

## MARILYN BUTLER

*Frankenstein and Radical Science*<sup>1</sup>

Mary Shelley's *Frankenstein* is famously reinterpretable. It can be a late version of the Faust myth, or an early version of the modern myth of the mad scientist, the id on the rampage, the proletarian running amok, or what happens when a man tries to have a baby without a woman.<sup>2</sup> Mary Shelley invites speculation, and in the last generation has been rewarded with a great deal of it.

From professionals, that is. Since 1823, the year when the novel's title characters and plot first became public property, the general public has seemed remarkably little divided about what the action signifies. A Californian researcher recently employed to find out what the public thinks of scientists was able to summarise his findings wordlessly, with a quick sketch of Frankenstein's Monster. Readers, flingers, people who are neither, take the very word Frankenstein to convey an awful warning: don't usurp God's prerogative in the Creation-game, or don't get too clever with technology.

Yet this is by no means what knowledgeable first readers in 1818 were likely to think, or on the evidence of early press comment did think. All three serious reviews in 1818 mention that the novel is topical. No-one appears to discern, as some modern critics do, an allegory of revolution or popular unrest, instead they suspect it of covertly promoting 'favourite projects and passions of the times'. By 'projects' must be meant the novel's network of allusions to contemporary science — not science as formally taught, but current scientific activity as represented to the British public in the 1810s by lectures, newspapers, a few accessible books, above all the serious *Reviews*.

The idea Mary Shelley famously hit upon in a house rented by Byron beside the shores of Lake Geneva between 16 and 29 June 1816 almost certainly does draw on a scientific dispute, conducted in lectures afterwards published as books, the first of which was the subject of an article in the *Edinburgh Review* the previous year.<sup>3</sup> The novel which grew from this anecdotal beginning introduces a range of scientific *means*, reported as such, particularly in the *Quarterly Review*, in the years 1816–18: topics such as electricity and magnetism, vivisection and Palae-

exploration — and the spectre of new radical French work in what became evolutionism.<sup>4</sup>

After a long, costly European war, these were years of recession, social unrest, and much frantic comment, in moods ranging between outrageous and outraged, in media that included popular papers calling themselves black, red and yellow. From early 1817 the pro-government press, including the leading cultural journal, the Anglican and Tory *Quarterly Review*, published articles calling for press censorship, especially of radical materials intended for a popular readership.<sup>5</sup> From 1818 the *Quarterly* several times called for the revival of the long-neglected charge of blasphemy against irreverent writings.<sup>6</sup> In 1819 it for the first time directed this call against a serious book on evolution science — with which, as I shall show, *Frankenstein* itself is directly implicated.<sup>7</sup>

The 1818 *Frankenstein*, which had drawn nomination, energy, importance from lectures and journals, had lived by the media, and after 1819 might well have died by the media. The public controversy concerning some of the kinds of science represented in *Frankenstein* endangered the book's future, for it read differently after readers became more knowing. It is not so much because of what Mary Shelley thought, but because of what readers thought, that *Frankenstein* became a substantially different and less contentious novel when reissued in popular form in 1831.

However unlike their apprehensions, modern critics are likely to be looking at the same text of *Frankenstein*. It will be a reprint of this very third edition of 1831, which Mary Shelley not only changed but, in a new Preface, interpreted — as the story of a human endeavour to mock the stupendous mechanism of the Creator of the world.<sup>8</sup> That is not an impression easily left by the novel in its 1818 form. But in 1831 Mary Shelley added long passages in which her main narrator, Frankenstein, expresses religious remorse for making a creature, and it is on such passages of reflection and analysis that the empathetic modern reader is encouraged to dwell. Our current understanding of *Frankenstein* is disproportionately impressed by passages introduced in what

3. See e.g. John Barrow, *Cape Buena Memoria: or the Question whether Asia and America are Contiguous*, *Quarterly Review* 18 (1818), 457–58 and G. D'Almeida's review of eight works on the subject, *Quarterly Review* 22 (1820), 1–34.

4. See especially R. S. Silliman, *Quarterly Review* 16 (1816), 225–28.

5. E.g. article on John Bellamy's translation of the New Testament, *Quarterly Review* 19 (1818), 250–51.

6. Key evidence for this connection appears in the article on evolution in the *Quarterly*, 1820, for which see n. 5 above. That article is reprinted as Appendix C to my edition, *Frankenstein, Or, The Modern Prometheus* (The 1818 text), ed. Milton William Pickering, 1973, reprinted as a World's Classics paperback (Oxford, 1996), 229–51.

7. Mary Shelley, Preface to 1831 ed., Revis. 1, Bennett and Charles E. Robinson, eds., *Mary Shelley Reader* (NY: Oxford University Press, 1986), p. 170.

<sup>1</sup> *Frank James Litton's Supplement* 4 April 1973. Reprinted with permission of the author.

<sup>2</sup> See Lewis Mumford, *The Myth of the Machine*, *Daedalus* 52 (1963), 236–57.

<sup>3</sup> *Edinburgh Review*, 1816, 1817, 1818, 1819, 1820, 1821, 1822, 1823, 1824, 1825, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910, 1911, 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927, 1928, 1929, 1930, 1931, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942, 1943, 1944, 1945, 1946, 1947, 1948, 1949, 1950, 1951, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 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might be called the composite *Frankenstein*, the product of a decade and a half of religious-scientific controversy.

It is of course standard practice for an editor to select the last version the author revised, on the grounds that no-one has a better right to determine its final form. But, like all rules, this one exists to be challenged. Wordsworth's early versions of 1799 and 1805 of his great poem *The Prelude*, first published posthumously in 1850, are now widely preferred to the much-revised text of 1850. Last year, Simon Gattell for Oxford's Worlds Classics passed over the standard 1895 text of *The Return of the Native* in favour of the first edition (1878), nearly summing up the historical reasons why the two differed, and the imaginative reasons why the first was to be preferred. The case for *Frankenstein* (1818) resembles these two precedents, since an urgent, unusual, brilliantly-imagined earlier book has been neutered or at best over-fieghted with incensural additions. In one respect the case for the early *Frankenstein* is the strongest of the three: The newsworthiness of this novel meant that after publication text and author were subjected to outside pressures which have little to do with aesthetics, and make it hard to say that it was she who changed her mind.

Within the last two decades the 1818 text has become available again. The first scholarly edition by James Rieger (1974, reprinted 1982) remains in print, and since 1990 two new editions based on 1818 have come on the market. The more helpful versions of either text now give some account of the variations between the two. But it requires an external, circumstantial perspective to show how the first *Frankenstein* arose, and why the second is almost a new book.

The single most striking new fact to emerge is the link between *Frankenstein* and the celebrated, publicly-staged debate of 1814-19 between the two professors at London's Royal College of Surgeons on the origins and nature of life, now known as the vitalist debate. The issue was raised in a lecture of 1814 by the senior of the surgeons, John Abernethy, who apparently sought to unite religious and secular opinion with a formula acceptable to both. Materialist science, concentrating on the organisation and function of living bodies, could not, Abernethy acknowledged, adequately explain life itself. A mysterious 'supradded' force was needed, some 'subtle, mobile, invisible substance', analogous on the one hand to soul and on the other to electricity.<sup>8</sup>

Cambridge scholars are aware of Abernethy because Coleridge approved of him, and built on his arguments in an essay, 'The Theory of Life', which remained unpublished in the poet's lifetime. Some modern Shelleyans have recognized that Abernethy's antagonist William Lawrence was Percy Shelley's physician (and in the very years of

<sup>8</sup> John Abernethy, *An Enquiry into the Probability and Reasonability of Mr Hunter's Theory of Life* (London: Longman, etc., 1814), pp. 48, 52.

vitalist row, 1814-19).<sup>9</sup> But in fact no critic has examined Lawrence's boldly sceptical lectures in relation to the writings of the intellectually close-knit Shelley group, which at this time included Percy and Mary Shelley, Peacock, Hunt and Byron.

Unimpeded by being Abernethy's colleague and former protégé, Lawrence took care to make the materialist position sound like the professional position. A more brilliant, cogent writer than Abernethy, he was also a charismatic lecturer and a formidable adversary. Historians of science make claims, if often cautious ones, for Lawrence's contribution to the long-running evolution controversy. But his major book, *Lectures on Physiology, Zoology and the Natural History of Man* (1819), shows that he can be sceptical and discriminating over new evolutionist positions as over everything else. What seems more certain is that his succinct briefings on current Continental work, the French doctor Bichat's research into the nerves and connecting tissue, or the German J. F. Blumenberg's ethnography, must have opened up the way anatomy and physiology were taught to London medical students in the second decade of the century.

Their friendship with Lawrence probably ensured that both Shelleys wrote more accurately and less speculatively on scientific matters than they otherwise might. But he also had a strong imaginative appeal for their disaffected group: after the defeat of the French Revolution, his style of science offered an alternative way of envisaging progress, free of the old discredited political vocabulary. This was above all *natural* history—the early evolutionists' non-scriptural and for some minds anti-scriptural narrative of the life of animal species. Mankind, the other animals, even plants now appeared capable, in response to their environment, driven by mechanisms of their own, of adaptation or what 1790s progressives had called perfectibility. The writers in turn shewed Lawrence an alternative career route: a literary platform from which to address the general public over the heads of cautious colleagues.

It would be possible to treat Lawrence's role in *Frankenstein* as a standard case of influence; some ideas from Erasmus Darwin and Humphry Davy also figure here and there in the novel. But the coincidences between Lawrence's best book and Mary Shelley's are so different in scale that they need following through as, in effect, a single intermeshing story. Both books were associated with aggressive materialism, and this seems to be the main reason why both became *causae celebres*. It was because each writer took on characteristics of the other's work that Lawrence came to read like a sinner as well as a medical professional, and Mary Shelley could be deemed to have attacked Christianity. In

<sup>9</sup> For pathbreaking work on P. B. Shelley's education and scientific contacts, especially William Lawrence, see Hugh J. Luke Jr., 'Sir William Lawrence: Physician to Shelley and Mary', *Poetry on English Language and Literature* (1965), 141-52, and N. Crook and D. Canton, *Shelley's Venomed Metaphy* (Cambridge: C.U.P., 1986).

fact it is only when their stories are considered together that we see the extent of the cultural challenge offered by this striking episode in Romantic literary experiment and in the social history of science.

Lawrence was appointed a second Professor at the Royal College of Surgeons in 1815, and in March 1816 gave the two lectures which opened his campaign against Abernethy. The first is a wide-ranging survey of recent Continental work in the physical sciences, while the second, 'On Life', focuses rigorously on the issue raised by Abernethy as physiology and anatomy can properly handle it. For biologists (a word Lawrence allegedly introduced to Britain), life is the 'assemblage of all the functions' a living body can perform. We have done what we can, Lawrence says, to find origins and 'to observe living bodies in the moment of their formation . . . when matter may be supposed to receive the stamp of life. . . . Hitherto, however, we have not been able to catch nature in the fact.' On the contrary, what we can observe of animals is that 'all have participated in the existence of other living beings . . . the motion proper to living bodies, or in one word, life, has its origin in that of their parents.'<sup>1</sup> The materialist thinker sees no means of abstracting the animating power from the animal.

By the time of his 1817 lectures, Lawrence was willing to identify Abernethy as his opponent, and openly to ridicule the argument that electricity, or something analogous to it, could do duty for the soul. 'For subtle matter is still matter; and if this fine stuff can possess vital properties, surely they may reside in a fabric which differs only in being a little coarser.'<sup>2</sup> But even in the more guarded 1816 lectures there was an offensive tone of superiority in the demand that the Life question should be left to the real professionals. In this case that meant excluding chemists, including presumably Davy, whom Abernethy had recruited. Organized bodies must be treated differently from . . . inorganic. . . . The reference to gravity, to attraction, to chemical affinity, to electricity and galvanism, can only serve to perpetuate false notions in philosophy. The great John Hunter, after whom his and Abernethy's lectures were named, would have been on his, Lawrence's, side when it came to method: He did not attempt to explain life by . . . *a priori* speculations, or by the illusory analogies of other sciences; . . . [but] by a patient examination of the fabric, and close observation of the actions of living creatures.<sup>3</sup>

Mary and Percy Shelley, Lawrence's friends, were living near London in that March of 1816, when Lawrence first put the materialist case against spiritualised vitalism. On June 15 1816, at Geneva, Byron's doctor Polidori recorded in his diary that he and P. B. Shelley had a

conversation 'about principles — whether man was to be thought merely an instrument'.<sup>4</sup> Fifteen years later Mary Shelley remembered several conversations on subsequent days, with Byron participating, she shortly adding, on 'the nature of the principle of life, and whether there was any probability of its ever being discovered and communicated.' On 16 June, most members of the party agreed to take part in a ghost-story contest.

There surely cannot be much doubt that the group were speaking of the vitalist debate, and presumably of Lawrence's lectures, which were on sale by June 1816 in book form. In fact, Mary's contribution to the ghost-story competition to some degree acts out the debate between Abernethy and Lawrence in a form close enough for those who knew it to recognise. Frankenstein the blundering experimenter, still working with superseded notions, suggests the position of Abernethy, who proposes that the superseded life-element is analogous to electricity — particularly when he uses a machine, reminiscent of a battery, to impart the spark of life.<sup>5</sup> Frankenstein's other procedures are made implicitly anti-life, recalling Lawrence's unfavourable comparison of inorganic with organic methods.<sup>6</sup> The fact is that in 1818 Mary Shelley's portrayal of her hero is harsh, contemptuous, with a touch of Lawrence's sarcastic debating manner. Not so much a mythical Prometheus, more a humble Sorcerer's Apprentice, Frankenstein as first devised seems to know too little science rather than too much.

Compared with the professional qualifications of the novel's first two narrators, Frankenstein and Walton, an inventor and an explorer, the Creature has few claims to act as the third. Just as he owes his existence to a unique and unnatural process, he defies all odds, as a parentless being, by learning language at all. Yet the voice in which he narrates the second of the three volumes is impressive, in a strange register appropriate to a witness brought back from the remote past — a phrase the scientific showman Georges Cuvier had recently used to describe the fossils he patiently reconstructed into Heliike animals.<sup>7</sup> He is more eloquent than Frankenstein in the conversations that introduce and end their meeting, and still more persuasive when relating his life-history, an exercise in self-observation, social observation, and retrospective

4. (Ed.) W. M. Rossetti, *Diary of J. W. Polidori, 1816* (1911), quoted James Reiger (ed.), *Introduction, Frankenstein, or the Modern Prometheus: The 1818 Text* (Chicago: U. of Chicago Press, 1962), p. xvii.

5. See opening sentences, *Frankenstein* (1818), ch. 4.

6. Not only does he rob graves for the flesh of the dead (ed. 3); he performs vivisection ('burials the living animal'). This, along with other forms of cruelty to animals, was particularly objectionable to humanitarians and principled vegetarians such as the Shelleys.

7. Georges Cuvier (1769-1852) popularised paleontology, in a triumphantly inorganic presentation of the remote past. 'My key, my principle, will enable us to restore the appearance of these long-quieted beings and relate them to the life of the present' (Cuvier, *Essay on the Theory of the Earth*, Edinburgh, 1815). See also *Edinburgh Review* 20 (1812) 382, and Loren Eiseley, *Dinosaur's Century*, p. 84.

1. William Lawrence, *An Introduction to Comparative Anatomy, being two introductory lectures delivered at the Royal College of Surgeons* (London, 1816), 140-42.

2. Lawrence, *Lectures on Physiology, Zoology and the Natural History of Man* (London: Cadell, 1819), Lecture 3 (1817), p. 84.

3. *Ibid.*, *Introduction to Comparative Anatomy* (1816), pp. 161-63.

analysis. By tracking his own maturation, from a solitary to a social animal, the Creature succeeds in the task Frankenstein abandons, that of scientifically following up Frankenstein's technological achievement. He begins his narration on the night of the experiment, substituting his careful record for Frankenstein's exclaimable recollection of the same events. Still unable to focus his eyes, the Creature blundered round Frankenstein's lodgings in the big Ingolstadt rooming house, before finding himself, very cold, out in the woods near the town. His visual impressions were still unclear, but he now began to make the distinction between light and dark. He might have died of hunger and exposure had he not found berries he instinctively ate, water to drink, and a cloak to wrap himself in. He responded, pleasurably, to moonlight and birds when still unable to name them, let alone classify, the little winged animals who had often intercepted the light from my eye.<sup>1</sup>

In this chapter Mary Shelley employs language experimentally and imaginatively, in a way that anticipates the scenes in William Golding's novel *The Inheritors* where the Neanderthal narrator describes his first encounters with *homo sapiens*. But there are conventionally-written eighteenth-century precedents, in the literature on Wild Boys and Girls who had supposedly grown up among wild animals, or at any rate isolated from humanity. Already in his *System of Nature* (1735), Linnaeus speaks of *homo ferus* as a distinct human species, four-footed, mute and hairy,<sup>2</sup> and lists ten recorded instances from 1544. The most famous case of Mary Shelley's day was the Wild Boy of Aveyron, whose discovery came to light in Paris in 1799. For what it reveals of early human physical and cognitive development, this remains a classic instance, thanks to the devoted teaching and careful reporting of Jean-Marc Gaspard Itard, the young physician of the Paris institution for deaf-mutes, who cared for the boy and analysed his problems as the loss of nurture by human parents in infancy.<sup>3</sup>

Rousseau and Monboddo enthusiastically contributed to the wider debate, over whether the wild man is a sub-species, and if so how he relates both to advanced man and to the primates. Unlike both, but like J. F. Blumenbach, Lawrence in his *Natural History of Man* (1819) argues against generalising from such cases: the child concerned was likely to have been born an idiot, and had either strayed from home or been cast out. The lack of bodily coordination in a case such as that of Peter of Hameln, an earlier wild boy brought in the 1720s to England, and the Aveyron boy's difficulty in learning language, had explanations less astonishing than Monboddo's supposition that such children represented a sub-species between mankind and the primates.<sup>4</sup>

8. Carl upon this globe without physical strength or innate ideas . . . it is only in the heart of society that man can attain the permanent position which is his natural destiny. 'Hand opening sentence of Preface to *The Wild Boy of Aveyron* (1807). (New York: Appleton-Century-Crofts, 1962), p. xi.

9. Lawrence, *Lectures on Physiology . . . and Natural History of Man*, pp. 134-40.

A significant aspect of Mary Shelley's treatment of the Creature's rearing in isolation from humanity is its avoidance of idealised, sentimental or scientifically-bold claims. The Creature's life in the woods is neither superior, nor even natural: it raises no question of his belonging to a species other than the human. So firmly is that speculative historical narrative omitted that it seems as if Mary Shelley, like Lawrence, deliberately avoided committing herself to the evolutionist hypothesis both Erasmus Darwin and Lamarck espoused, that all forms of organic life had evolved from single cells. Yet the Creature's life-experience hardly seems scientifically ill-informed, since it bears out the careful physiology of Herd's leading contemporary Bichat, in *Traité sur les membranes* (1800), *Recherches physiologiques sur la vie et sur la mort* (1809), and *Anatomie Générale* (1801), works which explain the functions and connecting tissue of the nerves, senses and organs, and give the most accurate account yet of every creature's sensitive interactions with its environment.

In fact, once it is considered in relation to fiction's established conventions, the Creature's career works on two levels, as a survival-story like Robinson Crusoe's, and as a story which does after all have historical implications, for it can be read as an all-generical account of the progress of mankind over aeons of time. That steepest into allegory evades, yet for the knowing reader might also bring to mind, the evolutionist's long view of the ascent of the species.

For all the excellence and the intriguing suggestiveness of volume II as a Voltairian fable, most modern readers probably find volume III the most brilliantly imaginative and original part of the book, and this seems as true of its science as of its characterization. There are signs by now of a rich literary interaction between the Shelleys and Lawrence, one that flows in both directions. In his polemical 1817 lecture on the Life question, Lawrence seems to stray into Mary Shelley's Gothicised rhythms and vocabulary — 'an immaterial and spiritual being could not have been discovered among the blood and filth of the dissecting room'.<sup>5</sup> In turn Mary Shelley seems to draw more in her later scenes on details from different writings by Lawrence, not necessarily contemporaneous. They include entries he contributed to Rees's *Cyclopaedia*, particularly one on Monsters, and an academic paper of 1815 on the case of a boy born without part of his brain, whom Lawrence had cared for in his own home.<sup>6</sup> That piece of fieldwork must surely have helped prompt Mary Shelley's 'hideous phantom',

1. *Ibid.*, p. 2.

2. Lawrence also contributed entries on 'Cranium' and 'Man' for Rees's *Cyclopaedia* (individual volumes undated, edition complete by 1819). The *Quarterly's* attack on medical science (1820) refers metaphorically in passing to the *Cyclopaedia* articles as 'borrowings from the school of modern French philosophy', namely, Cuvier and Bichat, and from unnamed 'frenchifying physiologists of Germany'. Percy Shelley had the obviously drawn attention to the debt of Frankenstein to German physiology in his hardly as yet well-known to the English public, in the opening sentences of his anonymous Preface to the 1818 *Franzmann* (7).

since *Frankenstein* must from the start have involved a scientist studying the relations of brain to physical functions, who fosters (or fails to foster) a monster. Even more clearly, the Lawrence case provided a plot for Peacock's satire *Melincourt* (1817), in which an intellectual called Foster (full form of the name Foster) adopts an orang-utan and tries to teach him to speak. Foster fails in his immediate objective, but a richly corrupt system enables him to secure his protégé a baronetcy and a seat in Parliament.

Lawrence's *Natural History of Man*, his one full-scale book, takes as its topic the human species, considered as a variety of animal. Lawrence states that his text is substantially based on lectures he gave in 1814, which no doubt explains why so much of it surveys the current state of knowledge in the appropriate field—ethnography, with inputs from anatomy and sociology. In his division of racial types into five, and his emphasis on physical differences between humans and primates, Lawrence largely repeats Blumenbach, with and without attribution. But in his freshest, most dynamic passages he works his own witty, distinctive variations on Blumenbach's memorable observation, 'man is the most perfect of domesticated animals'.<sup>3</sup> Most domesticated animals are smaller, weaker, less audacious than their wild-life ancestors. In an offensive, powerful passage, Lawrence develops a Swiftian put-down to humanity, by remarking on the tendency of the European upper orders to 'breed' by sexual selection, for physical beauty and elegance rather than strength or ability. But to judge by the ugly, stunted London Cockney, examples of degeneracy are plentiful among urban populations. Lawrence goes on to reflect that inbreeding within the European royal families has thrown up many recent cases of hereditary weakness and madness.<sup>4</sup> He need not remind his readers of the obvious example, England's George III.

Several topics Lawrence considers in his *Natural History* reappear, in yet more ingenious adaptations, in the third volume of *Frankenstein*. Mankind as a domesticated animal, pretentious but flawed, could also be the best way to summarise Mary Shelley's larger theme. Incidentally she touches on Lawrence's professional issues: heredity, fosterage and nurture, sexual selection and the perverse adoption of choices which

lead to extinction. She displays them by portraying the aristocratic Frankenstein as unhealthy, even incestuous, in their marriages in the first edition Frankenstein's bride Elizabeth is his first cousin, who has been brought up like a sister. Frankenstein exhibits a neurotic resistance when asked to fix the date of their wedding. His excuse to himself and us is that he must first make a female Monster for the Creature to mate with, thus helping to underline how much stronger and healthier are the Creature's instincts. Frankenstein indeed seems more aroused when making and dismembering the female Monster than at the prospect of joining Elizabeth on his own wedding night. It is, of course, the Creature who gets there first. This means that Frankenstein has a hand in his bride's death—because he brought the Creature to life because his neglect of him afterwards indeed made a Monster, and because he neglects Elizabeth too. That hideously terminated marriage kills Frankenstein's father, and raises the prospect that the family will become extinct.

When it comes to parenting, Frankenstein is himself a monster. He will not acknowledge his only child, the being he chooses to call Monster, Fiend and Demon, though no human father ever played so thorough-going a role in any birth. *Frankenstein* ironically illustrates Lawrence's scholarly observations about parenting—the medical mishaps to which the birth-process is subject, the one sure feature of any birth, which is the involvement of at least one parent of the same species. But, if this parent-child relationship after a fashion obeys the rules, the roles of those involved become perversely displaced. After Frankenstein vows to hunt down his 'progeny', the Creature nurtures Frankenstein to keep him alive, feeding him for example with a dead hare: it's only when killing for Frankenstein that the vegetarian Creature kills for food. He still tries in his way to live by the precept that the child is father to the man—and, anthropologically, primitive man is father to sophisticated man. But the Creature has slowly emerged as the dominant partner, though originally he was a dependent, a deformed huge child. Of the two antagonists, he is the stronger and better adapted when the chase ends in the Arctic, where natural conditions are at their most severe. He shares Frankenstein's fate of extinction, but goes to it voluntarily, with a consoling sense that even he now returns to nature.

The sequence of events after publication makes a story on its own, significant and intricate because it involves so many key institutions—the law, commercial publishers, the journals, the Royal College of Surgeons. The three reviews the novel received queried its attitudes,<sup>5</sup> and this is unsurprising since, though anonymous, it was dedicated to the

3. See entry 'J. F. Blumenbach' (1752-1840), *Dictionary of Scientific Biography*. In a series of major articles, Timothy Lenton has demonstrated that Blumenbach's 'materialist vision, which was sceptical, cautious and scepticopiously environmental, contributed importantly to the scientific thought of his Göttingen colleague Kant in the 1780s and 1790s, and in helping generate a philosophy of biology had a key influence on the early nineteenth-century emergence of the subject (Lenton, Kant, Blumenbach and Vital Materialism in German Biology', *Journal of the History of Biology* 71 (1980), 77-108; 'The Development of Transcendental Naturphilosophie', *Studies in the History of Biology* 5 (1981), 111-205). As a key English translator and follower of Blumenbach, Lawrence's intellectual role takes on enhanced significance; so does Frankenstein, once it can be seen to convey quite sophisticated biological concepts in a familiar form.

4. *Lectures . . . and Natural History of Man*, pp. 459-60; 'Natural History of Man', Section II, ch. VI, subsection on 'Powerful Influence of Attention to Breed' and 'Transition to the Point to the Human Race'.

5. *Quarterly Review* 18 (1818), 376-85; *Edinburgh Magazine and Literary Miscellany* 2 (1818), 249-53; [Scott], *Blackwood's Edinburgh Magazine* 2 (1817-18), 613-58.

1790s radical William Godwin. Even so, Mary had a kinder, larger press than her husband had in his lifetime—and better reviews than the Shelley's must have feared. But the next year the publication of Lawrence's *Lectures on Physiology, Zoology, and the Natural History of Man* provoked the virulent and prominently placed denunciation in the *Quarterly Review* of November 1819. This unusually long opening article surveyed the vitalist controversy over five years, and itself constituted a major event in the public reception of evolution theory. Encouraged by his editor William Gifford, the author George D'Oyley devoted most space to Lawrence, denouncing him for taking the leading role on the materialist side in the vitalist issue. He included Lawrence's other published writings in the indictment, but surprisingly omitted his treatment of heresy and breeding, possibly out of regard for good taste. D'Oyley's tone is exceptionally harsh and personal: after dealing with six other works on either side, he abruptly returns to Lawrence, and calls on the Royal College of Surgeons to discipline him. On pain of dismissal he should be made to withdraw the offending passages, and to undertake not to write again in the same vein.

The Royal College of Surgeons did indeed suspend Lawrence, and going a little farther than asked, would not reinstate him till he withdrew the book entirely. He did so for fear of losing his appointment as Surgeon to some of the London hospitals. The result ironically was that during the next few years several publishers pirated the volume, under cover of a ruling of 1817 by the Lord Chancellor, Lord Eldon, that where a book was blasphemous, seditious or immoral the author should not be protected by the law of copyright.<sup>6</sup> In March 1822, under pressure again from the Royal College, Lawrence tried to claim his copyright, and initially obtained an injunction restraining the firm of J. and C. Smith from selling their edition of his book. The Smiths' lawyers argued that the work was not protected because of passages 'hostile to natural and revealed religion'. After reading both the book and its reviews, Lord Eldon upheld the publishers, even though the book would in consequence remain in circulation, in cheap popular formats. Lord Byron lost similar cases, also tried before Eldon, in February 1822 and in 1823, involving *Cain* and *Don Juan* respectively.

The great notoriety of Lawrence's volume between 1819 and 1822 becomes part of the post-publication history of *Frankenstein*. For the author, her circle, potential publishers, and a significant number of

6. In addition to the first edition by J. Calver (1819), the British Library owns early pirated editions by W. Bantock (1822), Kaygill & Rice (1822) and J. and C. Smith (1823). There was a further edition in 1823 by Richard Cadell, the radical publisher jailed for reprinting Paine's critique of the Bible. *The Age of Reason* (1819), Cadell wrote an Address to the Members of Science (1821), singling out Lawrence for praise as a popular radical writer, and dedicated his edition of Lawrence's book ironically to Lord Eldon. See O. Trankin, *Basic Science, Medicine and the Romantic Era*, in *The Double Edge of Justice* (Baltimore: Johns Hopkins U.P., 1977), p. 355.

informed readers, whether their sympathies were theological or materialist, the plot of *Frankenstein* was either already associated with Lawrence's style of radical science, or was imminently in danger of becoming so—until, that is, Mary Shelley removed most of the telltale signs.

For the 1831 edition Mary Shelley added remorseful passages which made Frankenstein a more sympathetic as well as a more religious character; she pared away details of his scientific education and, most interestingly, changed all those facts about the Frankenstein family's marriages that in the first edition touch on genetic concerns. Her alterations were acts of damage-limitation rather than a reassertion of authority. They perhaps seemed advisable when surgeons and their experiments became the objects of public hysteria because of the Burke and Hare murders in Edinburgh in the late 1820s. What made them inevitable was that conservatives everywhere now interpreted the plot of *Frankenstein* as they wished to, and expected most readers to agree. As a writer in *Fraser's Magazine* (November 1830) remarks in passing, 'A State without religion is like a human body without a soul, or rather like a human body of the species of the Frankenstein in Monstey, without a pure and vivifying principle.'<sup>7</sup> Before Mary Shelley made the novel fit this description, a journalist confidently claimed it for Abernethy's rather than Lawrence's side in the vitalist dispute.

## LAWRENCE LIPKING

*Frankenstein, the True Story;*  
or, *Rousseau Judges Jean-Jacques*<sup>1</sup>

In the past few decades, a period during which Mary Shelley's *Frankenstein* has been received into the canon of English literature—to judge from the number of editions, books, essays, and course adoptions—a remarkable critical consensus has grown up around it. Consensus may seem a peculiar term, as I am aware. For no work has been more hotly debated. Indeed, the role of *Frankenstein* in the canon is exactly to be the sort of text one argues about. Like *Hanuel*, *Lycidas*, and *Tom of the Sower* in previous generations, it furnishes a testing ground for every conceivable mode of interpretation, in case books or collections of articles where students can be instructed in the infinite varieties of criticism and fledgling critics can cut their teeth on amazing new readings.

7. Quoted Lee Sparrow, 'Mary Shelley's *Monstey*: Politics and Psyche in *Frankenstein*', in (ed.) Lesnie and Koepfmanacher, *The Evolutions of 'Frankenstein'* (Berkeley, U. of California Press, 1979), p. 166.

<sup>1</sup> Published (with permission) here for the first time.