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CHAPTER 1

HOBBES'S LIFE

Thomas Hobbes, 'the infamous author of *Leviathan*', was born on 5 April 1588 in the village of Westport, adjacent to Malmesbury, in Wiltshire. His mother was brought to bed prematurely by the shock of hearing that the Spanish Armada had invaded British waters, so that Hobbes said in his verse autobiography many years later that his mother 'did bring forth Twins at once, both Me, and Fear'.[1] We have his own word for it that fear dogged his steps. He was afraid of 'Nights darkest shade',[2] of thieves, of persecution by his enemies, of death, which he called 'a Leap in the Dark'.[3] His critics liked to say that his fear was a sort of inner confession of sin. It was his conscience plaguing him for his atheism.[4] But Hobbes was a paradox: he was a fearful man with an adventurous and searching mind. His intellect was bold and virile. He never shrank from the violence he did to tradition. He deserved the epithet *temerarius* applied to him by his continental opponent, the German legal historian Conringius.[5] It was indeed 'prodigious', as a contemporary found, that 'the timorousness of his Nature from his Infancy . . . should not have chilled the briske Fervour and Vigour of his mind, which did wonderfully continue to him to his last'.[6] He lived for ninety-one years, *timor mortis* and all, and he was never afraid of new or audacious ideas.

[1] Thomas Hobbes, *The Life of Mr Thomas Hobbes of Malmesbury. Written by himself in a Latine Poem. And now Translated into English* (London, 1680), p. 2. Other contemporary sources for Hobbes's biography are an unfinished prose autobiography in Latin completed by Richard Blackburne and printed as 'Vitae Hobbianae Auctarium' in *Tracts of Thomas Hobb's* (London, 1681), and John Aubrey's biographical sketch in *Brief Lives*, ed. Andrew Clark (Oxford, 1898), I, 321–403.

[2] Hobbes, *The Life*, p. 4.

[3] *The Last Sayings, or Dying Legacy of Mr Thomas Hobbs of Malmesbury* (London, 1680). [Broadside.]

[4] See, e.g., Thomas Tenison, *The Creed of Mr Hobbes Examined* (2nd ed. London, 1671), p. 7; Bishop Francis Atterbury, sermon on 'The Terrors of Conscience', cited by John Hunt, *Religious Thought in England* (London, 1870), I, 397 n.

[5] Hermann Conringius, *Conringiana Epistolica* (2nd ed. Helmstadt, 1719), p. 76.

[6] Cited by John Aubrey, I, 390.

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In Malmesbury Hobbes spent a placid boyhood. He fished in the twin rivers that formed a graceful arch around the town; he played among the ruins of a castle, or else he wandered through the neighbouring meadows which Athelstane had 'moistened with the blood of *Danes*'. The five tuneable bells of St Mary's Church gave him pleasure. So did the horse-fair opposite his house.

His father, John Aubrey tell us, was an amiable, semi-literate vicar; 'one of the Clergie of Queen Elizabeth's time, a little Learning went a great way with him and many other ignorant Sir Johns in those days'.[1] He was certainly an indiscreet man. After a night of card-playing he fell asleep in his church and was heard to utter: 'Trafells [clubs] is troumps.'[2] Later he struck a parson at the church door and in consequence was obliged to leave Malmesbury. The care of his family passed to his more affluent brother, Francis, a glover, who maintained the young Thomas both at grammar school and later at Oxford.

When he was seven Thomas Hobbes came under the tutelage of Robert Latimer, 'a good Grecian', who grounded him solidly in Latin and Greek, and when he was fourteen, he matriculated at Magdalen-hall in Oxford. Here he did not flourish. Like so many others of his age he found the scholastic curriculum unpalatable and arid—as Milton called it, 'an asinine feast of sowthistles and brambles'. He appears to have liked the rhetoric well enough, but logic and physics as they were then taught left him wholly unimpressed.

> And sedulously I my Tutor heard,
> Who Gravely Read, althou' he had no Beard.
> *Barbara*, *Celarent*, *Darii*, *Ferio*, *Baralypton*,
> These Modes hath the first Figure; then goes on
> *Caesare*, *Camestres*, *Festino*, *Baroco*, *Darapti*,
> This hath of Modes the same variety.[3]

These things, Hobbes told us, he learnt slowly, and then dispensed with. He wanted to 'prove things after my own sense'.[4] To release his imagination from the confinement of a narrow and rigid curriculum he indulged his love of astronomy and geography.

[1] *Ibid.* [2] *Ibid.* p. 387. [3] Hobbes, *Life*, p. 3. [4] *Ibid.*

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My Phancie and my Mind divert I do,
With Maps Celestial and Terrestrial too.
Rejoyce t'accompany *Sol*, cloath'd with Rays,
Know by what Art he measures out our Days;
How *Drake* and *Cavendish* a Girdle made
Quite round the World, what Climates they survey'd. . . .
Nay there's a Fulness in Geography;
For Nature e'r abhor'd Vacuity.[1]

We have no exact information about Hobbes's reading at this time. Years later his critics were to charge him with not having read enough,[2] an opinion which Hobbes encouraged by boasting that if he had read as much as other men, he would have known no more than other men.[3] But Hobbes *was* widely read. He deliberately suppressed evidence of his reading as a pose, partly from vanity, so as to give weight to his conception of himself as innovator, and partly from an honest impatience with the habit of venerating the past uncritically. In the Battle of the Books Hobbes classed himself as a 'modern'. 'Though I reverence those men of ancient time, that either have written truth perspicuously, or set us in a better way to find it out ourselves; yet to the antiquity itself I think nothing due. For if we will reverence the age, the present is the oldest.'[4] Hobbes was willing to give the past its due, but not, as was 'the custom of late time', to grovel before it. Let no man, he says, argue from authority, unless (and in this Hobbes is human enough) the authority is Hobbes himself.

At Oxford Hobbes must have read sufficiently to satisfy his tutors, for in due course he took his bachelor's degree, and in 1608 was recommended by the Principal of his college to be tutor to the son of William Cavendish, Baron Hardwick, soon to become the first Earl of Devonshire. This appointment was

[1] *Ibid.* pp. 3–4.

[2] 'Mr *Hobbes* consulted too few Authors, and made use of too few Books'. Clarendon, *Brief View and Survey of The Dangerous and Pernicious Errors to Church and State, In Mr Hobbes's Book . . . Leviathan* (2nd ed. Oxford, 1676), 'Epistle Dedicatory', sig. *3 v.

[3] Aubrey, p. 349.

[4] *Leviathan*, ed. Michael Oakeshott (Oxford, 1946), p. 467. Hobbes is echoing Bacon. Cf. Francis Bacon, *Works*, ed. Spedding, Ellis, Heath (London, 1879–90), III, 291; IV, 82. (All page references to *Leviathan* will be to Oakeshott's edition.)

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of the utmost significance for Hobbes's later development. A new world was opened to him, offering him travel, leisure, the company of famous and sophisticated men. The tall, grave, black-haired boy with 'hazel-quick' eyes, who had suffered from 'contemplative melancholinesse' at Oxford, was introduced to the splendours of Chatsworth and Welbeck Abbey. In the Cavendish household he was spared the grinding, humiliating poverty which was the usual lot of the tutor in the seventeenth century.[1] His masters were generous, and their kindness soon ripened into friendship. Hobbes mingled with their guests: discoursed on philosophy with Lord Herbert of Cherbury, on Arminianism with Lucius Cary, Lord Falkland, on poetry with Ben Jonson. His connection with the 'Noble and Conspicuous' Cavendish family lasted, with minor interruptions, for the rest of his long life.

Most particularly he welcomed the salubrious intellectual climate of Welbeck Abbey, where William, Earl of Newcastle, and his brother Charles Cavendish, a gifted mathematician, had established an outpost of the new science.[2] The Earl of Newcastle was a brilliant administrator of his estates, and later a very able commander in the royalist army. He was less proficient at science, but he showed a perennial curiosity in it, and maintained a private laboratory where, according to a biased source (his famous wife Margaret), he discovered that the sun is 'nothing else but a very solid body of salt and sulphur, inflamed by its own motion upon its own axis'.[3] He had, too, a special interest in optics and geometry and combined these with his passion for horses by persuading Hobbes to write a curious treatise called 'Considerations Touching the Facility or Difficulty of the Motions of a Horse on Straight Lines, or Circular'.[4] It was on his behalf that Hobbes spent many hours

[1] John Eachard, *Grounds and Occasions of the Contempt of the Clergy* (London, 1670), *passim;* Macaulay, *The History of England from the Accession of James II* (London, 1877), I, 160.

[2] Cavendish's scientific achievements are studied in Jean Jacquot, 'Sir Charles Cavendish and his Learned Friends,' *Annals of Science*, VIII (1952), 13–27, 175–95.

[3] See Margaret Cavendish, Duchess of Newcastle, *Philosophical and Physical Opinions* (London, 1663), p. 463.

[4] A. S. Turberville, *A History of Welbeck Abbey and its Owners* (London, 1938), p. 54. The manuscript is printed in *A Catalogue of Letters and Other Historical Documents Exhibited in the Library at Welbeck*, compiled by S. Arthur Strong (London,

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searching the London bookshops in vain for a copy of Galileo's *Dialogues*.[1]

In these early years with the Cavendish family Hobbes had leisure to think and access to good libraries. Chatsworth was to him what Horton was to Milton. Here he read hundreds of romances and plays, which Aubrey points to as the source of his 'copie of words'.[2] Here he also deepened his knowledge of the classical poets and historians, as well as of their best commentators. At Chatsworth he found the university he had missed at Oxford.[3]

These benefits did not accrue to Hobbes all at once. At first he was rather a companion than a tutor to his pupil, who was only three years Hobbes's junior, seventeen when they met in 1608, though already a married man. The young Earl's bride was a twelve-year-old Scottish heiress who was allowed to mature some years more before assuming her wifely duties,[4] so that her husband was, for all practical purposes, a bachelor. He and his tutor rode hunting and hawking together, and Hobbes was set such unpleasant tasks as raising money for his pupil's creditors. He did not strenuously object to this mode of life, though he caught cold frequently on his borrowing missions, and he worried about forgetting his Latin. In 1610 he and his charge embarked on the grand tour. They visited France and Italy where they applied themselves to the study of foreign tongues. On their return Hobbes continued his reading of the classical historians, and in 1629 produced his first published work, a translation of Thucydides's *Peloponnesian War*. There are anticipations of the *Leviathan* in this book, both in the political overtones of Hobbes's preface and in the pithy phrases of the translation. 'There's none', said Hobbes, 'that pleased me like Thucydides.'

1903). The editor refers to this treatise as 'an irrelevant superfluity of reasoning' such as was produced by 'the tailor in *Gulliver's Travels* who measures his men with the help of a sextant and other mathematical instruments' (p. vii).

[1] Portland MSS., *Historical Manuscripts Commission*, II, 124.

[2] Aubrey, p. 361.

[3] Cf. Hobbes's statement: '. . . there was not any . . . in whose house a man should less need a university'. Thomas Hobbes, *English Works*, ed. Molesworth (11 vols., London, 1839–45), VIII, iv. (This collected edition will henceforth be referred to as *Works*.)

[4] Francis Bickley, *The Cavendish Family* (Boston, 1914), p. 41.

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He says Democracy's a Foolish Thing,
Than a Republick Wiser is one King.
This Author I taught *English*, that even he
A Guide to Rhetoricians might be.[1]

Some time before the Thucydides appeared, Hobbes served a brief period as secretary to Francis Bacon.[2] He accompanied the deposed Lord Chancellor in his 'delicious walkes' at Gorhambury; on these occasions Hobbes kept pen and paper in readiness against any sudden philosophic thought from his master. Bacon considered Hobbes the best of his amanuenses because the most understanding, and allowed him to help with the translation into Latin of several of the English essays.[3] It was from Hobbes that Aubrey derived his anecdote about the death of Bacon: the philosopher impulsively alighted from a coach in mid-winter to buy a chicken, which he eviscerated and stuffed with snow in order to test a theory about food-freezing, and as a consequence he contracted pneumonia and died.

In 1628 Hobbes lost another friend, his pupil-companion, Cavendish, who succumbed to 'excessive indulgence in good living'.[4] Hobbes was forced to seek employment elsewhere, and was engaged as cicerone to the son of Sir Gervase Clinton, with whom he immediately embarked on a tour of France and Switzerland. Hobbes was now forty years old and had not yet begun his career as philosopher. It was during this second tour, however, that he discovered Euclid and first turned his thoughts to the possibilities of mathematical philosophy. He had come upon a copy of Euclid in a private library in Geneva.[5]

'By G—,' sayd he, 'this is impossible!' So he reads the demonstration of it which referred him back to such a proposition; which proposition he read. That referred him back to another, which he

[1] Hobbes, *Life*, pp. 4–5. Hobbes consulted Ben Jonson and the Scottish poet Sir Robert Ayton about the prose style of his translation. Little is known about the relations between Hobbes and Ben Jonson. It is possible that Jonson's tribute to Bacon in the *Discoveries* is borrowed from Hobbes. See Arthur T. Shillinglaw, 'Hobbes and Ben Jonson', *T.L.S.* 18 April 1936, p. 336.

[2] Aubrey's chronology is vague. Bacon died in 1626. Precisely when Hobbes's connection with Bacon began and ended is not known.

[3] Aubrey, p. 331, remembers only one: Essay XXIX: 'Of the True Greatness of Kingdoms and Estates'.

[4] Bickley, *The Cavendish Family*, p. 43.

[5] The place is fixed in a recently discovered letter. See G. R. De Beer, 'Some Letters of Hobbes', *Notes and Records of the Royal Society*, VII (April 1950), 205.

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also read. Et sic deinceps, that at last he was demonstratively convinced of that trueth. This made him in love with geometry.[1]

So began Hobbes's lifelong infatuation with 'the only science that it hath pleased God hitherto to bestow on mankind'.[2] In the company of many other thinkers of his age, Hobbes thought he perceived in mathematics a certitude which the flux of human opinion could not alter. He considered 'Truth' to be a function of reasoning, its discovery an analytical process in which definitions are placed in their proper order. This type of truth is best arrived at by geometry, which is propositional in character, and which, when practised correctly, is immune to contradiction. The unity and logical structure of geometry produced in Hobbes an almost aesthetic emotion, comparable to that 'sense for beauty' which Matthew Arnold says the born scientist can apply even to the most unpromising subject matter.[3] The language of geometry, moreover, is lucid, free of verbal confusions, a perfect analogue of the kind of style which Hobbes hoped to achieve in his non-mathematical writings. And finally, geometry harmonized most easily with the cosmology that Hobbes was soon to develop: a universe that consists only of extended body is best described in geometrical terms.

Algebra, on the other hand, held no such attractions for Hobbes. It could not properly be applied to figures in space, since these are ultimately described only in qualitative terms. Hobbes was suspicious of all attempts, whether by Archimedes or John Wallis, to 'arithmetize' geometry;[4] the truth is that Hobbes grossly underestimated the scope of algebra. For him it was a minor branch of arithmetic, 'to the theory whereof two or three Days at most are required, though to the Promptitude of Working, perhaps the Practice of three Months is necessary'.[5] Even the use of symbols offended him, possibly because he

[1] Aubrey, p. 332.
[2] *Leviathan*, p. 21.
[3] Matthew Arnold, 'Literature and Science', *Discourses in America* (London, 1885), p. 113.
[4] Thomas Hobbes, *Seven Philosophical Problems* (1662), in *Works*, VII, 67–8.
[5] Thomas Hobbes, *Rosetum Geometrum* (1671), translated by Venterus Mandey as Book II of *Mellificium Mensionis* (4th ed. London, 1727), p. 125. Hobbes later 'lamented [to Sir William Petty] that he had not taken the art of algebra more into his studies'. The *Petty-Southwell Correspondence*, ed. Marquis of Lansdowne (London, 1928), p. 322.

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contrasted them with the pleasing abstract forms of geometrical drawings. Wallis's 'scab of symbols'[1] simply disfigured the page, 'as if a hen had been scraping there'.[2]

By thus holding himself aloof from algebra—as well as from calculus—Hobbes remained outside the mainstream of mathematical thought in his century. Nor did he make any significant contributions to geometry. Much of his energy was spent in pursuit of such *ignes fatui* as the quadrature of the circle and the duplicate of the cube. His dogmatic assertions, which he later modified, of success in these attempts amused his critics, and led him into long and futile controversy with the acrimonious but vastly superior mathematician, John Wallis.[3] Of this dispute it may be said that Wallis was right, but Hobbes was more of a gentleman, though neither conducted himself precisely according to the rules of fair play. At least we ought to remember that Hobbes was not unique in his preoccupation with circle-squaring; the same problem engaged the minds of other and better mathematicians in the century, such as John Pell; and it was not until the nineteenth century that the solution of this problem was finally shown to be impossible.[4]

Hobbes was soon to assimilate his interest in geometry to the new physics. In 1630 he returned to the Cavendish household, this time as tutor to the Earl of Devonshire's young son, and with his pupil again made the inevitable continental tour. On this third and longest journey, 'whether on Horse, in Coach, or Ship', Hobbes meditated on the problems of motion; at Pisa he sought out Galileo, whom he ever afterward held in veneration. 'Galileus . . . was the first that opened to us the gate of natural philosophy universal, which is the knowledge of *motion*. So that

[1] Thomas Hobbes, *Six Lessons to the Professors of the Mathematics* (1656) in *Works*, VII, 316.

[2] *Ibid.* p. 330.

[3] The controversy (which lies outside the scope of the present study) is treated fully in J. F. Scott, *The Mathematical Work of John Wallis* (London, 1938), and may be supplemented in G. Udney Yule, 'John Wallis, D.D., F.R.S.: 1616–1703', *Notes and Records of the Royal Society* (April 1939), pp. 74–82. The bibliography of the dispute is recorded in Hugh Macdonald and Mary Hargreaves, *Thomas Hobbes: A Bibliography* (London, 1952).

[4] Florian Cajori, *A History of Mathematics* (New York, 1894), p. 2. A. De Morgan, *A Budget of Paradoxes* (London, 1915), p. 110, says that Hobbes was 'very wrong in his quadrature, but . . . he was not the ignoramus in geometry that he is sometimes supposed. His writings, erroneous as they are in many things, contain acute remarks on points of principle.'

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neither can the age of natural philosophy be reckoned higher than to him.'[1] In Paris, possibly through the offices of Sir Kenelm Digby,[2] he met Marin Mersenne, the Franciscan monk who conducted in his cell an informal scientific academy where some of the best scientists of the age gathered and exchanged views. To Mersenne Hobbes communicated the results of his early speculations in optics and sensation.[3]

When he returned to England he continued to correspond with Mersenne about physics. He had by then already formulated the outlines of his philosophical system. It was to have three parts—of Body, of Man, of Citizenship—to be developed in that order. As Hobbes was provided with leisure and books at Welbeck Abbey, and was stimulated by his recent contacts with Mersenne and Galileo, he set about formulating the first section of his system, that concerning Body. The fruits of these early labours are three manuscripts,[4] none published in Hobbes's lifetime, and all apparently drafts of *De Corpore*, Hobbes's finished statement on this subject, which he published in 1655.

But Hobbes's political interests, which all his life were to compete with his metaphysical speculations, soon asserted themselves. In 1640 he produced two treatises, *Humane Nature; or the Fundamental Elements of Policie*, and *De Corpore Politico, or the Elements of Law*, both of which circulated widely in manuscript until they were combined and published in 1650. Hobbes hoped

[1] Hobbes, *Elements of Philosophy*, 'De Corpore', *Works*, I, viii. Tönnies believes, on very slight evidence, that at their interview Galileo first suggested to Hobbes the notion of treating ethics in a geometrical manner. See Ferdinand Tönnies, 'Hobbes-Analekten', *Archiv für Geschichte der Philosophie*, III, 232.

[2] John Stoye, *English Travellers Abroad*, 1604–67 (London, 1952), p. 438.

[3] These were summarized by Mersenne in his *Cogitata Physico-Mathematica* (Paris, 1644), preface to 'Ballistica'.

[4] The first, in English, was entitled 'A Short Tract on First Principles', edited by Tönnies, who printed it in his edition of Hobbes's *Elements of Law* (2nd ed. Cambridge, 1928), pp. 152–67. It is dated 1630 by Frithiof Brandt, *Thomas Hobbes's Mechanical Conception of Nature* (Copenhagen, 1928). The second, in Latin, was discovered in 1945 in the National Library of Wales by Mario M. Rossi, who believes that it is a copy made by Lord Herbert of Cherbury for his own use. From this premise Rossi dates the manuscript 1637. R. I. Aaron ('A Possible Early Draft of *De Corpore*', *Mind*, LIV (1945), 342–56) does not believe the handwriting is Herbert's, but is willing to accept the date on other grounds. The third, also in Latin, was discovered at the Bibliothèque Nationale in 1952 and is quite obviously a chapter-by-chapter refutation of Thomas White's *De mundo dialogi tres quibus materia* (1648), which is itself an attack on Galileo's *Dialogue upon the two systems of the world*. This third manuscript is described by Jean Jacquot in *Notes and Records of the Royal Society*, IX (1952), 188–95.

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that these philosophical and relatively abstract treatises might help cool the political and religious passions which were then boiling over in England; but his monarchical bias could not, in 1640, placate a Parliament soon to assume power. Hobbes feared for his safety; though the Parliament at that time made no move against him, nevertheless Hobbes thought it prudent to remove himself to France, where he remained, mostly in Paris, for eleven years.

In Paris Hobbes set himself at once to perfect his philosophy. In 1642 he published *De Cive;* then, abetted by Mersenne, he returned to his physical speculations, and was almost immediately engaged in controversy with Descartes. Hobbes was already acquainted with Descartes's work, having received a copy of the *Discourse on Method* from Sir Kenelm Digby in 1637, only a few months after the book was published.[1] The controversy with Descartes turned on a question which brought credit to neither man: which of the two had first announced that colours do not inhere in objects, but are rather functions of the mind? Descartes claimed priority and called Hobbes a plagiarist. Hobbes said he had expressed the doctrine verbally to Newcastle and Charles Cavendish as early as 1630.[2] Neither was actually first; the principle that secondary qualities are subjective was enunciated clearly and at great length by Galileo in *Il Saggiatore* (1623). But Hobbes and Descartes were both too proud to acknowledge this debt; and for the rest of their lives they alluded to each other's works with the utmost reserve and coolness. Of course their differences are more fundamental: Hobbes banished spirit from the universe; Descartes separated it from matter, but never denied that spirit was real. It is true that Descartes's critics thought this segregation of matter and spirit had the same effect as banishing spirit altogether, but in fact, Cartesian dualism remains a view of the world essentially different from the Hobbesian view. It is a difference which

[1] Digby's letter accompanying the book is printed from manuscript by Marjorie Nicolson, 'The Early Stage of Cartesianism in England', *Studies in Philology*, XXVI (1929), 358. The letter is sometimes referred to as containing the first English allusion to Descartes, but it is actually preceded in this respect by a passage in Samuel Hartlib's *Ephemerides* of 1635, describing a meeting between Descartes and John Dury which took place some time earlier. See C. De Waard, 'Un entretien avec Descartes en 1634 ou 1635', *Archives Internationales d'Histoire des Sciences*, XXII (Janv.–Mars 1953), 14–16.

[2] René Descartes, *Oeuvres*, ed. C. Adam and P. Tannery (Paris, 1899), III, 342.

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