Mary Shelley's *Frankenstein* is a peculiar case in the history of English fiction. Stubbornly labelled a "minor" work for years, its relevance has sporadically been emphasized by sectors of criticism which are willing to admit it is a landmark in the development of their respective trend. Thus, it has alternatively been hailed as a re-elaboration of the Promethean theme, as the work by a young girl whose talent has long been obliterated by her husband's, as an example of male appropriation of the idea of motherhood, as a pre-Marxist metaphor of bourgeois oppression, and probably other interpretations which combine features of the ones mentioned before.

My comments here will try to show that *Frankenstein* should be (an in fact is) seen as a genre initiator by most science fiction critics. Unfortunately, the validity of this assertion as a working hypothesis clashes with the academic gap between mainstream fiction and science fiction critics, who often embark on heated but useless discussions about the literary canon.

Besides the various interpretations of *Frankenstein* provided by mainstream literature critics, and its acknowledged relationship with classical mythology, the novel has become a landmark in the history of science fiction. *Frankenstein* is commonly referred to as having marked the beginning of a new mode of writing because unlike in previous tales of life creation, the new being was to be created by scientific means. In this sense, the critic Samuel Holmes Vasbinder (1976: 83) has written:

> With the emergence of speculative fiction as a legitimate area of concern for critics in the academic arena, *Frankenstein* must be evaluated in an entirely new light as a early work of his genre. The great number of literary offsprings which the book has been responsible for, and the increasingly popular use of the phrase "Frankenstein's monster" as a general term for the identification of the irresponsible use of scientific achievement, forces the novel into a new category.

In fact, *Frankenstein* has often been presented as a Gothic or near-Gothic romance because it shares some basic features with the main representatives of that trend. Although it is true that *Frankenstein* is not exactly on the same level as Ann Radcliff and Matthew Lewis' works, it seems clear, however, that it shares some elements with them which allow its classification under the "Gothic" label.

In 1951 Muriel Spark (1951: 128) already suggested that by 1818 "the limits of the horror novel had been reached, and old props of haunted castles, hanged babes and moonlit scenes, were beginning to raise a shrug rather than a shudder." Moreover, the publication of...
Northanger Abbey, Jane Austen's 1818 satire of Gothic excesses hinted at an approaching decline of that mode of writing.

Spark (1951: 128) maintained that *Frankenstein* was "the first of a new hybrid fictional species where horror was increasingly giving way to the influence of science and its effects on man both at an individual and a collective level. In other words, according to her, *Frankenstein* could / should be seen as the result of combining two opposing forces. On the one hand, "the scientific empiricism of the previous century" represented by Mary's father William Godwin. On the other hand, "the nineteenth century's imaginative reaction" personified by Coleridge. (1951: 132)

The inclusion of *Frankenstein* within the field of science fiction narrative is easily justified by the use of scientific or pseudoscientific means to create the monster. It has often been pointed out that the scientific knowledge of a girl of eighteen must have been highly limited, and therefore the scientific reading of the novel is somehow forced, although this is not necessarily so.

In fact, critics such as Vasbinder (1976), Aldiss (1986) and Mellor (1988) have pointed out that Mary Shelley was in close contact with some of the leading scientists of her time. Considering that the gap between science and the humanities was not as wide as it seems to be nowadays, it may be concluded that her knowledge of science was sound enough to produce a literary reaction like *Frankenstein*.

Regardless of her specific scientific background, it is undeniable that she was aware of the latest discoveries in *galvanism*. In her "Introduction" to the 1831 edition, Mary specifically mentions Erasmus Darwin and the experiments carried out by the Italian physiologist Luigi Galvani (1737-1798), who proved that an electric shock could cause dead muscles to twitch as if they were alive.

Furthermore, as a child Mary had met the chemist and physicist Humphrey Davy (1778-1829), who was a close friend of her father's, and was familiar with his work *Chemical Philosophy* (1812). To this it should be added that she was a warm admirer of her father's philosophical ideas and her mother's feminist concerns, and that her liaison with Shelley was highly enriching from an intellectual point of view. Consequently, it may be concluded that *Frankenstein* does not only show Mary Shelley's awareness of the new methods and scientific discoveries, but also of the social movements and literary fashions both in England and on the Continent.

The scientific relevance of the theme of life creation may go unnoticed to those readers and critics who approach the novel with a non-scientific bias. Such an approach may find obvious connections between *Frankenstein* and previous myths, legends and tales where life is bestowed upon human and non-human beings by means other than the natural. Thus, a quick reading of Mary's novel will surely discover similarities with the mythical figures of Pygmalion and the giant Talus. Likewise, it is not difficult to discover common elements between *Frankenstein* and the Jewish folk tales about golems. A glance at the corpus of Western European
literature will also detect the connections between Shelley's work and Goethe's poem "The Sorcerer's Apprentice," and also with all the European reelaborations of the Faustian theme. Finally, as a corollary to all these potential ancestors and influences, the novel may be pointed out as a new version of the myth of Prometheus, although slightly modified to make it fit within the coordinates of the literary taste of the age it was written.

Nevertheless, if we approach Mary Shelley's text bearing in mind the relevance of science fiction as a multimedia manifestation of popular culture, we may easily notice that *Frankenstein* has inspired hundreds of science fiction productions both in literature and cinema. In this respect, there is one theme in science fiction which is particularly indebted to Mary Shelley, namely, robot fiction.

The number of robot stories and novels which are inspired by or overtly imitate *Frankenstein* in structure, content, and meaning is amazing. There is one twentieth century author, however, who took a step further and moulded all his stories as anti-*Frankenstein* pieces. His name is Isaac Asimov. A scientist himself, Asimov always fought what he described as the Faustian element of science. Very often he told the story that he did not like all the robot stories written before 1940 because they revolved around the exploitation of a theme inherited from Mary Shelley's novel. So much so that eventually he coined the phrase "Frankenstein complex" to describe a widespread attitude which tended to ignore the potential benefits of technology and overemphasised a Promethean interpretation clearly derived from *Frankenstein*.

In order to counterbalance this prevailing attitude, Asimov enunciated his famous "Three Laws of Robotics," which he first quoted in his short story "Runaround" (1942). The three Laws read as follows:

1. A robot may not injure a human being, or, through inaction, allow a human being to come to harm.
2. A robot must obey the orders given it by human beings except where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

These Laws, which some critics have compared to the Ten Commandements, basically set limitations on robot behaviour. Certainly, a careful reading of these Laws proves that the First one is concerned with respect for the creator, and is meant to act as a safety mechanism for human beings. The Second one deals with obedience as the main raison d'être for robots. Finally, the Third one protects the life of robots on condition the First and Second laws are not broken. All in all, these rules enshrine a hierarchical division of power in the universe, which grants human comfort, robot reliability, and low-cost maintenance.

Using as his starting point a Marxist reading of *Frankenstein* where "the monster can be read as a metaphor of the new class which the bourgeoisie has brought into existence but can no longer control or get rid of," the critic Alessandro Portelli (1980: 55) concludes that the
Three Laws are not only a reassurance for the audience as to the role of science after Hiroshima, but also a guarantee against alienation and a model for social control (...). Taken together, the Three Laws guarantee the social stability which is essential to the dynamics of human capitalist and territorial expansion.

Nevertheless, the parallelism which can be established between *Frankenstein* and twentieth-century robot stories is limited. On the one hand, it is undeniable that as a (pseudo-)scientific novel about artificially created life it has obviously influenced a great deal of robot fiction. On the other hand, though, the fact that the attempt at life creating focusses on the reproduction of a human being, out of human physiological material, separates Victor's creature from modern robots and places it near other attempts where the main target was the creation / reproduction of flesh and blood beings (e.g. Karel Capek's 1921 play *R.U.R.*)

*Frankenstein*, however, has become the most influential work on later robot fiction in terms of attitudes and behaviours, both the scientist's and the creature's. As a forerunner of later scientists, Victor has become a standard model. A mixture of pride, curiosity, good will and messianic impulse leads him to try his hands at life creating. Victor foresees that "a new species would bless me as its creator and source; many happy and excellent natures would owe their being to me. No father could claim the gratitude of his child so completely as I should deserve theirs." (97) He also wants to find out about the principle of life, which, as he concedes, is a great mystery, yet "with how many things are we upon the brink of becoming acquainted if cowardice or carelessness did not restrain our enquiries." (95) Furthermore, Victor's experiments are also inspired by good will. As he says, "I thought that if I could bestow animation upon lifeless matter, I might in process of time (...) renew life where death had apparently devoted the body to corruption." (98) But there is a messianic touch in all his efforts, and so when he tries to justify his decision to kill the monster he states: "My duties towards the beings of my own species had greater claims to my attention because they included a greater proportion of happiness or misery." (255) Immediately after the completion of his experiment, and echoing previous Western folk and literary traditions, he rejects the outcome of his creative effort thus integrating within a scientific context an image borrowed from myth, which I have called the trespasser.

The science fictional reading of *Frankenstein* sees Victor as the modern scientific man, whereas the creature he makes would stand for man's technology. Consequently, Victor personifies the various roles assigned to science throughout history. As a further development of curiosity, and looked at from a Christian cultural standpoint, science may have negative connotations as it may be easily linked to Adam's fall. Technology, however, as a convenient outcome of science, may improve our lives on condition we are willing to pay a price Victor refused to: the acceptance that it may suddenly run out of control if it is not given proper attention. As a consequence, the scientist (Victor) becomes an ambiguous figure both praised and censured, welcomed and feared, loved and hated. Victor's rejection of his "monster" may be understood as a religion-rooted sense of guilt for having trespassed on the laws of nature,
but also as the horror of the scientist upon noticing his own breathtaking power. In this sense, Victor has become a much imitated character in later science fiction. The stock character of the mad scientist is probably rooted in the psychological strain produced when trying to harmonize these two elements.

The "monster," in turn, has become a referent for many robot characters who, in fact, do nothing but copy his patterns of behaviour. He is created innocent but his "birth" is stained from the beginning because it is an unnatural (sinful) act. After his rejection and subsequent desertion by his creator he grows bitter and channels his frustration towards his master. He demands recognition as a human being, or conversely an emotional placebo: a mate. As neither of these requests is heeded, he turns against his creator and tries to destroy him although this destruction entails his own, which proves that irrationality is not an exclusive feature of his maker. He was created in man's own image. Therefore, it is not surprising that he shares with his creator the same virtues and vices which led to his creation. The doppelgänger image is thus completed and the role-reversal situation reaches its climax.

By the time Victor has made up his mind not to build a second creature, he and his monster exchange these words:

Begone! I do break my promise: never will I create another like yourself, equal in deformity and wickedness.
Slave, I before reasoned with you, but you have proved yourself unworthy of my condescension. Remember that I have power; you believe yourself miserable, but I can make you so wretched that the light of day will be hateful to you. You are my creator, but I am your master; obey! (208)

It is precisely this kind of language which has produced a chain reaction in twentieth-century robot stories. By taking advantage of well-known myths and post-Industrial Revolution conditioned reflexes, many of these stories are mere re-elaborations of these very ideas. Eventually, as I said above, this attitude was named by Asimov the "Frankenstein complex," meaning the fears triggered by the scientist's irresponsible behaviour, but most particularly, the robot's uncontrollable personality. But twenty years before Asimov's harmless robots appeared, the Check author Karel Capek proved how influential *Frankenstein* had been for him. Capek's robots in *R.U.R.* are not even machanical, so the differences from Victor's creature are minimal. They are flesh and blood artificial beings created in man's image who run out of control as a consequence of an unfair treatment. Talking about *R.U.R.*, Christopher Small (1972: 301) has written that "it is the true heir of *Frankenstein*, the only work in which Mary Shelley's imaginative creation is continued with something like similar freedom." I quite agree with him. However, and besides the coincidence in nature, mechanical robots rather than Capek's flesh and blood beings are the real heirs to Victor's creature. In the first place because they are made of metal, a material reminiscent of the Industrial and post-Industrial Revolution landscape. Secondly, because, as most performances of *R.U.R.* have shown, the metallic (machine-like) appearance was a necessary step forward in the separation of the mere horror-
creating figures (with a clearly Gothic ancestry) from the twentieth-century post-Russian Revolution drudges.

The language of *Frankenstein,* with the logical variations in vocabulary, syntax and style has been reproduced in hundreds of robot stories. In fact, writers have only had to make minor changes to adapt the same old concepts to the new imagery. In this sense, despite the differences, *Frankenstein* is by far the text which has exerted the deepest influence on later robot fiction. Therefore, maybe it is time for mainstream critics to admit that the battle between *hubris* and *techné* is just as artificial as the being Victor tried to create.

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