Exerpted from *Frankenstein and the Spark of Being*

**Bolt from the blue? Frank A.J.L. James and J.V. Field describe how Regency period ideas about science and electricity influenced Mary Shelley's tale of an infamous creation.**

Some of the contextualisation that historians of literature seem inclined to shun provides us with insights that make Frankenstein a significant document for the history of science. Mary Shelley uses many elements of the natural philosophy and chemistry of her time in her story. Her novel accordingly makes interesting reading as non-expert testimony to the philosophical and scientific ideas of its time. It is notoriously difficult to come by such testimony in any period much before our own, so it is curious that this aspect of Frankenstein has received so little attention. This neglect is the more curious in that Mary Shelley lived in intellectually interesting times -- and seems, indeed, to have been personally acquainted with a number of the people who made them so.

That the book was in some sense in tune with its own time is reflected by the favourable reception it initially received. In fact, it was turned into a stage play in the 1820s -- complete with some distortions of the plot -- and the novel was re-issued many times in its somewhat amended third edition of 1831.

In line with today's popular conceptions of the culture of its time, the origins of Frankenstein make a fairly picturesque story in themselves. It begins in the shadow of the Alps. During the Napoleonic wars, British citizens had generally not been able to travel freely on the Continent, though an exception is provided by the distinguished and celebrated chemist Humphry Davy (1778-1829). The situation changed with the return of peace, at first seemingly insecure, in 1815.

Thus, the summer of 1816 found a small group of English visitors assembled beside Lake Geneva, and largely confined indoors by the `ungenial' weather. On one such evening, the after-dinner conversation turned to ghost stories. Those present at this discussion were the poet Lord Byron, his friend Shelley, Mary Wollstonecraft Godwin (soon to become the second Mrs Shelley), her half-sister Claire Clairmont (currently Byron's mistress) and probably Byron's personal physician, John William Polidori.

The average age of the party was just twenty-two. They had been reading some German ghost stories, in French translation, and at the end of the evening Byron suggested that each of those present should write a ghost story. The words `ghost story' seem to have been interpreted as indicating that the tale should contain something of the fantastic or the supernatural, since no ghost is to be found in either of the tales the evening spawned: Frankenstein (London, 1818) and a short novel called The Vampyre (London, 1819), partly based on an idea of Byron's but actually written by Polidori.

In view of the wide dissemination of the deformed versions of the novel, we hope we may be excused for providing our own sketches of relevant parts of its plot. The protagonist, Victor Frankenstein -- whose first name may carry an overtone of irony -- is a scion of one of the leading families of the Genevan oligarchy. His young mind is fired with enthusiasm by what he reads in the works of Agrippa yon Nettesheim, Paracelsus and Albertus Magnus. At the time the novel was written, these authors were generally esteemed as the repositories of medieval and Renaissance wisdom, particularly in regard to Alchemy.

At the age of seventeen, `imbued with a fervent longing to penetrate the secrets of nature', Victor enrols as a student at the University of Ingolstadt in Bavaria. The choice of university firmly situates the story in the past, since the University of Ingolstadt, founded in the fifteenth century and long a bastion of Catholic orthodoxy, moved to Landshut in 1800 (and to Munich in 1826). Whatever Mary Shelley's personal beliefs were, she could certainly rely on most of her English, largely Protestant, readership finding anti-Enlightenment overtones in the name of Ingolstadt. Victor's teachers there include a charismatic professor who inspires him to make chemistry his `sole occupation'.

The character of the professor, whose name is Waldman, may be partly based on that of Humphry Davy, Professor of Chemistry at the Royal Institution from 1801 to 1812. Davy was known personally to Mary's father. Indeed, William Godwin seems to have been on friendly terms with most of the London intelligentsia. At the least, Waldman certainly has a view of chemistry very close to that of Davy. As Davy's friend, the poet and philosopher Samuel Taylor Coleridge, was to put it in 1823, Davy was `the Father and Founder of Philosophic Alchemy'.

Waldman is harsh in his comments on Victor's heroes, but promises much of modern science, whose practitioners, he says, `have acquired new and almost unlimited powers'. Spurred on by what he learns, two years' work are enough to bring Frankenstein to the point where he has `made some discoveries in the improvement of some chemical instruments' (that is, chemical apparatus). These discoveries are apparently connected with `the principle of life`, which Frankenstein has come to understand by studying the processes of decay. As this part of the story is told by Frankenstein himself, details of the discoveries are withheld on the (entirely reasonable) plea that they have brought the narrator such misery that he will not pass them on. All the same, it is clear that readers are expected to accept the idea that the same forces are at work in the dissolution, as in the formation, of national bodies. This belief has alchemical resonances, going back to the ancient and characteristically obscure dictum of Heracleitus that 'the way up and the way down are one'. Percy Shelley could no doubt have quoted that in its original Greek. Having grasped something of the principles involved, it follows, in good alchemical fashion, that Victor can make them work for him. Mary Shelley does not spell this out. Possibly she is taking it for granted that `Knowledge is Power'. This opinion is expressed by Sir Francis Bacon (15611626), whose views were held in high regard by natural philosophers in the early nineteenth century. As Frankenstein himself puts it `I became myself capable of bestowing animation upon lifeless matter'.

Unlike the original Creator, however, Frankenstein is not interested in lower forms of life. Nor does he propose to follow the pattern of Adamic creation found in various stories to do with the creation of a golem, stories which were current at the time Frankenstein was being written. Since the early eighteenth century, one such story had come to be associated with the already legend-encrusted figure of Rabbi Jehuda ben Bezalel (known as Rabbi Loew, that is `Lion', 1513-1609). His capacity to absorb folklore was no doubt connected with the fact of his having lived in the famously magical environment of Prague at the time when it was ruled by the Emperor Rudolf II (where, in a more recent fantastical story, Janacek has the father of the heroine of The Makropoulos Case discover the elixir of life).

However, whereas all the golem stories mimic Adamic creation by having the golem fashioned from clay or flour and water and then brought to life by charms, or the sacred power of God (for those of a more reverent bent), Frankenstein is a vitalist. That is, he proposes to give life back to previously living matter, apparently taking it for granted that living matter is of some special kind. This debate is, of course, still with us, though its area of concern is now somewhat different. In any case, it seems likely that in our own time, as in the early nineteenth century, lay opinion would be on Frankenstein's side. Somehow, perhaps under the influence of Gothick tales, which were popular in literary form in Mary Shelley's time and are more widely disseminated by the cinema in our own, it follows naturally that to acquire the material for making a living being Frankenstein must have, as he put it, `haunted the charnel houses of Ingolstadt`.

Since he apparently needs to use such material, it is curious that when, under pressure from the Being, who has found that humans will not accept him, Frankenstein consents to make him a mate, the place he chooses for his work is a remote island in the Orkneys. There is no mention of the location of the nearest charnel house. However, no critics seem to have remarked upon this peculiarity in the narrative. Nor indeed has there been comment on the curious fact that, while Frankenstein can apparently give life to a Being of his own construction, he cannot (as he admits) exercise the same power over the corpses of his nearest and dearest when they are killed by the Being in revenge for mankind's rejection of him and Frankenstein's destruction of the half-finished female.

No details are given about how the bodies Frankenstein proposed to animate were actually constructed, but once the first is fully formed, in Frankenstein's apartment in Ingolstadt, he collects the `instruments of life' about him so as to `infuse a spark of being into the lifeless thing'. The Being stirs into life and Frankenstein, in horror, rushes out of the room. His explanation for his revulsion is muddled. He describes the Being's ugliness but at the same time admits he himself had given it that appearance and exclaims against human changeability:

The different accidents of life are not so changeable as the feelings of human nature. ... now that I had finished, the beauty of the dream vanished and breathless horror and disgust filled my heart.

If one is attempting to read this as a description of a real experiment, one's next question must surely be to ask what result he had hoped for. In Gothick, however, such literal-mindedness is not appropriate, and it appears to follow quite naturally that Frankenstein is then prostrated by a physical illness brought on by his moral perturbation. While Frankenstein is thus incapacitated, the Being leaves the apartment. This is the fatal event which determines the remainder of the action of the novel. This action sees Frankenstein destroyed as completely as any flawed protagonist in a Greek tragedy. The fatal incident thus invites a moral judgement: the irresponsible rejection of the Being he has created is clearly blameworthy and the ensuing illness is abstract Justice's way of making sure Frankenstein pays for it