal things'.⁴ Pomponazzian 'ambiguity' is realized in the moral and spiritual complexity and confusion of Jacobean drama in England, for it is both symptom and source of a disenchantment, mirrored in pessimistic theories of the incompatibility of free will and determinism, which continued through the sixteenth century and helped to set the agenda for the seventeenth.

It has recently become clear that sophisticated treatments of the

problems of determinism, freedom and responsibility cannot overlook the 1973 years of debate between the death of Aristotle and the publication of *Leviathan*. Sorabji and White in particular have demonstrated the subtlety and relevance of Hellenistic theories.⁵ Meanwhile Dihle has investigated the clash between Greek conceptions of the universe as rationally ordered and Judaeo-Christian voluntarism as leading to Augustine's 'invention' of the modern notion of the will.⁶ Stoic determinism, with its eternal causal chain available for man's rational examination, can be seen as the philosophical systematization of the Greek intuition noted by Dihle. It was the root of two of the three sixteenth- and seventeenth-century general classes of determinism at which I shall look in this paper; the explicitly neo-Stoic determinism of Justus Lipsius and the naturalistic determinisms of Pomponazzi and of Hobbes. These views, in contrast to the radical providentialist determinism of Luther and Calvin, failed to gain widespread acceptance. But, despite obvious major differences between them, the three determinisms were not entirely distinct, particularly in the eyes of their critics. All three were accused, as determinisms have always been, of leading to moral decay, political and religious subversion, and the erosion of human dignity. Whether denying free will like Luther, finding room for human freedom within a deterministic world of causes like Lipsius, or arguing for revised conceptions of freedom and responsibility like Pomponazzi and Hobbes, these views were attacked for not attributing a sufficient degree of flexibility to human decision and action. Determinism is never popular.

I will not always distinguish between the theological problem of freedom versus predestination and the philosophical problem of freedom versus determinism. The latter grew out of the former only gradually, and the possibility of their separation was itself a contentious issue. In addition, I do not of course intend to *identify* Luther's views with Calvin's, Lipsius' with the English neo-Stoics', or in particular Pomponazzi's with Hobbes'. The failures of these systems had at least as much to do with their manifest cultural image, and thus with their reception by generally hostile writers, as with what their proponents actually thought.

Modern work on free will often seems to assume that any determinism must be that of Laplace, tied to classical mechanics. But the intuition that the universe is one connected causal whole does not depend on any particular physical theory. Pomponazzi was not less of a

determinist for believing in occult powers and systematic astrological causation: he was just working within an erroneous physical system.⁷ Determinism is a blanket description used to cover many particular views. I shall mean little more by it in general than the thesis that every event has a cause and that the same cause is always followed by the same effect. A note on some other terms: compatibilism (also known as soft determinism) is the view that the truth of determinism does not rule out human freedom. Incompatibilists think that it does. Of these, hard determinists claim that determinism is in fact true, and thus that we are not free; whereas the libertarian position is that determinism is in fact false, and that we are free. This latter view was that of the most vehement philosophical opponents of sixteenth- and seventeenth-century determinism; so the paper concludes with a sketch of two libertarian attempts at positive accounts of freedom, those of Mersenne and Cudworth.

I. NEO-STOICISM AND RELIGIOUS DESPAIR

A powerful early statement of determinism is that of the Stoic Chrysippus. Fate is 'the natural order of all things established from eternity, mutually following each other in an immutable and imperishable connection'.⁸ Towards the end of the sixteenth century Stoicism was reinvigorated as it became clear that eclectic use of its ethics could enhance Christianity. The oracular Justus Lipsius tried, most systematically in his *Physiologia Stoicorum* of 1604, to reconcile Stoic determinism with human freedom:⁹ and an ethical neo-Stoicism became as fashionable as its ancestor had been in first century A.D. Rome.

Lipsius' God is Providence, Fate, Necessity and the Greek Logos. He notes Augustine's approval of the Stoic attribution of 'the so-called order and connection of the causes to the Will and Power of God most high'.¹⁰ But God is no slave to Necessity; the decrees he obeys are his own.¹¹ With respect to human freedom, Lipsius expounds an ultra-rational compatibilism. He sees that the attempts to divorce necessitation from causation ascribed to Chrysippus¹² do not allow sufficient flexibility to human action. Chrysippus has failed in his attack on 'men who, when they have been convicted of crime and in an evil deed, flee for refuge to the necessity of Fate, as if to some kind of asylum'.¹³

But, against this, Lipsius' compatibilism is barely more than asserted.

Although God/Fate creates our character, these inbred causes can somehow be moderated or even turned aside easily ('leviter') by the Will, which is a proximate and auxiliary cause.¹⁴ Unlike later attempts to save freedom and morality¹⁵ Lipsius does not go so far as entirely to remove human will from the chain of universal causation: but he gives inadequate reason to assume that fully determined choice is 'free' in a sense strong enough to ground Christian ethical practice.

Lipsius' neo-Stoicism, as an attempt fully to rationalise Christian theology, was bound to conflict with the voluntarism inherent in Christianity since its inception.¹⁶ But the ethical aspect of neo-Stoicism, in its popular form an unmetaphysical philosophy of life, found a continued popularity, among a multiplicity of unreconciled philosophical dogmas, for intellectuals who desired a Christian morality independent both of discredited Catholic authority and the faith of fanatical reformers. But almost all its adherents were Christians before they were Stoics, for as an all-embracing philosophical system its reconciliatory tactics failed to hide the inconsistencies between the two world-views. This is apparent in the problems its adherents faced in England.

Stoicism's remarkable vogue in the late Elizabethan and early Jacobean era has been well documented, particularly with regard to its literary influence.¹⁷ Thomas James, prefacing his 1598 translation of du Vair's *La Philosophie morale des Stoiques* (1594), remarked that 'Christians may profit by the Stoicks' because 'no kind of philosophie is more profitable and neerer approaching Christianitie'.¹⁸ Fulke Greville was one who tried to carry out this project of incorporation.¹⁹ But his explorations of such a fusion could not but induce public criticism from those unwilling to be bound by the Stoic causal chain. One of the cynical choruses in the 1609 Quarto of Greville's play *Mustapha*, the Chorus Tartarorum, attacks 'Religion, thou vain and glorious style of weakness'. But a copy of the 1633 Folio edition in the Bibliothèque Nationale has a manuscript annotation in the hand of Sir Kenelm Digby, who would later become the first to introduce the Cartesian philosophy into England.²⁰ The line now reads 'Vast superstition! Glorious style of weakness', because the original 'seemed too atheistical to be licensed at the press'.²¹ Internal as well as external problems beset neo-Stoic Christianity.²² In the world of the Jacobean malcontent, where man is 'confounded in a maze of mischief, /Staggered, stark fell'd with bruising stroke of chance',²³ the idea of rational harmony with a divine and beneficently ordered scheme becomes a mirage:

Philosophy maintains that nature's wise
And forms no useless and imperfect thing . . .
Go to, go to, thou liest, Philosophy!
Nature forms things imperfect, useless, vain.²⁴

Yet more widely criticised than Stoicism's determinist metaphysic is its ethic of patience in adversity. Even 'our English Seneca', the Anglican Bishop Joseph Hall, rejected Stoic emotionlessness: 'I would not be a Stoic, to have no passions; for that were to overthrow this inward government God hath erected in me; but a Christian, to order those I have'.²⁵ Webster's Antonio, in the manner of the best Stoics of Books 15 and 16 of Tacitus' *Annals*, finding easy ways to die, begs the Duchess

O be of comfort,
Make patience a noble fortitude:
And think not how unkindly we are us'd.

We are not surprised to see him found unconvincing:

Must I like to a slave-born Russian
Account it praise to suffer tyranny?²⁶

II. DIVINE FATALISM ARBITRARY

Stoic resignation was similarly rejected by the Reformation theologians. Calvin's first published work, in 1532, was a commentary on Seneca's *De Clementia*, but his praise in the preface of Seneca's 'perfect grasp of the mysteries of natural philosophy' and supremacy in ethics²⁷ was later displaced by an impatience with Stoic detachment. 'Ye see that patiently to bear the Cross is not be utterly stupefied and to be deprived of all feeling of pain. It is not as the Stoics of old foolishly described the "great-souled man": one who, having cast off all human qualities, was affected equally by adversity and prosperity'.²⁸ In particular, he was careful to distinguish his own theory of predestination from the 'fatalism' of the Stoics.²⁹ If God is direct cause even of every drop of rain,³⁰ and there is no 'wandryng power' independently inherent in any creature,³¹ then both Catholic free will and rational Greek determinism fail to do justice to the phenomena. As John Knox put it, 'Fortune and adventure are the words of Paynims . . . That which ye scoffingly call

Destiny and Stoical necessity . . . we call God's eternal election and purpose immutable'.³²

Besides Augustine's voluntaristic conception of God, the intellectual ancestor of Luther's denial of free will was the *De Libero Arbitrio* of Lorenzo Valla (1439), which had also asserted the requisite dependence on faith ('no-one who likes philosophy so much can be pleasing to God').³³ The Reformation assertion that the fall was ordained and that some men are made necessarily damnable seems to imply God's ultimate responsibility for the existence of evil. So unless faith is exercised, and the apparatus of praise and blame, salvation and damnation in a universe in which man is caused to sin by a wholly external force is simply accepted, the doctrine will lead to despair, doubt and atheism. At the end of the seventeenth century, Pierre Bayle explained the existence of so many bungling theological attempts to save free will: 'It is the wish to exculpate God; for it has been clearly understood that all religion is here at stake, and that, as soon as one dared to teach that God is the author of sin, one would necessarily lead men to atheism'.³⁴

Luther's initial attack on the Church's doctrine of free will was answered by Erasmus in 1524, and a bitter controversy ensued, in which Melancthon was won over by Erasmus. But Luther repeatedly pointed out Erasmus' (typically compatibilist) inconsistency in claiming that on the one hand man can do nothing without grace, but on the other the human will has enough power to fulfil its own commands and even to earn eternal life.³⁵ In this as elsewhere Erasmus, 'the fountain-head of the systematic deliberate vagueness of liberal Protestant theology',³⁶ sets the agenda for future attempts to defuse real theological controversy. Like Cudworth³⁷ he blames injustice and moral failings on those who teach that men are not causally responsible for their own actions. 'While we are fully occupied singing the praises of faith, we must be careful not to destroy freedom, because if we do, I cannot see how we could resolve the problems of justice and divine mercy . . . who will be able to bring himself to love God with all his heart when He created hell seething with torments in order to punish His own misdeeds in His victims as though He took delight in human torments?'³⁸

III. NATURALISTIC DETERMINISM: POMPONAZZI, CHRISTIANITY AND FREE WILL

Hard determinism was the rarest view in antiquity on freedom and

determinism,³⁹ and, apart from hints in Valla, it did not gain much ground in the early Renaissance. But in the early sixteenth century two very different new systematic philosophies denied that we have as much free will as traditional philosophy and theology had assumed. The flat message of Luther's *De Servo Arbitrio* had been that 'there can be no free will in man, in the angels or in any other creature'.⁴⁰ Because this radical determinism was tied to a strict providentialism, looking only to God as first cause, its problematizing of moral responsibility could at least be referred back to God's incomprehensible will. But in its removal of the initiative from the human will to maintain God's omniscience and omnipotence, it shared a common determinism with the system of Pietro Pomponazzi.⁴¹ He, however, advocated no such continual meditation on God alone as first cause,⁴² had, unlike the Stoics, no popular ethical system readily assimilable to Christianity, and was thus more vulnerable to violent criticism from those fearing the collapse of traditional moralities. This kind of common ground between radical determinist providentialism and radical determinist naturalism is parallel to the similar alliance noted by Keith Hutchison⁴³ on the issue of supernatural and natural causation. It is just as striking in the case of determinism, free will and responsibility, for the contemporaneous systems of Luther and Pomponazzi both threatened, from different directions, traditional Catholic moralities based on free will, as adopted by the Council of Trent, and as would survive into the mechanical philosophy of the seventeenth century.⁴⁴ The similarity of the two new determinist systems of the 1520s has been briefly noted by Poppi: 'In the Reformation debate, therefore, Pomponazzi's philosophical fatalism was infiltrated by a fideistic fatalism of the opposite kind'.⁴⁵

Pomponazzi's *De Fato, De Libero Arbitrio et De Praedestinatione*, completed in 1520, is a sustained and sophisticated attack on traditional Aristotelian vagueness about the relations between causation and necessitation, or between free will and responsibility.⁴⁶ Using the *De Fato* of Alexander of Aphrodisias, an attack on Stoic fatal necessity, as his primary target, he criticises the Aristotelian exemption of chance events and coincidences from the realm of necessity.⁴⁷ Fortuitousness is compatible with necessity, as when a stone falls and happens to hit the head of an unwitting bystander.⁴⁸ This is exactly the kind of example Aristotle had used to avoid necessity.⁴⁹ But Pomponazzi points out that this contingency is not the real ontological indifference of the explicitly libertarian view, the actual physical possibility of an event happening or not happening; it is simply a notion we apply to things which sometimes

happen and sometimes do not. (If it does rain tomorrow, it rains necessarily; if it doesn't rain, the lack of rain is necessary). 'And that is the true meaning of contingency.'⁵⁰ He neatly demonstrates the contradiction, implicit in Aristotle's works on ethics and explicit in Alexander, between the assumed libertarian possibility of self-change, which Alexander takes to be self-determination as between two incompatible choices, and the Aristotelian denial of self-change in sublunary creatures.⁵¹ For Pomponazzi, as for Aquinas before and for Hobbes after, the will is not an independent psychological faculty. And as it cannot change itself, it must be changed by some higher, external source. Of decision, he writes 'It is held without qualification to be within the power of the will, which it in no way is'.⁵²

Surprisingly, the *De Fato* was not banned by the Inquisition on its publication in the mid-sixteenth century: neither, until a century after its original composition, was Pomponazzi's *De Incantationibus*, which cast doubt on the existence of angels and demons and gave a naturalistic account of the rise and fall of religions, including Christianity.⁵³ But his views on moral matters arising out of fate and free will were subject to religious criticism throughout the sixteenth century.⁵⁴ His former student Paolo Giovio claimed in 1557 that Pomponazzi's doctrines led 'to the corruption of young men and the destruction of Christian discipline'.⁵⁵ But, just as in *De Immortalitate Animae* Pomponazzi had argued that the unqualified ('simpliciter') mortality of the soul does not destroy human goals and ideals,⁵⁶ so in *De Fato* he makes a case for a moral responsibility which could be compatible with universal necessitation. We are Fate's children, and ordinary praise and blame are out of place.⁵⁷ But a revised conception of morality can see good and evil both as parts of the natural order. Indeed, as for the Gnostics, good *requires* evil: 'It is necessary that there should be sin: providence intends there to be sin and is itself author of sins'.⁵⁸ He avoids the ensuing temptation to blame God for evil by claiming that God's behaviour towards man is as free and blameless as is man's towards cattle and chickens.⁵⁹ Given the natural existence of evil, Pomponazzi suggests that judgements about good and evil can function as do judgements on good wine or noxious insects.⁶⁰

Book Three of the *De Fato* begins a different and incompatible account of freedom which is firmly Christian, taking free will as a premise.⁶¹ As Copenhaver notes, however, 'in the larger context of his work these attempts to repair the damage done to free will ring

hollow'.⁶² Pomponazzi has already counterattacked against Christian doctrines of free will in Book Two by praising Stoic determinism for refusing to deny any powers to God. The Stoics 'preferred to be servants and followers than to be impious and blasphemers; they believed that everything was fated and arranged by providence and that there is nothing in us which is not done by providence'.⁶³ So Pomponazzi too professes docility, using the same phrase.⁶⁴ This attribution of all causes directly to God is not quite an accurate description either of Stoic determinism or of Pomponazzi's version of it.⁶⁵ But he had to tread carefully. Less than a hundred years later, in February 1619, Vanini was burnt in Toulouse for expounding Pomponazzian naturalism. Poppi's remark that the Christian account of free will in Book Three of the *De Fato* was a 'dialectical line of defence'⁶⁶ is confirmed by a close reading of the wonderfully ironic epilogue to the whole work.⁶⁷ It ends with Pomponazzi's acknowledgement that because the Church has condemned Stoic fatalism, he too must deny it, 'and the Church is firmly to be believed'.⁶⁸ Against anticipated attacks on his work, Pomponazzi happily issues a disclaimer of its doctrines; 'Moreover, of the opinions I have put forward, I adhere only to as many as the Roman Church, to which both in this and in other matters I wholly submit, will have approved'.⁶⁹ But a few paragraphs earlier, at the beginning of the epilogue, Pomponazzi had concluded that, although no account of fate and free will is wholly satisfactory, that of the Stoics, in nature alone and by reason, is 'furthest removed from contradiction'.⁷⁰ Here he says that the best argument against it is that it makes God the cause of sin. Pomponazzi remarks that this consequence 'seems [*videtur*] absurd and erroneous',⁷¹ before referring back to his own arguments in Book Two which remove its sting. He provides just sufficient disclaimers throughout to escape more than unofficial censure. A clever man.

IV. NATURALISTIC DETERMINISM: HOBBS, MATERIALISM AND MORALITY

Naturalism, materialism and determinism are thought to be entirely compatible by many modern philosophers, aspects of the same broadly 'naturalistic' perspective. Cudworth, unlike Bramhall, saw the crucial link between determinism and materialism in Hobbes' thought. In the

now fragmentary *Discourse of Liberty and Necessity* Cudworth claims that Hobbes denied free will because he 'denied all spirituality and immateriality and made all cogitation, intellection and volition be nothing but mechanical motion and passion from objects without . . . wherefore it is a sufficient confutation of (Hobbes) to show that there is another substance in the world besides body',⁷² which Cudworth, of course, thinks he has done in *The True Intellectual System of the Universe*.⁷³

Hobbes' deterministic psychology has been the focus of much work generically classifiable as 'Hobbism'⁷⁴ both in the seventeenth century and again recently, as materialist theories of mind have gained widespread acceptance. Cognition is reduced, via sensation, to motion. Deliberation is a vector of mechanical motions, of which the will is the resultant vector. Mental processes are 'nothing really, but motion in some internal substance of the head',⁷⁵ and psychology is reducible to the mechanics of appetite and aversion.⁷⁶ This Hobbes is at least a revisionary if not an eliminative materialist.⁷⁷ Psychological Hobbism has certainly over-emphasised the *external* determination of mental events: Jamie Kassler in this volume demonstrates the importance of the movement outward in Hobbes' physiology, and thus of the internal determinism of action and character. It would indeed be a crude materialist determinism which ignored (deterministic) inner processes. But what is at issue here is whether the naturalism in Hobbes brought out by Kassler is at odds with the materialism of contemporary and modern Hobbist interpretations of Hobbes. I tend to think not,⁷⁸ but the following treatment of Hobbes' determinism holds for both readings.

Hobbes knew Pomponazzi's thought: his friend Mersenne had devoted the first section of his *Quaestiones Celeberrimae in Genesim* to an attack on Pomponazzi's and Vanini's naturalistic denial of the immortality of the soul and the existence of angels and miracles.⁷⁹ There are interesting similarities between the two determinisms. Hobbes' account of the will as merely the last desire or appetite in deliberation is in accord with Pomponazzi's unification of intellectual and sensitive soul. Both men offer an argument against free will from human ignorance of causes: in our epistemically deprived state we do not know the true causes of things, and we pass easily from such ignorance to the illusory belief that there are no such causes in nature. This account, which may go back to the ancient atomists,⁸⁰ is intended to explain *away* our intuitions of free will.

Pomponazzi's account of soul and mind is very complex, trying to

ward off the crudest varieties of materialism; but at the very least he too claimed that the human soul was by nature absolutely ('simpliciter') 'materiale' and only relatively ('secundum quid') 'immateriale'.⁸¹ Of course not all causes are *easily* explicable in physical terms; Pomponazzi accepted astrological causation, and explained alleged phenomena in terms of occult or hidden powers and qualities. This could be seen as an area in which Hobbes is typical of a general advance on Pomponazzi and other Renaissance naturalists and magicians. But Pomponazzi's acceptance of occult qualities is not naturalism in an anti-materialist sense.⁸² The shortcomings of Aristotelian physics and theories of matter make such an inability to tolerate temporary ignorance unremarkable in the Aristotelian philosopher desiring to know the causes of things. Hobbes, in contrast, shares with many philosophers of the scientific revolution an acceptance that all explanation is incomplete. Keith Thomas pinpoints this as an important intellectual and cultural innovation in the seventeenth century.⁸³ But despite this change, it is unnecessary to see belief in occult qualities as marking an 'irreconcilable difference' between Renaissance naturalism and seventeenth century philosophy, as Keith Hutchison has shown.⁸⁴ Seventeenth century science did not so much reject occult qualities as break down the distinction between occult and manifest, by showing occult qualities to be no more and no less intelligible than any other causes, and subsuming those which gained scientific respectability into the new science. Hutchison's remark on natural magic and the new science in general could be applied to Pomponazzi and Hobbes in particular: ' . . . the two systems have in common a willingness to deal with occult qualities and a refusal to accept that insensibility implies spirituality: it is within natural magic that we can find precedents for the confidence with which seventeenth century philosophy insisted that the insensible realms of nature could be profitably entered by human thought.'⁸⁵

I noted earlier Poppi's drawing of the parallel between the two new determinisms, Pomponazzian and Lutheran, of the 1520's. He follows this with the comment that both are 'equally destructive of man's reality; in the first case because he is the victim of material cosmic forces, and in the second because he is the victim of a predestined will. Man's highest faculties are systematically demoted and denied; his works are entirely disregarded, and his moral commitments discarded as illusory'.⁸⁶ Similar remarks are easy to find in both seventeenth and twentieth century treatments of Hobbes' determinism.⁸⁷ But few if any

determinists, least of all Hobbes, have ever been amorally Hobbist in the sense their opponents assume they must be. Alternative determinist conceptions of self-creation, and revised freedoms and moralities, are consistently ignored. We need historical and cultural explanations of the intuitions behind the reception in England of Hobbes' 'blasphemous, desperate, and destructive opinion of fatal necessity'.⁸⁸ One of the ironies of Hobbes studies is that Hobbes 'argued in support of a social and political order the conceptual resources to justify which he had removed'.⁸⁹ But free will, unlike some of the other concepts mentioned by Shapin and Schaffer in this context, was not so much a legacy of an existing social and political order which was about to disappear, as an important factor in the construction of an emergent new order which required the creation of an idealized autonomous individual subject.⁹⁰ On Hobbes in particular, Mintz has described Bramhall's and others' criticisms of the 'ethical inconveniences' of determinism.⁹¹ Benjamin Laney complained in 1677 that it 'must needs shake not only the Foundation of all Religion, but even of humane Society'.⁹² The prevalence of these assumptions about the consequences of determinism needs to be related to an English fear of social and religious corruption among intellectuals which was not confined to political reactionaries:

If this fail,
The pillared firmament is rottenness,
And earth's base built on stubble.⁹³

Determinism and naturalism are a short step from atheism. As Sir William Alexander wrote in 1630, 'Young Naturalists oft old Atheists doe prove'.⁹⁴ Bramhall's epistle to the reader, in his *Vindication of True Liberty from Antecedent Extrinsic Necessity*, gives us further suggestions on the social implications of determinism: Hobbes' 'principles are pernicious both to piety and policy, and destructive to all relations of mankind, between prince and subject, father and child, master and servant, husband and wife; and they who maintain them obstinately, are fitter to live in hollow trees among wild beasts, than in any Christian or political society. So God bless me'.⁹⁵

Hobbes' particular defences of moral practices in a deterministic world are generally consequentialist.⁹⁶ There are extrinsic justifications for praise and blame. Even 'retributive' punishment does not require full moral responsibility, for it works 'to the end that the will of men

may thereby be the better disposed to obedience'.⁹⁷ Rejection of Stoic rational design and Reformation providentialism had always been recognised as leading to ethical relativism:

Most things that morally adhere to souls
Wholly exist in drunk opinion,
Whose reeling censure, if I value not,
It values nought.⁹⁸

Hobbes accepts this, but claims that things can nevertheless be necessary and yet praiseworthy, just as they can be necessary and yet dispraised.⁹⁹ Consequentialism in some form is surely the best ethical framework for a sincere determinist, and if there is a way out of the determinist maze described in this paper this is it. But it makes moral theorizing desperately difficult (rightly so?), and no libertarian has ever been convinced that it could be a genuine substitute for moral realism. One reason for this is that it fails to save, to any significant degree, what the libertarian considers to be the moral phenomena. Given this, it is slightly odd that Hobbes is supposed to be a compatibilist.¹⁰⁰ He acknowledges that dispute over questions of free will and determinism among 'the greatest part of mankind, not as they should be, but as they are . . . will rather hurt than help their piety', that he would not be putting forward his argument if Bramhall had not provoked him, and that he hopes 'your Lordship and his will keep it private'.¹⁰¹ Free will should still be defended in public. Bacon had written to some judges in 1617 that 'there will be a continual defection, except you keep men in by preaching, as well as the law doth by punishing'.¹⁰² Despite regular protestations of innocence, Hobbes knew the revisionary consequences of his determinism for morality as well as did his critics: but, unlike them, he was willing to embrace what they saw as ethical inconveniences.

V. JOHN WEBSTER AND THE FAILURES OF DETERMINISM

Hobbes' account of contingency as ignorance of causes is justifiably famous:

A wooden top that is lashed by the boys, and runs about sometimes to one wall, sometimes to another, sometimes spinning, sometimes hitting men on the shins, if it were sensible of its own motion, would think it proceeded from its own will, unless it felt what lashed it. And is a man any wiser, when he runs to one place for a benefice, to

another for a bargain, and troubles the world with writing errors and requiring answers, because he thinks he doth it without any cause other than his own will, and seeth not what are the lashings that cause he will?¹⁰³

The image, as used in this context, is not his own. We have already seen how the Duchess' rejection of Antonio's advice to 'make patience a noble fortitude' is symptomatic of embarrassment over Stoic determinism and impatience with Stoic resignation. She continues with an appeal to a radical providentialism, to God as guide of *all* human affairs:

And yet, O Heaven, thy heavy hand is in it.
I have oft seen my little boy scourge his top,
And compared myself to't: nought made me e'er go right,
But Heaven's scourge-stick.¹⁰⁴

This is one of Webster's rare borrowings from Sidney's verse works. Reference to this source for the image makes its providentialist inclination clearer:

Griefe onely makes his wretched state to see
(Even like a toppe which nought but whipping moves)
This man, this talking beast, this walking tree . . .
But still our dazeled eyes their way do misse,
While that we do at his sweete scourge repine,
The kindly way to beat us to our blisse.¹⁰⁵

Bramhall too, in perhaps his most famous rhetorical flourish against Hobbes' determinism, asserting that man *must* be more than talking beast or walking tree, echoes a Webster borrowing from Sidney. Bosola notoriously complains, after the unintended death of Antonio, that 'We are merely the stars' tennis balls, struck and banded/Which way please them'.¹⁰⁶ Similarly Hobbes' doctrine 'destroys liberty, and dishonours the nature of man. It makes the second causes and outward objects to be the rackets, and men to be but the tennis-balls of destiny'.¹⁰⁷ A whole conflation of traditions is at work here. The idea itself is an old conceit, going back at least to Plautus.¹⁰⁸ It reaches Webster through a use by Sidney which mingles the medieval morality tradition with a Calvinist belittling of man's powers: 'in such a shadowe, or rather pit of darkness, the wormish mankinde lives, that neither they know how to foresee, nor what to feare: and are but like tennisballs, tossed by the racket of hyer powers'.¹⁰⁹ The Jacobean malcontent is the bruised

inheritor of what Burton called this 'horrible consideration of the diversity of religions which are and have been in the world'.¹¹⁰

In these texts are inscribed the failures of the three major determinist systems of the early modern age. The Duchess rejects Antonio's Stoicism; her own frail providentialist faith in God's scourge-stick proves unfounded; Hobbes' use of the image of the top to explain away our intuitions of free will is rejected because it gives man no more than brute or object status.¹¹¹ What accounts of human freedom could be offered in their place? In England the Restoration government banned public preaching and discussion on the topic of free will, among other subversive issues,¹¹² as the Royal Society took steps towards the correcting of excesses in natural philosophy, without Hobbes.¹¹³ But besides censorship, the seventeenth century saw two criticisms of determinism from major new philosophical directions, the mechanical philosophy and Cambridge Platonism. We will take Mersenne's criticism of Pomponazzian naturalism and Cudworth's deft but desperate bolstering of free will against the evils of Hobbist atheism as representative.

VI. LIBERTARIANS ON FREE WILL: MERSENNE

The religious dangers of overzealous application of the mechanical philosophy were obvious even before Hobbes' perniciously materialist version. So sometimes, 'to preserve religion, morality and science',¹¹⁴ it was 'more prudent to adopt the mechanical philosophy in an attenuated form even at the cost of philosophical untidiness or inconsistency'.¹¹⁵ Mersenne died before the publication of the Hobbes-Bramhall debate. But his attacks in *Quaestiones Celeberrimae in Genesim* and *L'Impiété des Déistes*¹¹⁶ on the naturalisms of Pomponazzi, Cardano and Vanini show that, like Bramhall, he was willing to exclude the human mind and in particular the will from the mechanical universe of secondary causes. The difficulty of Mersenne's limited defence of supernaturalism against Neoplatonic magic and astrology on the one hand and the naturalists' denial of angels and miracles on the other has been demonstrated by Hine: 'with naturalism, Mersenne's task was to explain the limitations of nature. With magic, he had to emphasise the limits of supernatural events and angelic powers'.¹¹⁷ A similar balancing act is apparent in his attitudes to determinism and free will. He criticizes Pico and Ficino for attributing too much to human freedom.¹¹⁸ But the threat of naturalism,

in contrast, is the erosion of human dignity by cosmic destiny. Mersenne's typically libertarian assumption is that the determinists' denial of absolute self-determination automatically removes all justification for any moral striving whatsoever. A naturalistic Averroist view of religions as natural phenomena like any other, as taken up by Pomponazzi,¹¹⁹ ensures that 'whether one preserves the name of "free will" or not, man does not escape his destiny'.¹²⁰

There is little logical space for Mersenne's position. He attacks the Cabala and astrology because they fail to do the explanatory and predictive work they profess to,¹²¹ and because they derive from disreputable Eastern sources. But his alternative, 'Greek' conception of the cosmos as rationally ordered, and the importance for mechanism in general of the idea of a nature subject to intelligible laws, seem *prima facie* to suggest a naturalistic determinism which denies the belief in miracles and the efficacy of prayer to which the good Catholic priest is committed. When these opposing influences, religious morality and mechanistic science, come into conflict, the outcome is decided in a familiar manner, by the necessity of making man rather than God responsible for sin. Despite, or perhaps because of, mechanism's boast to be the true science to deliver politic society from the variety of false sciences, Mersenne must in the end profess the traditional Catholic liberty of indifference: 'So the will, then, is in my opinion able to pursue either one of two objects equally set before it, even if no greater reason should be apparent to it why it should pursue one rather than the other'.¹²² He supported free will against the Jansenists in the early 1640s.¹²³ Even Lenoble confesses Mersenne's difficulties in attempting 'the impossible synthesis . . . of two violently opposed traditions; the ancient tradition which identifies God and destiny, and which, with regard to man, must thus subordinate freedom to nature; the Christian tradition for which God gives benevolently and freely, and creates as his masterpiece souls which are truly free'.¹²⁴ These are *exactly* the two incompatible tendencies identified by Dihle as contributing to the origins of the modern problems of the will.¹²⁵

This is another angle on the problems created by the mechanists' tendency to remove the mind from the realm of physical causality. If 'voluntary' human action is not to be explained within the same causal nexus as the behaviour of physical bodies, how does the libertarian freedom of indifference possessed by a separate faculty of the will itself help in giving an account of the springs of action which preserves a

space for rational deliberation? The arbitrariness which dogs any account of action, from Lucretius to J. R. Lucas, which does not refer to previous deterministic causal factors, infects Mersenne as well. In modern terms, 'if no amount or kind of cognitive and volitional capacity and complexity that could obtain in a deterministic world will suffice for free agency, then adding a requirement of indeterminism won't help'.¹²⁶

VII. LIBERTARIANS ON FREE WILL: ANGLICANISM AND CUDWORTH

The elements of Reformation determinism which were fully absorbed into the Anglican mainstream were nevertheless somewhat less menacing than the varieties developed in Geneva, Scotland or New England: hell was sanitized, and, escaping the 'bruising stroke of chance', the English found God's scourge-stick the *kindly* way to beat them to their bliss. Webster has Antonio attempt to bolster the Duchess' quavering faith in providence.

Do not weep:

Heaven fashioned us of nothing; and we strive
To bring ourselves to nothing.¹²⁷

The tag derives from Donne's *First Anniversary*

Wee seeme ambitious, God's whole worke t'undoe;
Of nothing hee made us, and we strive too,
To bring ourselves to nothing backe.¹²⁸

Self-denigration was the darker side of Anglicanism, explicit at least before Laud made belief in free will an obligatory article of faith. It mixed with a more optimistic if less honest English compatibilism and complacency. The general attitude is apparent in Hooker's complaint: 'A number there are, who think they cannot admire as they ought the power and authority of the word of God, if in things divine they should attribute any force to reason. For which cause they never use reason so willingly as to discredit reason'.¹²⁹

The first years of the seventeenth century saw a climax of religious pessimism, apparent in the raw nerves touched by the Jacobean dramatists. In Holland, the controversy over Arminian attacks on Calvinist predestination was brought to a temporary halt by the death

of Arminius himself in 1609 and by the victory in 1608–9 in front of the Dutch States-General of the followers of Gomarus (who had studied at Oxford and Cambridge). These 'supralapsarians' reiterated the Calvinist claim that God wills the fate of each man before creation.¹³⁰ This was the dominant view in England too, indeed almost universal before the accession of Charles I.¹³¹

But alongside predestinationism in England were prevalent optimistic views of causation and free will. Peter Baro, Professor of Divinity at Cambridge from 1574 to 1596, believed that 'God willed that there should be divers and sundry causes, namely some necessary and other some also free and contingent: which according to their several natures might work freely and contingently, or not work. Whereupon we conclude that secondary causes are not enforced by God's purpose and decree, but carried willingly and after their own nature'.¹³² The tendency towards a libertarian view of the autonomy of the human will among other secondary causes evident in this passage coexisted happily with a genuinely prescientific devaluation of secondary natural causes; 'thus must we in all things that be done, whether they be good or evil (except sin, which God hates and causes not), not only look at the second causes, which be but God's means and instruments whereby he works, but have a further eye and look up to God'.¹³³ For the Elizabethan preacher, distanced from theological and scientific controversy on the continent, second causes were of little interest anyway. But this latter view does show the influence of Calvinist determinism: Calvin too could allow talk of secondary causes, but affirmed that 'whatsoever instruments God uses, his original workyng is nothing hindered thereby', for 'we set no power in creatures. Onely this we say, that God useth meanes and instruments whiche he hymselfe seeth to be expedient'.¹³⁴

In England, religious despair arising from radical providentialism and from the failure of Stoicism was often an impetus to construct a less threatening metaphysic. Some, like Donne and his Oxford near-contemporary Marston, found solace in a retreat to the Anglican altar. Ignoring or suppressing the problem, like the Restoration censors, was one way out (Webster's Duchess, in our text, knows the perils of thinking: 'All our wit/And reading brings us to a truer sense/Of sorrow'¹³⁵). But not the only way. One of the most resolute supralapsarian opponents of free will in the late sixteenth century was the Cambridge preacher William Perkins. His chosen successor as vicar of St. Andrews'

Church in Cambridge was his collaborator in divinity, one Rafe Cudworth. We know that his son Ralph's first reading of the ancients initiated crisis and revolt against the strict Calvinism of his upbringing.¹³⁶ If men accept that they have no free will and that God is cause of all, debauchery, scepticism and infidelity, thinks the natural libertarian, can be the only results: Nashe in 1592 had his character Ver in *Summer's Last Will and Testament* complain, after surveying the world's evils, 'If then the best husband be so liberal of his best handiwork, to what end should we make much of a glittering excrement, or doubt to spend at a banquet as many pounds as He spends men at a battle?'.¹³⁷ Ralph Cudworth includes the Reformation 'Theologick Fate' and the ideas of that 'atheistic politician' whom he never mentions by name, Hobbes, among his four atheistical doctrines of the Fatal Necessity of all Actions and Events.¹³⁸ Just as the Calvinist Divine Fatalism Arbitrary makes God 'meer arbitrary will omnipotent',¹³⁹ so a denial of free will on the basis of an overenthusiastic mechanism, looking only to second causes, fails to explain the alleged (moral) phenomena, and leaves us with no 'measure or norma in nature'.¹⁴⁰ So instead Cudworth, with a phrase reminiscent of the chameleon-like Renaissance man of Pico della Mirandola, upholds man's 'potential omniformity'.¹⁴¹

But Cudworth, unusually, is not content with the taking of free will as a given, and just asserting *that* it is. Mintz has unravelled the tortuous positive account of *what* it is in the manuscripts of Cudworth's *Discourse of Liberty and Necessity*.¹⁴² Agreeing with Hobbes against Bramhall that the will is not a separate faculty, he sees the free will as the soul redoubled on itself, as giving the soul *sui potestas* over itself and the ability to 'command it Selfe or turne it Selfe this way and yt way'.¹⁴³ But although he professes not to be avowing an arbitrary freedom of indifference,¹⁴⁴ he found no easy road between that and determinism. The perennial objection to compatibilism that choice must be either determined by external and internal causes beyond the individual's control, or be arbitrary, forced him finally into incompatibilism, accepting 'indifferent Voluntaneity' almost despite himself as the root of sin.¹⁴⁵ Because he will accept only an 'eternal and immutable' morality,¹⁴⁶ he must finally retreat to an incoherent libertarianism. If determinism is true, the reasons why particular determinisms have failed might be exactly those intuitions about freedom which have to be changed if they cannot be satisfied. But, as the case of Cudworth shows,

nothing but a significantly revised ethics has any prospect of survival in a deterministic world.

NOTES

- * Many thanks to Jamie Kassler and Stephen Gaukroger for comments on an earlier draft of this paper.
- ¹ Webster, J., *The White Devil* (1612), V.vi.177–8. References to Webster are to the Revels editions, edited by J. Russell Brown, *The White Devil*, London (1960) and *The Duchess of Malfi*, London (1964).
 - ² Webster, *The Duchess of Malfi* (1614), I.i.359–61.
 - ³ Milton, J., *Paradise Lost*, London (1667), II.557–61.
 - ⁴ Pomponazzi, P., *De Immortalitate Animae*, Leyden (1534), p. 5.
 - ⁵ Sorabji, R., *Necessity, Cause and Blame*, London (1980); White, M., *Agency and Integrality*, Dordrecht (1985).
 - ⁶ Dihle, A., *The Theory of Will in Classical Antiquity*, Los Angeles and London (1982).
 - ⁷ Similarly, if a deterministic theory should be found to underlie quantum theory at a more fundamental level of physical reality, this of course would not entail a return to the world-view of classical physics.
 - ⁸ Chrysippus at Aulus Gellius, *Noctes Atticae* vii.2, quoted by Lipsius, J., *Physiologia Stoicorum*, in *Opera Omnia*, 4 Vols, Wesel (1675), IV. 860.
 - ⁹ *Op. cit.* (note 8). See Saunders, J., *Justus Lipsius: The Philosophy of Renaissance Stoicism*, New York (1955). On attitudes to Stoicism in the earlier Renaissance see Schmitt, C., and Skinner, Q., (eds.), *The Cambridge History of Renaissance Philosophy*, Cambridge (1988), especially Krayer, J., 360–370, and Poppi, A., pp. 641–650.
 - ¹⁰ Augustine, *City of God*, v. 8, quoted by Lipsius, *op. cit.* (note 8), IV. 862.
 - ¹¹ Much of Lipsius' effort is spent in warding off the problem of evil. He attacks Chrysippus for failing to absolve God from evil (*op. cit.*, note 8 IV. 866). Lipsius' solution is to add to his Stoicism the Gnostic/Neoplatonic account of matter as intrinsically evil (IV. 862–73).
 - ¹² Cicero, *De Fato* 39, 41; see Sorabji, *op. cit.* (note 5), chapters 3 and 4.
 - ¹³ Chrysippus at Aulus Gellius, *Noctes Atticae* vii.2, quoted by Lipsius, *op. cit.* (note 8), IV. 866.
 - ¹⁴ *Ibid.*; and see Saunders, *op. cit.* (note 9), pp. 143, 147–51.
 - ¹⁵ See below, sections VI and VII.
 - ¹⁶ This point is well made by Long, A., 'Hellenistic Philosophy and the Classical Tradition', conclusion to *Hellenistic Philosophy*, London (1974), pp. 232–48; on Lipsius, pp. 239–40.
 - ¹⁷ Monsarrat, G., *Light from the Porch: Stoicism and English Renaissance Literature*, Paris (1984), and, on 'Lipsius his hopping style', Williamson, G., *The Senecan Amble*, London (1951), pp. 121–49. Salmon, J., 'Stoicism and Roman Example: Seneca and Tacitus in Jacobean England' *Journal of the History of Ideas* 50, 199–225, (1989) makes an important case for the seditious political implications of a taste for Stoic literary and historical themes, particularly among the Essex circle.

- ¹⁸ Du Vair, G., *The Moral Philosophie of the Stoicks*, trans. T. James, edited by R. Kirk, New Brunswick (1951), p. 45.
- ¹⁹ Rebholz, R., *The Life of Fulke Greville*, Oxford (1971), especially pp. 24–6, 82–5, 219.
- ²⁰ Digby, K., *Two Treatises*, London (1644), repr. New York (1978).
- ²¹ Greville, F., *Mustapha*, in *Selected Writings*, edited by J. Rees, London (1973); Hilton Kelliher, W., 'The Warwick Manuscripts of Fulke Greville', *British Museum Quarterly* 34, 107–21 (1970); Dollimore, J., *Radical Tragedy*, Brighton (1984), pp. 128, 281–2.
- ²² On Greville's own concern with the problem of evil, see Rebholz, *op. cit.* (note 19), pp. 25, 308–9.
- ²³ Marston, J., *Antonio's Revenge* (1600), ed. G. Hunter, London (1966), IV.i.56–7.
- ²⁴ Marston, J., *Antonio and Mellida* (1599), ed. G. Hunter, London (1965), III.i.27–8, 34–5. At *Antonio's Revenge* II.ii.47ff. Antonio actually reads from Seneca's *De Providentia*, only to reject it as 'naught/But foamy bubbling of a fleamy brain'; cf. *The Malcontent* (1603), ed. G. Hunter, London (1975), III.i.20–8. Aggeler, G., in 'Stoicism and Revenge in Marston', *English Studies* 51, 507–17, (1970) argues that *The Malcontent* is consistently and successfully both Christian and neo-Stoic, the tragicomic mode reflecting Marston's belief that this new fusion could not accommodate blood vengeance. This seems to me to ignore the terrible ambiguities in Marston's treatment of the views put forward by the protagonist Malevole/Altfront. It is far from clear that the play upholds belief in a rationally and beneficently ordered nature.
- ²⁵ Hall, J., *Works*, 10 Vols, ed. P. Wynter, Oxford (1863), VII. 457. Sams, H., in 'Anti-Stoicism in Seventeenth- and Early Eighteenth-century England', *Studies in Philology* 41, 65–78 (1944) saw the Stoics' suppression of passion, their paganism, and their over-reliance on reason as the three main elements of the popular received perceptions of neo-Stoic views. His opinion (77–8) that the first of the three was the most prevalent and specific source of criticism in England is supported by literary sources as well as the philosophical and theological writers he cites. (I owe this reference to Jamie Kassler). This received view of Stoicism was a far remove from Lipsius' systematic philosophy let alone from actual ancient Stoic tenets. One reason for this may be that, as Salmon, *op. cit.* (note 17), 224, notes, the rational blending of metaphysics and ethics with politics which was possible, at least in theory, for Lipsius, was never a practical option for 'those English malcontents who devised their own blend of Senecan and Tacitean influence under the pressure of plots, rivalries and disappointments in the first decade of the seventeenth century'.
- ²⁶ Webster, J., *The Duchess of Malfi*, III.v. 72–4, 76–7.
- ²⁷ Battles, F. L., and Hugo, A., *Calvin's Commentary on Seneca's De Clementia*, Leiden (1969).
- ²⁸ Calvin, J., *Institutes*, trans. Beveridge, H., 2 Vols, London (1949), III.viii.9.
- ²⁹ *Ibid.*, I.xvi.8.
- ³⁰ *Ibid.*, IV.xiv.17.
- ³¹ *Ibid.*, I.xvi.7.
- ³² *The Works of John Knox*, ed. D. Laing, Edinburgh (1846–64), V. 32, 119.
- ³³ Valla, L., *De Libero Arbitrio*, ed. M. Anfossi, Florence (1934); quoted by Poppi, *op. cit.* (note 9), p. 650.

- ³⁴ Bayle, P., *Dictionnaire historique et critique*, Paris (1697), art. Pauliciens, rem. (I), p. 632.
- ³⁵ Poppi, *op. cit.* (note 9), p. 664.
- ³⁶ Walker, D., *The Decline of Hell*, Chicago and London (1964), p. 193.
- ³⁷ See below, Section VII.
- ³⁸ Erasmus, D., *De Libero Arbitrio Diatribe sive Collatio in Opera Omnia*, 10 Vols., ed. J. Leclerc, Leiden (1703–6), repr. Hildesheim, (1961–2).
- ³⁹ Sorabji, *op. cit.* (note 5), p. 87.
- ⁴⁰ Luther, M., *De Servo Arbitrio*, in *Werke*, Weimar (1883), XVIII, p. 786.
- ⁴¹ Pomponazzi, P., *De Fato, De Libero Arbitrio et De Praedestinatione*, ed. R. Lemay, Lugano (1957).
- ⁴² At least, not in the same part of his work. See below.
- ⁴³ Hutchison, K., 'Supernaturalism and the Mechanical Philosophy', *History of Science* 21, 297–333, e.g. 311, (1983).
- ⁴⁴ See below on Mersenne, Section VI.
- ⁴⁵ Poppi, *op. cit.* (note 9), 666.
- ⁴⁶ Pomponazzi, *op. cit.* (note 41). See Huby, P., 'The First Discovery of the Freewill Problem', *Philosophy* 42, 353–62, (1967) on Aristotle's failure to address the issues.
- ⁴⁷ *Alexander of Aphrodisias on Fate*, ed. R. Sharples, London (1983).
- ⁴⁸ Pomponazzi, *op. cit.* (note 4), I.6.
- ⁴⁹ Aristotle, *Physics* II.5, *Metaphysics* VI.3. See Sorabji, *op. cit.* (note 5), chapter 1.
- ⁵⁰ Pomponazzi, *op. cit.* (note 41), I.7.2.23 (p. 40).
- ⁵¹ *Ibid.*, II.5.59 (p. 183).
- ⁵² *Ibid.*, I.9.3.3. (p. 160).
- ⁵³ *De Naturalium Effectuum Causis sive de Incantationibus*, Basel (1567), especially chapter 13: *De Immortalitate Animae*, *op. cit.* (note 4), p. 123. Del Rio, M., *Disquisitionum Magicarum Libri Sex*, Mainz (1624), p. 10.
- ⁵⁴ Poppi, *op. cit.* (note 9), p. 660.
- ⁵⁵ Giovio, P., *Elogia Doctorum Virorum*, Antwerp (1557), p. 154.
- ⁵⁶ *Op. cit.* (note 4), chapters 13 and 14.
- ⁵⁷ *Op. cit.* (note 41), I.11.3. 35–46 (pp. 78–81).
- ⁵⁸ *Ibid.*, II.7.1.34 (p. 203).
- ⁵⁹ *Ibid.*, II.7.1.42 (p. 205); cf. II.7.1.39 (p. 204). This comparison functions as a *reductio ad absurdum* of determinism for the libertarian defender of free will and divine and human dignity: see Bramhall's remarks on brutish liberty in *The English Works of Thomas Hobbes of Malmsbury*, ed. W. Molesworth, London (1839–45), V, 40; and below, section IV.
- ⁶⁰ *Op. cit.* (note 41), I.11–15. Compare a modern aesthetic justification of 'moral' judgements in a world of hard determinism: 'I could regret being selfish or dishonest in the way I regret having no talent for music or for sport. I could judge my actions aesthetically as admirable or appalling; and these thoughts could be charged with feelings'. Glover, J., 'Self-Creation', *Proceedings of the British Academy* 69, 445–71 (1983); cf. *I: The Philosophy and Psychology of Personal Identity*, London (1988), chapter 18.
- ⁶¹ At III.6.8 (p. 252), Pomponazzi even sees the will as a prime mover.
- ⁶² Copenhagen, B., in Schmitt, C. and Skinner, Q., eds., *op. cit.* (note 9), p. 273.

- ⁶³ Pomponazzi, *op. cit.* (note 41), II.1.76–7 (p. 154).
- ⁶⁴ *Ibid.*, II.3.19 (p. 163).
- ⁶⁵ The attempt to claim for naturalistic Stoic determinism the prime doctrinal advantage of radical providentialism is a sleight-of-hand in that the Stoic God is identical with (even if not bound by) at least a logical Necessity which the Reformation theologians saw as itself subject to God's Will. However, Pomponazzi's fundamental point, that the greater the power and control attributed to the human will, the more God's omnipotence is eroded, was shared by Luther and Calvin.
- ⁶⁶ Poppi, *op. cit.* (note 9), p. 659.
- ⁶⁷ Pomponazzi, *op. cit.* (note 41), Epilogus sive Peroratio, (pp. 451–4).
- ⁶⁸ *Ibid.*, p. 453.
- ⁶⁹ *Ibid.*, p. 454.
- ⁷⁰ *Ibid.*, p. 451.
- ⁷¹ *Ibid.*, p. 451.
- ⁷² British Museum Additional Manuscripts 4979, fol. 61: see Mintz, S., *The Hunting of Leviathan*, Cambridge (1962), pp. 127–8.
- ⁷³ Cudworth, R., *The True Intellectual System of the Universe*, 2 Vols, London (1678), repr. New York (1978).
- ⁷⁴ A good account of what constitutes 'Hobbism' (although his emphasis is on politics) is Lamprecht, S., 'Hobbes and Hobbism', *American Political Science Review* 34, 31–53, (1940).
- ⁷⁵ *Human Nature*, in *English Works*, *op. cit.* (note 59), IV, 31.
- ⁷⁶ Spragens, T., *The Politics of Motion*, London (1973), pp. 68–73; Lott, T., 'Hobbes' Mechanistic Psychology', in J. G. van der Bend, (ed.), *Thomas Hobbes: His View of Man*, Amsterdam (1982), pp. 63–75. The mechanistic materialist reading of Hobbes in the twentieth century derives from Brandt, F., *Thomas Hobbes' Mechanical Conception of Nature*, Copenhagen and London (1928).
- ⁷⁷ For the terms, see Churchland, P. S., 'Replies to Comments', *Inquiry* 29, 247–8, (1986). For the modern theory, see for example, Churchland, P. M., *Matter and Consciousness*, 2nd edition, Cambridge, Mass. (1988), p. 43–9. The conceptual affinity between eliminative materialism and hard determinism is noted by Armstrong, D., 'Recent Work on the Relation of Mind and Brain', in G. Floistad, (ed.), *Contemporary Philosophy, Vol. 4*, The Hague (1983), pp. 53–4.
- ⁷⁸ The important passages in the later work of Hobbes are *Body* chapter XXV, in *English Works*, *op. cit.* (note 59), I.287–410; *Human Nature* chapters II and VII, in *English Works*, IV.3–9, pp. 31–4; *Leviathan* chapters 1, 2, 3 and 6, ed. C. Macpherson, Harmondsworth (1968), pp. 83–99, 118–30. Nothing in these passages seems to me incompatible with a sophisticated materialism: for instance, in *Leviathan* chapter 3, an initially crude associationism about 'mental discourse' is supplemented by an account of the influence of 'desire and design' on the consequence or train of thoughts. Of course any materialist will avoid fatalism by allowing that processes inside us, which form a part of a chain of physical causes, are among those which determine future actions and events. To what extent they are 'in our power', and how the self acts through a rational will when neither self nor will has any separate existence apart from the same physical causal nexus, are further questions. In psychology at least, perhaps, there is no Hobbist smoke without Hobbes' own fire.

- ⁷⁹ Mersenne, M., *Quaestiones Celeberrimae in Genesim*, Paris (1623).
- ⁸⁰ Aristotle, *Physics* 196 a1–3, b6–7 on the atomists' views on chance.
- ⁸¹ Pomponazzi, *De Immortalitate Animae*, *op. cit.* (note 4), pp. 75–6.
- ⁸² It is perhaps, rather, comparable to the views of those physicists of strong determinist inclination (including Einstein, Schrödinger and Planck) who have believed that indeterministic quantum theory is incomplete, or that there may be hidden variables yet to be discovered in apparently indeterministic systems. See Bohm, D., *Causality and Chance in Modern Physics*, 2nd edition, London (1984), and *Wholeness and the Implicate Order*, London (1980). Occult qualities, like hidden variables, were postulated to explain phenomena which contemporary natural philosophy could not, while avoiding recourse to supernaturalism or non-material entities.
- ⁸³ Thomas, K., *Religion and the Decline of Magic*, Harmondsworth (1973), pp. 785–94. He quotes Sir Robert Filmer: 'There be daily many things found out and daily more may be which our forefathers never knew to be possible', *An Advertisement to the Jury-Men of England*, London (1653), 8. Similar considerations are used as arguments for hidden variables by Honderich, T., *A Theory of Determinism*, Oxford (1988), pp. 322–5.
- ⁸⁴ Hutchison, K., 'What Happened to Occult Qualities in the Scientific Revolution?', *Isis* 73, 233–53, especially 249–50 (1982).
- ⁸⁵ *Ibid.*, 250. One genuine difference between Pomponazzi and Hobbes is in their respective concepts of God. A crucial question here is the extent to which Hobbes' God was involved in the natural world. For an important argument that the God of Hobbes' writings on determinism is not the accepted Hobbist *deus absconditus*, see Pacchi, A., 'Hobbes and the Problem of God', in G. Rogers and A. Ryan, (eds.), *Perspectives on Thomas Hobbes*, Oxford (1988), pp. 171–87.
- ⁸⁶ Poppi, *op. cit.* (note 9), p. 666.
- ⁸⁷ For example, Bramhall on the 'horrid consequences' of determinism, which 'dishonours the nature of man', in Hobbes, *English Works*, *op. cit.* (note 59), V.III; cf. More, H., *The Immortality of the Soul* (1659), ed. A. Jacob, The Hague (1987), Lix.1; Eliot, T., 'John Bramhall', in *Selected Essays*, London (1951), e.g. p. 358; Peters, R., *Hobbes*, London (1956), pp. 184–5.
- ⁸⁸ Bramhall, *op. cit.* (note 59), V. 21.
- ⁸⁹ Shapin, S. and Schaffer, S., *Leviathan and the Air-Pump: Hobbes, Boyle and the Experimental Life*, Princeton (1985), p. 104, note 64. Those who consider Shapin and Schaffer's Hobbist Hobbes to have little to do with the real Hobbes can treat the present remarks purely as part of a history of reception.
- ⁹⁰ See for example Dollimore, J., *op. cit.* (note 21), chapters 1, 10, 16; Barker, F., *The Tremulous Private Body: Essays on Subjection*, London (1984); Belsey, C., *The Subject of Tragedy*, London (1985), chapter 4. There is important material for a political history of the free will debate in Tyacke, N., 'Puritanism, Arminianism, and Counter-Revolution', in C. Russell, (ed.), *The Origins of the English Civil War*, London (1973), pp. 119–43.
- ⁹¹ *Op. cit.* (note 72), chapters, pp. 110–33.
- ⁹² Laney, B., 'Observations', appended to Hobbes, T., *A Letter About Liberty and Necessity*, London (1677), pp. 103–4.
- ⁹³ Milton, J., *Comus*, ed. W. Bell, London (1899), pp. 597–9.

- ⁹⁴ Quoted by Hunter, M., 'The Problem of Atheism in Early Modern England', *Transactions of the Royal Historical Society* 35, 155 (1985).
- ⁹⁵ Bramhall, *op. cit.* (note 59), V. 25.
- ⁹⁶ For example, *English Works*, *op. cit.* (note 59), IV.252–8.
- ⁹⁷ *Ibid.*, III.297.
- ⁹⁸ Marston, J., *Antonio's Revenge*, *op. cit.* (note 23), IV.i.31–4; see Dollimore, J., *op. cit.* (note 21), pp. 36–40.
- ⁹⁹ *English Works*, *op. cit.* (note 59), IV.255–6.
- ¹⁰⁰ Compare the optimistic claim of a modern determinist, who thinks he is also a compatibilist, that we will keep all our social and moral practices in place even 'now that we see the social utility of the myth of free will'. Dennett, D., *Elbow Room*, Cambridge, Mass., and London (1984), chapter 7 and p. 166. Good modern accounts of the intuitions behind compatibilism and incompatibilism are Strawson, G., *Freedom and Belief*, Oxford (1986), pp. 105–20, and Honderich, T., *op. cit.* (note 83), pp. 382–400.
- ¹⁰¹ *English Works*, *op. cit.* (note 59), IV.256–7.
- ¹⁰² Bacon, F., *Works* 14 vols, (eds.) J. Spedding, R. Ellis, D. Heath, (1857–61), repr. Stuttgart (1961–3), XIII.213.
- ¹⁰³ *English Works*, *op. cit.* (note 59), V.55.
- ¹⁰⁴ Webster, *The Duchess of Malfi*, III.v.78–81.
- ¹⁰⁵ Sidney, P., *Arcadia II*, in *Works* (ed.) A. Feuillerat, Cambridge (1922), I.227.
- ¹⁰⁶ *The Duchess of Malfi*, V.iv.54–5.
- ¹⁰⁷ *English Works*, *op. cit.* (note 59), V.111.
- ¹⁰⁸ Plautus, *Captivi*, Prolog. 22. *Fortune's Tennis* was the title of a play by Dekker, now lost.
- ¹⁰⁹ *Arcadia V*, *op. cit.* (note 105), II.177.
- ¹¹⁰ Burton, R., *The Anatomy of Melancholy*, quoted by Trevor-Roper, H., *Renaissance Essays*, London (1985), p. 270.
- ¹¹¹ Traditional Webster criticism, either attacking his perverted and macabre sensationalism or somehow finding a deeply religious Christian humanism lurking beneath the plays' apparent anarchy, has only recently been challenged by readings which mark the sustained antihumanism of his thought. Particularly relevant here is Kroll, N., 'The Democritean Universe in Webster's *The White Devil*', *Comparative Drama* 7, 3–21 (1973). She notes, among other things, the play's systematic materialism, which extends to the human mind, its emphasis on contact action between bodies, and its insistence that the universe, and life itself, is nothing but continual motion. Forker, C., 'The Tragic Indeterminacy of *The Duchess of Malfi*', chapter 7 in *Skull Beneath The Skin: The Achievement of John Webster*, Southern Illinois (1986), refers (pp. 367–8) to Pomponazzi's double truth, in which reason and faith are incompatible but complementary. But Forker's notion of a dual causality which preserves freedom, derived from the work of R. Grudin, on Paracelsus' influence, in *Mighty Opposites: Shakespeare and Renaissance Contrariety*, Los Angeles and London (1979), chapter 2, is an over-optimistic reading of Webster, even if it is applicable to Shakespeare. Pomponazzi's attitude to this 'double truth', too, is somewhat less than straightforward (section III above).
- ¹¹² Shapin and Schaffer, *op. cit.* (note 93), pp. 284–98. On censorship see Hill, C., 'Censorship and English Literature', in *The Collected Essays of Christopher Hill, Volume One: Writing and Revolution*, Brighton (1985), pp. 32–71.

¹¹³ See now Malcolm, N., 'Hobbes and the Royal Society', in G. Rogers and A. Ryan (eds.), *op. cit.* (note 85), pp. 43–66.

¹¹⁴ Lenoble, R., *Mersenne, ou la naissance du mécanisme*, Paris (1943), p. 133.

¹¹⁵ Webster, C., *From Paracelsus to Newton*, Cambridge (1982), p. 89.

¹¹⁶ Mersenne, *op. cit.* (note 79); *L'Impiété des Déistes*, Paris (1624).

¹¹⁷ Hine, W., 'Mersenne, Naturalism and Magic', in B. Vickers, (ed.), *Occult and Scientific Mentalities in the Renaissance*, Cambridge (1984), pp. 165–76.

¹¹⁸ *Op. cit.* (note 79), section 3.

¹¹⁹ See note 53.

¹²⁰ Lenoble, *op. cit.* (note 114), p. 111.

¹²¹ *Op. cit.* (note 79), col. 386.

¹²² *Ibid.*, col. 1298; Lenoble, *op. cit.* (note 114), pp. 108–9, 300–2; cf. Hutchison, *op. cit.* (note 43), on other proponents of mechanism who thought that the very barrenness of matter on which their natural philosophy of contact action was based actually *guaranteed* the existence of a separate realm of the supernatural, including God, the mind, angels and demons, which intervenes in the otherwise passive material world. If there is no real distinction between natural and supernatural, it matters little, from Mersenne's point-of-view, whether God is immanent, as for Stoics and naturalists, or transcendent, as for radical supernaturalists. Mersenne *must* make a clean distinction between the mechanistic physical universe and the transcendent supernatural.

Liberty of indifference was a technical term of the Molinist Jesuits. It seems also to have been accepted by Descartes: see *Principles of Philosophy*, trans. V. Miller and R. Miller, Reidel (1983), I.x1, x1i.

¹²³ Lenoble, *op. cit.* (note 114), pp. 571–2.

¹²⁴ *Ibid.*, p. 301.

¹²⁵ Dihle, *op. cit.* (note 6).

¹²⁶ Watson, G., 'Free Action and Free Will', *Mind* 96, 172 (1987).

¹²⁷ Webster, *The Duchess of Malfi*, III.v.81–3.

¹²⁸ Donne, J., 'An Anatomy of the World', pp. 155–7, in *The Complete English Poems*, (ed.) A. Smith, Harmondsworth (1971).

¹²⁹ Hooker, R., *Of the Laws of Ecclesiastical Polity*, with an introduction by C. Morris, 2 Vols., London (1969) III.viii.4.

¹³⁰ Cf. Calvin, *Institutes*, *op. cit.* (note 28), II.931: 'by His just and irreprehensible but incomprehensible judgement He has barred the door of life to those who He has given over to damnation'. See also Baker-Smith, D., 'Religion and John Webster', in (ed.) B. Morris, *John Webster*, London (1970), pp. 207–28.

¹³¹ On this and other issues relevant to the free will debate in England see Tyacke, N., *op. cit.* (note 90); and Colie, R., *Light and Enlightenment: A Study of the Cambridge Platonists and the Dutch Arminians*, Cambridge (1957).

¹³² Quoted by Porter, H., *Reformation and Reaction in Tudor Cambridge*, Cambridge (1958), p. 377. See Gunby, D., *The Duchess of Malfi: A Theological Approach*, in (ed.) B. Morris, *op. cit.* (note 130), pp. 179–204.

¹³³ Pilkington, J., *Works*, (ed.) J. Scholefield, Cambridge (1853), p. 227.

¹³⁴ Calvin, *Institutes*, *op. cit.* (note 28), I.xiv.20, 21.

¹³⁵ *The Duchess of Malfi*, III.v.69–71.

¹³⁶ Cudworth, R., Letter to Limborch, (1668), quoted by Cassirer, E., *The Platonic Renaissance in England*, London (1953), pp. 122–3.

¹³⁷ Nashe, T., *The Unfortunate Traveller and Other Works*, (ed.) J. Steane, Harmondsworth (1972), p. 155.

¹³⁸ Indeed the two may have been tightly linked in the minds of their critics. Damrosch, L., 'Hobbes as Reformation Theologian: Implications of the Free-Will Controversy', *Journal of History of Ideas* 40, 339–52, (1979), argues that Anglican thinkers were so antagonistic towards Hobbes partly because he was systematically reasserting the Calvinist determinism on which the pre-Laudian Reformed Anglican Church had been based. This may not be the whole truth (see note 85 above), but might well have been accepted by Cudworth.

¹³⁹ Cudworth, R., *A Treatise of Eternal and Immutable Morality*, London (1731), repr. New York (1978), vii.

¹⁴⁰ Quoted by Mintz, *op. cit.* (note 72), p. 129.

¹⁴¹ *Op. cit.* (note 139): see Baker-Smith, *op. cit.* (note 130), p. 212.

¹⁴² Mintz, *op. cit.* (note 72), pp. 129–33.

¹⁴³ British Museum Additional Manuscripts, 4979, fol. 5.

¹⁴⁴ *Ibid.*, 4982, fol. 15.

¹⁴⁵ Mintz, *op. cit.* (note 72), pp. 132–3.

¹⁴⁶ Cudworth, *op. cit.* (note 139).

- 103 Quoted by B. R. Singer, 'Robert Hooke on Memory, Association, and Time Perception', *Notes and Records of the Royal Society of London* 31 (1976), 126.
- 104 Michael Hunter, *Science and Society in Restoration England* (Cambridge, 1981), 13, 37, 136; Hunter, *The Royal Society and its Fellows 1660–1700* (Oxford, 1994), 35–54.
- 105 Henry More, *An Antidote Against Atheism*, in *A Collection of Several Philosophical Writings*, vol. 1 (1662, reprinted London, 1978), Book 1, chapter 11, paragraph 2, p. 33; Glanvill, *Vanity of Dogmatizing*, 35, 38.
- 106 More, *The Immortality of the Soul*, in *A Collection*, vol. 2, 2.2.7, 68; Glanvill, *Vanity*, 39, 35–6.
- 107 Glanvill, *Vanity*, 36, 39.
- 108 More, *Immortality*, 2.10.9, 105; 2.5.7, 83.
- 109 Digby, *Two Treatises*, 284–5.
- 110 Hooke, *Lectures of Light*, 142. (This was a 1682 lecture on memory to the Royal Society.)
- 111 This theoretical imposition of order went together, for Hooke, with practical but external schemes for the organization of information about the past in diaries, lists and other memory aids: see Lotte Mulligan, 'Robert Hooke's "Memoranda": memory and natural history', *Annals of Science* 49 (1992), 47–61.
- 112 Jamie Kassler, *Inner Music: Hobbes, Hooke, and North on internal character* (London, 1995), ch. 3.
- 113 Hooke, *Lectures of Light*, 144. This is a strict analogy between 'the Soul in the Center of the Repository' and the sun irradiating or resonating throughout the sphere of the bodies which it regulates and governs by an attractive power. Compare More, *Antidote*, 1.11.11, 36.
- 114 John P. Wright, *The Sceptical Realism of David Hume* (Manchester, 1983), 5–9, 70–4, 212–15, 224–6.
- 115 Locke, *Essay*, II.33.6,7.
- 116 Wright, 'Association, Madness, and the Measures of Probability', 116–20.
- 117 *Letter Concerning Enthusiasm* (1708), quoted by DePorte, *Nightmares and Hobbyhorses*, 43–4.
- 118 *The Mechanical Operation of the Spirit* (1704), quoted by Hillel Schwartz, *Knaves, Fools, Madmen, and the Subtle Effluvium* (Gainesville, 1978), 53.
- 119 Roger Smith, *Inhibition: history and meaning in the sciences of mind and brain* (Berkeley, 1992); Georges Canguilhem, *La Formation du Concept de Réflexe aux XVII^e et XVIII^e Siècles* (Paris, 1955); Michel Foucault, *Madness and Civilization*, trans. R. Howard (New York, 1965), 124–46; G. S. Rousseau, 'Towards a Social Anthropology of the Imagination' (1969), in his *Enlightenment Crossings* (Manchester, 1991), 1–25; W. F. Bynum, 'The Anatomical Method, Natural Theology, and the Functions of the Brain', *Isis* 64 (1973), 445–68.

6 Restraining the passions

Hydropneumatics and hierarchy in the philosophy of Thomas Willis

Jamie C. Kassler

So long as the brain is still, a man is in his right mind.

(Hippocrates, *The Sacred Disease*¹)

INTRODUCTION

From the time of the ancient Greeks, there has been a recurring theme in which the passions are conceived as storms at sea or tempests in the air. This theme occurs in two different versions. One version, deriving from the Stoics, regards passions as fatal to a tranquil mind, so that Francis Bacon, for example, wrote: 'as the sea would of itself be calm and quiet, if the winds did not move and trouble it; so . . . the mind . . . would be temperate and stayed, if the affections, as winds, did not put it into tumult and perturbation'.² The other version, deriving from Aristotle, regards the passions as spurs to action, so that Henry More, for example, maintained that the brisk winds of passion serve as active forces guarding man's vessel from inertia.³ To extend the metaphor of the passions as winds, one might conceive of the body as a ship, either moved by healthy gales or tossed hither and thither by every wind, and the mind as a pilot or steersman, since reason is supposed to rule the passions. But John Bramhall lamented, for example, that reason is too seldom the guide at the helm, because passion, 'like an unruly passenger . . . thrusts reason away from the rudder'.⁴

Although the ship model has been used by many writers from antiquity right up to the present day,⁵ this chapter presents an analysis of a different model constructed by Thomas Willis (1621–75), perhaps the most prominent English physician after William Harvey (1578–1657).⁶ From the single contemporary source that describes Willis's medical practice, we learn that he was a caring physician;⁷ and from his writings, we discover an astute anatomical and clinical observer.⁸ But his philosophy is Janus-faced, and, hence, presents difficulties for the