

'Sciencing the Sh*t' out of a Crisis

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At the start of *The Martian* movie we find an astronaut left for dead on Mars. A dust storm has forced the rest of his crew to leave in a hurry and now the astronaut, Mark Watney, has only enough food and water to last a month. To survive he must, as he puts it, “science the shi*t” out of his predicament. Holding up to the cinema-goer a supposed NASA booklet, *Exploration of Biological Processes on Planet Earth*, he says,

Right, let's do the math. I've got to figure out a way of growing three years' worth of food here on a planet where nothing grows. Luckily, I'm a botanist. Mars will come to fear my botany powers.

So Watney, using his apparently “scientific” knowledge, sets about terraforming Mars with his own excrement, a project central to the whole movie. Without this application of this ‘science’ to his predicament neither Watney nor the film would have survived. Meanwhile, as Watney is doing his best to get by, a sharp-eyed satellite operator on Earth notices his movements on Mars and alerts her superior NASA officers. So while Watney is terraforming Mars to survive, NASA is collaborating with the might of the China National Space Administration, to return to the Red Planet and bring Watney back to Earth.

Ernst Bloch and Social Theory

To start understanding *The Martian* (and indeed science fiction more generally), we must first consider the Marxist writer, Ernst Bloch (1885-1977). His *magnum opus*, the three-volume *Principle of Hope*, was written between 1938 and 1947. Yet it was translated into English only in 1986, and it has never received the attention it deserves. Bloch's reputation is nevertheless now growing in significance.

Before the First World War Bloch studied in Berlin under the sociologist Georg Simmel. The latter's focus on everyday life and “the lived moment” deeply influenced Bloch. He later became a part of Max Weber's circle and joined the German opposition in Switzerland. Bloch next returned to Berlin and Munich where he was influenced by a range of individuals and movements, all of which contributed to his philosophy. Bloch actively supported the expressionist movement in art, believing it articulated the widespread alienation of his time. (“The Scream” by Edvard Munch is perhaps the best known example). Bloch also actively supported Brecht's radical theatre, seeing it as joining in a common struggle against Marxist dogmatism while at the same time imagining possible utopian alternatives. Another strong influence was György Lukács who was attempting a Marxist appropriation of fantasy. Bloch's circle of friends and associates also included Theodor Adorno and Walter Benjamin, the latter being influenced by eschatological hope and “end times”. In the late 1960s Bloch held academic posts in East and West Germany and was held in high regard by the student movement of that era.

Bloch's early writing contained a strong emphasis on the ultimate destiny of humanity. In addition to a strong commitment to Marxism, his work also contained strong quasi religious and eschatological themes, this combination later influencing the liberation theology movement in South America and elsewhere. The *Spirit of Utopia*, Bloch's first major book, is a product of this early period. Written in the immediate post World War One period, it is organised around the theme of “the self-encounter” and “the self-invention”. The modern self, he argues, has lost its sense of meaning. As he put it, “we live without knowing what for. We die without knowing where to.” (2000:275. See also Bloch 2009). Yet Bloch's aim was consistently optimistic. His focus was on the “not yet”, this referring to existing developments and tendencies which may prefigure future, less alienated, forms of life. Thus *The Spirit of Utopia* and his later work revisited a vast range of cultural forms including art, music and literature which, Bloch argued, both disrupt the established social order and anticipate the elements of new, emancipated, ways of life. Note here, however, the contrast between Bloch and his friend Adorno. The latter argued that

culture has a deadening effect on civilisation while Bloch again took an opposite, far more upbeat, view. He saw cultural forms as opening up prospects of new, progressive, utopian possibilities.

These themes were later filled out and greatly extended in Bloch's later work. For example, he later developed his thinking about religion, arguing that the importance of the Bible does not lie in its portrayal of a fixed set of religious dogma. Rather, its significance lies in its portrayal of ideals and utopias by which people have long attempted to free themselves from oppression. Seen in this way, *The Bible* is a thoroughly subversive text (Bloch 2009). Bloch's main book in this later period, *The Principle of Hope* was first drafted between 1938 and 1947. This extraordinary trilogy took the thinking in *The Spirit of Utopia* much further; outlining in great detail the many ways in which people express their hopes and dreams of a better existence. As foreshadowed in *The Spirit of Utopia*, however, there remains here a sense of Jewish Messianic thought running through Bloch's work (Thompson 2013). This again entails imagining on the one hand a revolutionary cataclysm and apocalypse and, on the other hand, a new Golden Age of social justice. Yet the Messianic theme was dissipated in Bloch's later work, in part a result of his growing focus on Marx's historical materialism. But the aim remained that of recognising and supporting cultural-cum-political upheaval. The intended outcome being a form of anarchism, one in which a new ideal world would obviate the need for state laws. Bloch's message of hope, while having many resonances in our own times, also needs seeing as the product of a particular time, one in which the Stalinism and the USSR were starting to decline. Having originally supported the Russian Revolution, Bloch saw these declines as encouraging. "Now", he wrote in optimistic mode, "the creators of fear have been dealt with, a feeling that suits us better is overdue. It is a question of learning hope. Its work does not renounce, it is in love with success rather than failure." (1986:3).

Bloch argued that a combination of "cold" with "warm" analysis was inherent within Marx's own work. The *Critique of the Gotha Programme*, Bloch argued, offered just such a combination. In this text the better known, more rational and economic, form of Marxism is merged with Marx's "warm" elements. Marx argued that a communist society, and the ending of a division between mental and manual labour essential to capitalism, would mean that work could become the means by which individual realises her or his talents and lives a fulfilled life. As Marx himself put it,

in a higher phase of communist society, when the enslaving subordination of individuals to the division of labour, and therewith the antithesis between physical and intellectual work has disappeared, when work has become not only a means of life but itself the first need of life; when the all-round development of the individuals' productive forces have grown as well, and all the wellsprings and of co-operative wealth flow more fully – only then can the narrow bourgeois horizon of law be completely surpassed, and society will be able to write on its banners: "From each according to his ability, to each according to his needs!" (1970a, cited by Bloch 1986:136)

Such was the starting point for Bloch's positive and optimistic commitment to hope and utopia. The most basic hope in Bloch's scheme is not dissimilar to that of *The Martian*; surviving, simply staying alive, having enough to eat. But from such a starting-point, Bloch went on to describe the many collective and collaborative dreams prefiguring new ways of securing a full and satisfying life. These dreams are enormously varied in Bloch's work. They include fairy tales, poetry, drama, sport, architecture and, most importantly from our viewpoint, music and film. Music has a special role in Bloch's scheme of things, not only expressing emotions but giving them an objective quality in the experienced world, one that can be appreciated and shared by audiences.

Resonating with Bloch's theories, music has a central role in *The Martian*, albeit one we now perhaps take for granted. When Watney is seemingly left for dead on Mars the film is accompanied by plaintive woodwinds and strings in the background. But, when he is making

plans to survive and escape, the music turns to the 1970s and 80s disco music left behind by his spaceship commander. This music provides acoustic connections to Earth, keeping Watney sane in his isolation while encouraging the hope that he will one day return to Earth.

Bloch's aim in his mature writings was to combine the "warm" and "cold" streams in Marx's early work. In *The Principle of Hope* he argues, in line with Marx, that emancipation should be based not only on a sober account of economic and social relations of the kind perhaps now most often associated with Marxism. It also should address, Bloch argued, people's imagination. "Warm" and "cold", streams in Bloch's view, are therefore intimately combined, one dependent on the other. *The Martian* plays on the contrasts between these two kinds of stream. On the one hand the movie portrays a collaborative effort to save Watney, with his close and loyal crew-mates making the dangerous return to Mars in an attempt to rescue their lost colleague. On the other hand, *The Martian* also portrays the "cold" economic-cum-political might of both the American and Chinese governments combining to rescue Watney from Mars. But again, there remains a dialectical process at work here. There is actually a strong sense in which the Red Planet itself actually offers a "warm" attraction to the lone astronaut. Despite or because of the dangers he is confronts, he is actively enjoying the extraordinary, awe-inspiring, landscape of Mars. As Watney puts it, "every day I go outside and look at the vast horizons just because I can".

An important example of Bloch's work, and of course one of particular interest to readers of *Capitalism Nature Socialism*, concerns his vision of humanity's relations with external nature. Utopia, Bloch argued, will be achieved to the extent that humanity continues to reveal and understand the underlying qualities and powers of external nature. Wayne Hudson, Bloch's main contemporary interpreter, summarises Bloch's position here as follows.

For Bloch, nature is the end problem of human history, a still arising apocalyptic *omega*, and it is only by bringing nature within the sphere of history in a conscious way that history can end in success (Hudson 1982:146).

Bloch's understanding of humanity's relations with nature clearly resonates with the early works of Marx (Marx 1975). Humanity, Marx argued, will realise its full capacities to the extent that it reveals and realises the underlying causal powers of external nature. But Bloch took the matter still further, recognising that understanding the causal powers of nature does not in itself bring human liberation. (He notes with trepidation, for example, the likely devastation of the atom bomb). Furthermore, the "humanity" of which he speaks is not humanity as a whole. Bloch extended Marx's brief account, arguing that the uncovering and realisation of the powers of external nature will need to be conducted not just by "man" but by the working classes who will have achieved domination in the new society. The implication is of course that the priorities for science and its application will take distinct new forms when the working class takes charge of creating and using knowledge. Bloch wrote, "the hinge in human history is its producer – the working man, finally no longer alienated, estranged, reified". (Cited by Hudson 1982: 145). Bloch's account is a dynamic one. For example, he does not envisage a moment when the workings of external nature are fully understood and emancipation finally achieved. Rather, and in line with his prime focus on "hope", he envisaged an emergent and continuing process stimulating human progress, with an understanding of external nature being part of a constant and diverse drive towards human emancipation. *The Martian* illustrates this process. In interacting with an essentially hostile external nature the ever-hopeful Watney is changing himself; realising capacities, skills and abilities he never knew he had.

The Novum, External Nature and Science Fiction.

Bloch's ontology was based on what he called "the *novum*". This refers to an imagined and emergent idea, one developing within society, which is by no means fully understood but one with potentially positive material qualities. *The novum* informs people's dreams and actions aimed at sustaining hope and making a better life. It is an emergent 'new thing' or set of contents which creates astonishment and wonder on the one hand and intimations of a final, good, 'new'

towards which the process of struggle and human imagination can aim (Hudson 1982:118). Bloch referred to the *novum* as “a perspective land”, a vision which starts to offer a vision of a new, emancipated way of life (Hudson 1982: 119).

The *novum* as used by science fiction writers offers intimations about how the world and external nature might be changed for the good. Particularly important for our purposes is Bloch’s account of the universe. Utopia is not to be found, Bloch argued, as simply an extension of everyday experience. Again, it is established through interacting with, and transforming, the cosmos as a whole. As the laws of the universe are increasingly established humanity is itself transformed. The vision is again similar to that of the Marx and his assertion that, in interacting with external nature, we start changing ourselves (Marx 1970b: 177). But, particularly as developed by the science fiction theorist Darko Suvin (1979), *the novum* is a hypothesis or new thought which introduces the reader or cinema-goer to a different reality, one ‘validated by a cognitive logic’, this latter referring to the ‘science’ of science fiction. The key feature of the *novum* in this context is again its unsettling quality, hovering somewhere between the real and non-real and between science and fiction and between the possible and impossible (Kitchin and Kneale 2002). The contradictory and ‘fantastic’ experiences made by science fiction can be interpreted through a Freudian lens as ‘uncanny’. (Godorov 1973; Jackson 1981). But, whether or not psychoanalytic interpretations are made, the key point is that *the novum* has intriguing, unnerving and troubling qualities, these again stemming from its apparently hard-edged ‘scientific’ quality being combined with a strong sense of fantasy. *The novum* in this sense is a regular feature of science fiction. In Jules Verne’s *From the Earth to the Moon*, for example, we find the idea of human beings being fired to the Moon by a huge cannon (Verne 2011). In practice this adventure would have swiftly destroyed the astronauts, yet Verne went to great lengths to make this story seem plausible. The trick was achieved by fusing pure fantasy with elements of well-established science taken from popular science magazines (Belloc 1895; Dolby 2011). The result was again an uneasy and mentally destabilising sense of both science and fantasy.

Similarly, *The Martian* makes enormous pretence at being “scientific”, being replete with apparently accurate scientific “facts” and jargon. Remember here Mark Watney apparently ‘doing the math’ and “sciencing the sh*t” out of his predicament. But despite all the science the movie remains very much a piece of speculative science fiction. In the very same week as *The Martian* was released in Britain it was announced that satellite observations of Mars showed that the Red Planet actually contains substantial amounts of water. The underlying “scientific” premise of the movie was thereby thoroughly undermined. In reality Mark Watney could have avoided all that trouble with his excrement.

Jameson and the Contemporary Return to Bloch

Frederic Jameson’s extensive writings on the novel and science fiction are often seen as today’s main heir to Bloch’s analysis. Indeed, in one of his earliest books, *Marxism and Form*, he argued that Bloch’s work should be “grasped” this having the potential of providing Marxism with “a full-blown allegorical hermeneutics” (1971: 116). Jameson here interprets Bloch as setting out a set of allegories or visions illustrating what humanity could hope for in a free, unalienated, world. (See also Miller 2013.) And in his most recent work Jameson takes this further, arguing in his *Archaeologies of the Future* that the kind of utopia Bloch envisaged was “an allegorical process in which various figures seep into the daily life of things and people and afford an incremental, and often unconscious bonus of pleasure unrelated to their functional value or official satisfactions” (2005:5). Jameson goes on to thematise contemporary utopian visions in science fiction by focussing on the body (and its transformations), time (including memory and interrogations of the future) and relations between the individual and the collective. In these ways Jameson continues to develop Bloch’s early work on utopian forms.

But Jameson's extensive work is now being joined by a wide range of further work, focussing on and developing Bloch's writings, including those on "hope". (See, for example, Levitas 2013; Thompson 2013; Siebers 2014). Many of these essays argue that Bloch's notion of hope was originally envisaged as taking a collective form while this form of hope is now in short supply. It is increasingly desocialised and privatised.

This returns us to *The Martian*, which can also be seen as a straightforward example of the privatised and individualised hope, one wholly obsessed with the individual's abilities and survival. As such it seems to be another clear utopia for our neoliberal times. Yet this surely underestimates the movie's basic message. The trailer's key assertion is that

Every human being has a basic instinct – to help each other out. If a hiker gets lost in the mountains people coordinate a search. If an earthquake levels the city people all over the world send emergency supplies. This instinct is found in every culture without exception.

So, contrary to initial appearances, the movie again offers a form collective hope of the kind Bloch yearned for.

'Spirit' in Bloch and Kovel

The outlook for Bloch's notion of hope is therefore not wholly bleak. Of particular interest here to *Capitalism, Nature and Socialism* readers was Bloch's early close acquaintance with Joel Kovel, Editor-in-Chief of the journal until 2011. It was an association made while Bloch was in the United States during his periods of exile from East Germany. Kovel's work, particularly as articulated in his 1991 text *History and Spirit*, was clearly influenced by Bloch and especially by his themes of the spirit, the "self-encounter" and "the self-invention" all stemming from the struggle for freedom.

Like Bloch, Kovel is here searching for sources of hope in a society with little or no spiritual focus. The concept of "spirit" has received limited attention in later writing influenced by Bloch, perhaps because of the word's apparently religious connotations. But Kovel's book points to the continuing and significant relevance of spirit. Like Bloch, it includes a particular interpretation of religion. Like both Marx and Bloch, Kovel is a firm non-believer in religious faith. But, again like Marx and Bloch, Kovel sees a positive and socially critical side to religion. It has been, he believed, one of the main means by which the self has opened up to others, including the "others" of the non-human world. Therefore, like Bloch in his era, Kovel actively supports the pursuit of spirituality not in narrowly religious forms but as a key means of opening a range of subversive, highly "political", social movements. These include today's ecological politics, New Age movements and, again, liberation theology. Bloch himself rejected Freudian explanations of behaviour, believing that there are no fixed or settled elements of human nature independent of the mediation of the particular social and economic contexts with which people engage. But such negative reservations regarding psychoanalysis are not shared by Kovel. Indeed, he sees psychoanalysis as a key means of opening up the individual to the Other, including external nature.

In sum, Kovel's work surely shares much with that of Bloch, the notion of 'spirit' looming large throughout both authors' analyses. But the contemporary importance of Kovel also stems from his analysis of today's crises. It is surely appropriate to close this discussion with Kovel linking "spirit" to today's environmental crisis.

A world order that commits planetary suicide in the search for profit while driving the majority of human beings into despair poverty is a killing/producing machine without spiritual centre (Kovel 1991:12).

References

- Belloc, M. 1895. 'Jules Verne at Home'. *Strand Magazine*. February.
Bloch, E. (1953) 1986. *The Principle of Hope*. (Three vols.). London: Blackwell.
Bloch, E. 2000. *The Spirit of Utopia*. Stanford: Stanford University Press.
Bloch, E. 2009. *Atheism in Christianity*. London: Verso.

- Dolby, R.G.A. 2011. 'Introduction and Notes' in Verne 2011.
- Hudson, W. 1982. *The Marxist Philosophy of Ernst Bloch*. London: MacMillan.
- Jackson, R. 1981. *Fantasy: the Literature of Subversion*. London: Methuen.
- Jameson, F. 1971. *Marxism and Form*. Princeton, New Jersey: Princeton University Press.
- Jameson, F. 2005. *Archaeologies of the Future. The Desire Called Utopia and Other Science Fictions*. London: Verso.
- Kitchin, J., and R. Kneale. 2002. *Lost in Space: Geographies of Science Fiction*. London: Continuum.
- Kovel, J. 1991. *History and Spirit*. Boston: Beacon Press.
- Levitas, R. 2013. *Utopia as Method: The Imaginary Reconstitution of Society*. London: Palgrave MacMillan.
- Marx, K. (1875) 1970a. *Critique of the Gotha Programme*. Moscow: Progress.
- Marx, K. 1970b. *Capital*. Vol. 1. Harmondsworth: Penguin.
- Marx, K. (1843-1844) 1975. *Early Writings*. Introduced by L. Colletti.
- Miller, D. 2013. "A Marxist Poetics: Allegory and Reading in 'The Principle of Hope'" in *The Privatization of Hope*, edited by P. Thompson and S. Zizek. Durham: Duke University Press.
- Siebers, J. 2014. 'The Utopian Function of Music' in Mazierska, E. and Kristensen, L. *Marx at the Movies*. Basingstoke: Palgrave MacMillan.
- Suvin, D. 1979. 'SF and the Novum' in *Metamorphoses of Science Fiction*. New Haven, CT: Yale University Press, reprinted in Suvin, D. (2010) *Defined by a Hollow. Essays on Utopia, Science Fiction and Political Epistemology*. Oxford: Peter Lang.
- Thompson, P. 2013. 'Introduction: the Privatization of Hope and the Crisis of Negation' in Thompson and Zizek 2013.
- Todorov, T. 1973. *The Fantastic: a Structural Approach to a Literary Genre*. Cleveland, OH: Western Reserve University Press.
- Verne, J. (1865) 2011. *From the Earth to the Moon*. Ware, Hertfordshire, UK: Wordsworth Editions.