

The Realm of Entropy

In a seminal article on the work of horror writer H.P. Lovecraft, Paul Buhle (1976) challenged the dichotomy between utopia and dystopia. Buhle branded the “progressive” utopian optimism and uplifting realism as “radical myopia,” jilting Leslie Fiedler’s base line on literary criticism as “showing the omnipresent death pageantry to be the result of erotic failure, the sexual alienation of *Homo Americanus*” (p. 119). Buhle’s approach explains the political non-rationalism of the Sixties in “renewed Utopian dreams.” His approach reveals two interesting tenets: a political one and a cognitive one. Politically, he holds it that horror, contrary to general belief, is “the natural concomitant to the socialist critiques of capitalism” (p. 121; Eizykman 1974: 99–118), not escapist speculation on evil as such, but undeniably an ideological paradigm. More fundamentally, it poses the problem of the indeterminacy of our scientific objectivity.

In claiming that for Lovecraft and Poe horror themes were “mere literary devices” (p. 121), Buhle restores the original revolutionary motive force of historical development to that seemingly right wing, conservative belief of immanent *angst* haunting the human being in view of the lack of scientific certainty. Therefore, it regains “the hidden utopianism of its negative romanticism” (p. 121). The author fails to go all the way: dystopia and utopia are not antagonistic¹. They are not the two sides of a coin, but the very substance of a proposition inevitably leading to an asymptote to infinity, where morals and method, intuition and science ultimately should merge. At least as a semiotic system. Melting referential strategies to elucidate our conception of the world (irrational and rational) finally succumb to loss of entropy. The ultimate result is the definitive abolition of time in the sense of a vectorial force.

¹ They are the lunar phases of the same body, as Dutch philosopher Hans Achterhuis holds it in *Utopie* (2006: 50: “Ze blijken, zoals we naar aanleiding van Huxleys *Brave New World* aanstipten, een en dezelfde persoon te zijn” — “They are one and the same person, as we tagged on account of Huxley’s *Brave New World*”).

This is not a new insight. Utopian thought is apodictic. It freezes the ideal structure of human relations, it isolates and strips dynamic social processes from time. It denies evolution (Eizykman 1974: 118). But in the same process, any utopia cannot evade its being anchored in specific social and historical conditions. In the 18th century, scientism prevailed, in the 19th the communist collective dreams of equality², today relativity and probability. The common element through history is the mania to classify, to systematize, to planify, to measure human activity and thought. Clashing interpretations in organizing these (historically determined) worldviews can easily be reduced to the angle of observation, thus inducing reality from specific observations — ‘the eye of the beholder’ — to a general conclusion. I will demonstrate that the outcome is strikingly akin between the refusal of interpretation (Susan Sontag 1965) and the meticulous semiotic structuring of Umberto Eco (1985)³. The common ground is aesthetic value.

Sontag’s abhorrence of content based literary analysis leads her to accountability of the work of art as a personal experience, and brings her close to the way Buhle legitimizes Lovecraft’s irrationality being inclusive in utopian projections. It is a moral refutation of a tedious and insensitive application of sets of rules, whether they be structural, psychological or technological. Her plea for the aesthetic experience, the lure of form, “the luminousness of the thing in itself” (Sontag 1966: 9), aims at disconnecting the experience from its description, the reduction of the semiotic complex to universal values and truths. Nonetheless, “The Imagination of Disaster” (Sontag 1965) — a common denominator for dystopia — identifies fantasy with “thinking the unthinkable” as “an act questionable from a moral point of view” (p. 42). The sullen, predictable if not petrified pail of disaster movies (she tries to coin in some rudimentary classification of narrative tropes), however, “may have a sensuous elaboration” (p. 44). It elicits “a dispassionate, aesthetic view of destruction and violence — a technological view” (p. 45). Mad professors are the token of science gone berserk. And the message remains unequivocal: these films are “strongly moralistic” (p. 45).

Now Sontag covers in her essay a typical period of history: the fifties, when the fear of nuclear annihilation was at its peak⁴. The atomic bombs on Japan and the consequences of uncontrollable radioactivity had given way to monstrous depictions, especially in Japanese *Gojira* (*Godzilla*) movies, and to whacky conspiracy themes in Hollywood’s B-tradition. What Sontag does is to interiorize “the negative imagination about the impersonal” (p. 47).

² Utopian projects are all but new, Arthur von Kirchenheim writes in *Schlaraffia Politica. Geschichte der Dichtungen vom Bestenstaate* (Leipzig, FW. Grunau Verlag 1892: 290):

Der Grundgedanke, den sie vertreten, ist der Kommunismus, und es braucht hier wohl noch einmal darauf hingedeutet zu werden, wie gefährlich es gewirkt hat, sobald er aus den Tiefen der Phantasie zur Wirklichkeit emporbrödelte und wie ein Lavastrom sich über die Kulturwelt ergoß.

More in general,

every utopia, rooted as it is in time and place, is bound to reproduce the stage scenery of its particular world as well as its preoccupation with contemporary social problems (Manuel & Manuel 1979: 23).

³ Sontag 1965: 42–48, and in rearranged form included in Sontag 1966. Umberto Eco, “I Mondi degla Fantascienza” was brought as a speech at the Congress on Science and Science Fiction (Rome, May 2, 1984), and adapted in *Sulli Specchi e Altri Saggi* (Milan, Bompiani 1985). I had no access to the original tekst, I used the Netherlandic translation *Wat Spiegels Betreft* (Eco 1997: 175–181).

⁴ Even in Europe, the impact caused doubt and distress. A typical example was French popular science historian Pierre Devaux, who hastened to re-edit his *L’Avenir Fantastique* (1942) with the subtitle “Edition 1947, avec la Bombe Atomique” (Paris, Denoël 1947):

She rejects the ultimate depersonalization as a new form of man's insanity — perhaps most convincingly epitomized in a film she does not mention, *Forbidden Planet* (Fred Wilcox 1956). This movie exteriorizes “man's perennial but largely unconscious anxiety about his sanity” (p. 48). Monsters killing and threatening the crew on planet Altair 4 are merely imagined creations taking shape in the materialized form of Dr. Morbius' own subconscious that he wanted to enhance by an extraterrestrial “plastic educator,” weird machinery of an extinct civilization, to intensify his intellectual capacities. The Freudian “monsters from the Id” (the instinctive element in man) take over reality. The unseen menace responsible for terror and death on the planet is revealed to be “a nightmare from the subconscious, unwittingly created by Pidgeon (*the scientist*) to drive the rescuers away. Mere man can't defeat the awesome thing, so Pidgeon has to die to kill it” (Brog, 1956; Wade 2019).

Self-destruction, that is the real curse for aesthetic and sensuous admiration, a warning to man's *hubris*. Spaceship commander Adams (played by Leslie Nielsen) speaks the ominous words: “We're all monsters of the subconscious, that's why we have laws and religions.” Sontag's ‘religion’ is a return to the moralistic scheme endemic in all utopias, from Lucian of Samosata's *True Story* to Plato's *Republic*, from More's *Utopia* to the anonymous *Wöhleingerichtete Staat des Königsreichs Ophir*. Moralism is conspicuous. Evil is always surprisingly banal, superficial and bureaucratic, as Hannah Arendt (1963) exposed a year after the trial and execution of Adolf Eichmann, SS-Obersturmbannführer and secretary of the Wannsee-Conference on the elimination of all Jews (1942). She reduced “the banality of evil” to the basic fear of not being able to cope with the cosmic. “We live under continual threat of two equally fearful, but seemingly opposed, destinies: unremitting banality and inconceivable terror.” Sontag (1965: 48) blames science fiction films for having clotted into an “emblem of an inadequate response [...] to the unassimilable terrors that infect (people's) consciousness.” In other words, she expects a liberating effect of the narrative (in sound and image) by an escape into imagined exotic situations, and by normalising the psychologically unbearable. “In the one case, fantasy beautifies the world. In the other, it neutralizes it” (Sontag 1965: 42). The only way out she can suggest is solipsism, a retreat into an anchorite's closed world like in Thomas Disch, *Camp Concentration*, or in Philip K. Dick's self-inflicted narcotic illusions, where senses replace the outer world.

Part of Sontag's reluctant reaction to rationalizing evil is due to her deep distrust of scientific description⁵. The accurate mapping of reality that surrounds us strips her mind of beauty, the poetic, the unspeakable sensation. In lieu, she perceives ugliness, boredom, (commercial) spectacle. She claims that in the very end this “negative imagination about the impersonal” erases personal thrills and leads to a totalitarian society. A telltale sign of this inevitable perversion is her conviction that “science fiction films are not about science” (Sontag 1965: 44). The signifier has become empty. But if you look at, say, the 1961 disaster movie *Il Pianeta degli Uomini Spenti* (*Battle of the Worlds*, with Claude Rains), one discovers that nearly all arguments Sontag put forward can be rejected. True, Italian films were commercially blatant

Aujourd'hui, il n'est pas un homme sur Terre qui ne connaisse le génie et la sombre folie des savants. L'humanité, dans une inertie terrifiée, regarde, au-dessus des capitales, où va s'élever la panache d'Hiroshima [...] cette hécatombe. (p. 7)

⁵ Hartmut Lück shows no mercy for Sontag's freewheeling rejection of dystopias and their “Ästhetik der Destruktion”: “die ein tiefes Misstrauen gegen Intelligenz, Vernunft und Wissenschaft verrate und irrationalen politischen Strömungen Vorschub leiste” (1977: 257).

(director Antonio Margheriti appears as Anthony Dawson, script writer Ennio de Concini was renamed Vassilij Petrov, trying to surf on the success of the American wave). True, the special effects are rather ludicrous. True, the scenario follows strikingly the models Sontag describes. And true, radioactivity is the classic metaphor. But that “there is absolutely no social criticism, of even the most implicit kind” (p. 44) cannot be corroborated, and — as an aside — appeals to an argument of content, not of idiosyncrasy. Margheriti clearly condemns the role and influence of the army in decision making when it comes to the right strategy to follow — inducing the death of the grumpy professor Benson, who discovers the secret of a planet that threatens to crush Earth⁶.

But Sontag is right as to the glaring stubbornness military and scientists hold in high esteem. In her view, violence and knowledge, they destroy humanity. Both are to be blamed, because they can never be absolute. So, when Eco declares “science fiction is a narrative game played with the very essence of each science, i.e. its conjecturality” (Eco 1984: 1257), he tries to deactivate that booby trap. Forwarding hypotheses, proving them, corroborating or falsifying them, that is the scientific procedure. Verifying or falsifying fall outside the task of science fiction, only the experimental law counts. Eco therefore eschews differentiating in categories: space operas, utopias (parallel worlds), ideal societies, disaster art, they all provide us with worlds that are structurally possible. Science is not limited to the study of natural sciences, but includes also linguistics, semiotics, sociology, history. Engineers’ dreams do not surpass utopias nor *fantapolitica* or alternative history.

The flaw in the system is science itself or at least our concept and definition of science, as Karl Mannheim correctly stated: if “only what is measurable should be regarded as scientific,” if “the ideal of science has been mathematically and geometrically demonstrable knowledge,” then “everything qualitative has been admissible only as a derivative of the quantitative” (Mannheim 1970: 165). In postmodern times, that conviction has been challenged from different angles. The strict definition has become metaphorical, and has been exchanged for probability.

One of the first scientists to attack the narrow interpretation of science was French mathematician René Thom. In his John von Neumann Lecture 1976, he upset his audience by stating that “applied mathematics cannot exclude qualitative thinking, as its problems are originally given in ordinary language — in a qualitative way.” According to his audience, “modelization’ is nothing but translating this qualitative problem into a quantitative model, which then has to be confronted with experiment.” But his catastrophe theory turns the tables: “Quantitative studies — inasmuch as they are possible and reliable — may help in defining local morphological elements (singularities), from which a global quantitative construction may be built” (Thom 1977: 189–201)⁷. I am convinced that Eco’s semiology has

⁶ Which serves him right, since he himself triumphs, on the verge of fathoming in an underground labyrinth the logical explanation of the threat: “The electronic brain is here ! [...] What importance does life have, if to live is not to know ? [...] I have the formula. I know the truth. Now I can order the Outsider to go away” — and to space command on earth: “Stop your missiles.” In vain. Missiles have no conscience. Nor do generals.

⁷ In *Topologie et Signification*, he notes: “Le moteur de toute implication logique est la perte en contenu informationnel”, waning entropy as language is diffuse and diversified (Thom 1968: 219–242). Applications on literature have been realised by, a.o., Peter Weibel, *Zu einer Katastrophentheorie der Literatur*, “Protokolle”, 1980, no. 2, p. 23–44, and Donald Rice, *Catastroph(h)es: The Morphologie of Metaphor, Metonymy, Synecdoche and Irony*, “Sub-Stance”, 1980, no. 26, p. 3–18.

been trying to realize that endeavour (Eco 1978; Berteti 2017: 51)⁸, and took into account the impossibility of absolute abstraction and computation without external legitimation — the language of signs and modality. It is quite clear that infinitesimal digitalisation has to be confirmed by a system of a different nature, e.g. a multi-layered language of subjectivity, emotion and sense, as Sontag tried to discern from so-called scientific ambitions in language description.

Thom was humble enough to refer to the Greek philosopher Heraclitus, who defined man by what he does not possess, his limits and his mortality. “The Master whose oracle is in Delphi, does not speak, does not hide, he signifies”⁹. He gives a sign that humans interpret and lend it signification. Eco relies on Peirce to link things or words and to create a consistent communication to render a comprehensible situation or world or reality: a conjectural game of deduction, induction and abduction. It is not hard to understand why the father of modern utopia, Thomas More, added an example of an unknown alphabet to his ironic reflections on the ideal state (fortunately translated into Latin gibberish). His goal was simple: to enhance the reality factor in his description¹⁰.

The problem of realism also haunts Umberto Eco. He solves the problem by assuming not only the existence of parallel worlds, but also of possible worlds. From the semiotic point of view, utopias pose two problems. “These problems are the truth conditions of counterfactual statements (‘If a couple hundred more Florida voters had voted for Gore in 2000, the Iraq war would not have happened’) and of sentences modified by modal operators expressing necessity and possibility (hence the close relationship between possible worlds theory and modal logic)”¹¹. In his article “I Mondi degla Fantascienza,” Eco emphasizes the inverse strategy of utopias and science fiction. They do not act scientifically, they start from a counterfactual result, not from a presupposed law. Science fiction is always based on anticipation i.e. “when a counterfactual speculation about a structurally possible world is conducted by extrapolation from certain tendencies in today’s world,” whereas utopias offer “a model of the way our real world ought to be” (Eco 1984: 1257).

The grey zones of comprehension have driven a lot of distinguished scientists to those kind of ploys that are beyond proof. Ludwig Wittgenstein, for instance, introduced the notion of “das Mystische” (he was unable to speak about) to keep the tenets of his *Tractatus*

⁸ In his conception of possible worlds. “In a logic of possible worlds — as Eco understands it — it is not sufficient to tell of ‘structurally possible worlds’. Instead we must specify the particular properties that distinguish a science fiction world from a naturalist or a fantasy one, as well as the rules of construction” (Berteti 2017: 51). Cf. Eco 1978: 4–72.

⁹ “ὁ ἀναξ οὐ τὸ μαντεῖόν ἐστι τὸ ἐν Δελφοῖς οὔτε λέγει οὔτε κρύπτει ἀλλὰ σημαίνει” (Heraclitus 1993: 29).

¹⁰ “These letterforms are a literary conceit or exercise in ingenuity meant to give a flavour of authenticity to fictional accounts of the civilization of imaginary societies” (Firmage 1993: 226). When printing *Utopia* in 1516, the printer did not have the necessary fonts to render them. The alphabet was saved by the French typographer Geofroy Tory who printed the letters in *Champfleury*. Paris 1529, Image 99 (Rosenwald Collection Copy), retrieved from the Library of Congress, www.loc.gov/item/22014106/. Tory mentions the alphabet already in his introduction: “En deux Caietz a la fin sont adiouxitées diverses facôs de Lettres. [...] Les Lettres Phantasiques. Les Vtopiques, quon peut dire Volontaires [...]” (Image 6).

¹¹ Ryan 2013 — Retrieved from <https://lhn.uni-hamburg.de/node/54.html>, Sept. 27, 2013. Eco considers, according to Lucia Vaina (*Les Mondes Possibles du Texte*, “Versus”, 1977, no. 17, p. 3–13), the “semantic domain of semantics not as a possible world, but as a universe made up of a constellation of possible worlds”.

closed and unattainable¹². Noam Chomsky avoided the crumbling down of his Transformational Generative Grammar by anticipating all factual discrepancies when he introduced the “competence of the native speaker” as the final and decisive resort. The third diverting method combines probability and modality: it is the French theory of the “à peu près” (“approximately”). Mathematician Georges-Théodule Guilbaud revalues the non-exact in calculation as a most helpful tool. He harks back to the biblical pardon, “approximation is not a vice but on the contrary an ‘evangelical’ virtue” (Guilbaud 1985: 18)¹³. He adds to his willing lack of rigorous correctness the use of modality in language, “we use words and signs in different discourses [...] to highlight this modality (well-nigh, almost, fast, about [...]) But I’m neither a linguist nor a semiotician.” Eco was. And Eco and Sontag agree that aesthetic value supercedes any analytic tool, even to the extent that Eco hopes that intuition and logic melt together, and that any scientific discovery might have “something artistic” (Stancati 2017) and his “general semiotics remain open to all forms of revision and are able to transcend semiotic idealism by erasing the difference between scientific and literary culture, as the essays in *Kant and the Platypus* demonstrate.”

Bridging intuition and logic remains an uphill battle. Most “pure” scientists look down on speculation and fluid language, as did Christiaan Huyghens when he commented in *Kosmotheoros* (1698) on the fancy, frivolous theories his rivals put down in early utopias or even dreams. Huyghens sneers at Athanasius Kircher’s “idle unreasonable stuff” when the latter abjures the Copernican Revolution and gives way to astrological humbug in his *Ecstatick Journey* on the nature of stars¹⁴. Kepler is bullied since he considers moon craters to be enormous constructions built by the Moon’s intelligent creatures, “some vast work of the rational Inhabitants. But I can’t be of his mind, both for their incredible largeness, and that they might easily be occasion’d by natural Causes” (p. 130–131). Kepler’s *Somnium* is a dream of a trip to the Moon. The text took decades to get published, not because of its utopian anti-

¹² The world of logic has to be unequivocal. But ethics, in Wittgensteins view, cannot be caught in unambiguous terms. “Es gibt allerdings Unaussprechliches. Dies zeigt sich, es ist das Mystische” (TLP: 6.522). And “das Gefühl der Welt als begrenztes Ganzes ist das mystische” (TLP: 6.45). Empirical description of the world outside the logical world is impossible. Death and mysticism do not belong to what is observable. “Das absolut Gute, Heilsame, Wahre ist logisch nicht begründbar,” the meaning of life and the world is to be found outside both of them. Eco evidently scans the limits of what can be said, Sontag tilts towards the ethical premiss. Wittgenstein pleads none the less for fair and precise meaning when he writes:

Wenn die Philosophen ein Wort gebrauchen — ‘Wissen,’ ‘Sein,’ ‘Gegenstand,’ ‘Ich,’ ‘Satz,’ ‘Name’ — und das *Wesen* des Dings zu erfassen trachten, muß man sich immer fragen: Wird denn dieses Wort in der Sprache, in der es seine Heimat hat, je tatsächlich so gebraucht? — Wir führen die Wörter von ihrer metaphysischen wieder auf ihre alltägliche Verwendung zurück. (1971: 67)

Hygiene in thought and formulation unfortunately implies also abuse in a totalitarian context (as Orwell’s *1984* proved with Newspeak and its ever shrinking dictionary: what cannot be said cannot be thought).

¹³ “Approximation n’est pas un vice, mais au contraire une vertu ‘évangélique’”. And: “Les mots et les signes utilisés dans les divers discours [...] pour marquer cette modalité (presque, almost; fast, environ [...]) Mais je ne suis pas linguiste ni sémiologue”. “Et ita uterque quasi divinis obtemperans praeceptis proximum sicut seipsum diligens, de suis et largitur bonis”, wrote Theobald of Langres in the 12th century (*Tractatus de Misteriis Numerorum*). The reference to modality is on page 206.

¹⁴ Huyghens refers to *Itinerarium Exstaticum Mundi Opificium* (Rome, Mascardi 1656), and writes literally: “Antequam vero iter longuincum ingreditur, haec duo tamquam certo tenendam statuit fancitque; nullum videlicet Telluri motum esse tribuendum; tum nihil in Planetarum globis Deum extare voluisse, quod vita aut sensu praeditum sit” (“He lays down these two things as certain; that no Motion must be allow’d the Earth, and that God has made nothing in the Planets”) (Huyghens 1699: 88).

Aristotelian content, but because Kepler wanted to add explanatory footnotes and translations of Plutarch and Lucian in the same volume. Autobiographical references brought his mother to trial, she narrowly escaped being burnt at the stake as a witch. Fear made him a cautious man. In a letter to his friend Matthias Bernegger (December 4, 1623), he mused about the fate of More and Erasmus, and concluded: “Let us leave the vicissitudes of politics alone and let us remain in the pleasant, fresh green fields of philosophy” (in: Christianson 1976)¹⁵.

The ideological stand of the later *Staatsromane* is a product of the Enlightenment and of the revolutionary spirit that swept over Europe from the 18th century onwards. Practical cosmological findings and commercial applications in the colonial expansion of Europe (Huyghens, Kepler) gave way to social modelling, and later the focus shifted to theoretical problems and wild semiotic try outs (William Burroughs, J.G. Ballard, Philip K. Dick, Brian Aldiss — the novel itself became a field of research and experiment). But ideology was never absent. Mannheim warned already that the weakest point of science was its “arbitrary definition,” with clear repercussions on power and status, thus creating new classes in society. Whereas sciences are cultivated in “the contemplative atmosphere which prevails in academic institutions” (Mannheim wrote this in times of indolent bourgeois satisfaction, while in the streets authoritarianism was gaining momentum; universities did not suffer from “publish or perish,” nor from industrial sponsoring), “the practical man seeks orientation with reference to action” (Mannheim 1970: 173). Postmodernism refuses to accept an ordering system, as is proven today by the international response to the new pandemic. Hence the inner migration of Susan Sontag, but also the efforts to bridge the intellectual world and the popular one by Eco.

Fact is that Eco thought along the lines of Isaac Asimov. Contrary to Sontag, he vehemently defended the idea that utopia and science fiction are not timeless like mainstream literature or film. According to Asimov, SF is about science. Utopia is about social construction. They are not fantasy, which “is written against a background now known to be unrelated to reality” and is “read by readers just as aware of that” (Asimov 1957: 327). Social satire is “the work of an advanced intellect trapped in a society that does not welcome criticism.” It “graduated from the anecdote to the treatise” (328). The reason is simple: satirists (from Swift to Orwell) deal with the ideology of their own society, and are, if possible, even more moralistic and dogmatic than the old utopians. Asimov claimed three quarters of a century ago: “We are living in a society, which for the first time *must* consider the future.”

Therefore, SF “is based on the fact of social change. It accepts the fact of change” (332)¹⁶. That is the perverse streak of most dystopians: they re-individualize their approach, and drown into the very structure of their vision, which serves as an unrelenting mould to bring about any decisive change. Plato’s *Republic*, Augustine’s *Civitas Dei*, Campanella’s *Civitas Solis*, Godwin’s *Man in the Moone*, Veiras’ *Histoire des Sévarambes*, Tyssot de Patot’s *Les Voyages et Aventures de Jacques Massé*, Smeeks’ *Beschryvinge van het Magtig Koningryk Krinke Kesmes*, Holberg’s Niels *Klîms Underjordiske Rejse*, Cabet’s *Voyage en Icarie*, most socialist inspired

¹⁵ Praise for Keplers’ view came rather late. “Gone is the fantasy-utopian world of Lucian and Campanella”, Christianson remarks. “In its place is an imaginative modern work anchored in fact and rich in rational scientific theory”. The first complete English translation was published in 1965.

¹⁶ In *Books and Ideas*, Stancati nuances that rationalism. “For Eco, knowledge of the world *resembles* science; but his conception of the latter is both unitary and plural. The difference between natural sciences and cultural sciences must be examined at the semiotic level”. The syncretism of art and science points to complementary and mutual exchanges: “Art, rather than allowing us to know the world, produces forms in the world that are added to those that exists, while having life and laws of their own”.

utopias of the 19th century, Lindsay's *Voyage to Arcturus*, and dystopias of the 20th century (Zamyatin, Čapek, Huxley, Orwell, Vonnegut and the like) testify to the crushing and suffocating corollaries of schematization for politics and social relations¹⁷. Is there a way out?

Yes. Eco's endeavour to frame all extremely diversified genres (extraordinary voyage, utopia, science fiction, imaginary worlds, satire, space opera et al.) into one conjectural strategy or abductive game, ouflanks petty philological divisions (and appreciation). His semiotic approach favours mutual stimulation between science (as we know it) and imagination. Instead of folding up the content oriented reading of this interaction and its social carry-over and withdrawing into self-centered sensations by the signifier alone, the utopian drive is the best method to avoid humanity's loss of energy, of flawing entropy. The most emphatic theme in utopian literature is indeed the topic of the last man. If the theme has been perverted by ideological patriotism in recent disaster films, where the last man is reduced to "last man standing," preferably the president of the United States¹⁸, it left deep humanistic traces in serious considerations by less prejudiced writers, from Mary Shelley (*The Last Man*, 1826, when humanity is being ravaged by a pandemic disease) to Olaf Stapledon's *Last and First Men* (1930), from Edward Bulwer-Lytton, *Vril, the Power of the Coming Race* (1871) and H.G. Wells, *The Time Machine* (1895) to Karl Čapek, *R.U.R.* (1920) and *Válka s Mloky* (1936)¹⁹.

The Achilles' heel of mankind is man himself. But even then, there is a way out. Does creation need the human being? In the last of his four (air, water, fire and earth) eco-dystopias, *The Crystal World* (1966), J.G. Ballard offers an alternative that would suit Eco as well as Sontag. It is the soft apocalypse, as nature and the jungle in Africa start off petrifying. "A terrible beauty is born," to paraphrase W.B. Yeats: creation is slowly turning into a brilliant gem, no living creature, least of all 'leprosic' man can escape the mining virus. No remedy is to be found, water from a river has only a superficial effect. "The crystals are not a veneer encasing a body — they are the body. The cleansing effect of the river is not restorative, it is scouring"

¹⁷ For an extensive overview of the utopian tradition, see Lyman Tower Sargent, *British and American Utopian Literature 1516–1975*. Boston, G.K. Hall 1979; F.E. & F.P. Manuel, op. cit.; Ian Tod & Michael Wheeler, *Utopia*, London, Orbis 1978; Pierre Versins, *Outrepart*. Paris/Lausanne, La Tête de Feuille/La Proue 1971; Pierre Versins, *Encyclopédie de l'Utopie et de la Science Fiction*, Lausanne, L'Age d'Homme 1972; Raymond Trousson, *Voyages aux Pays de Nulle Part*, Brussels, ULB Press 1975; Robert Bloch, *Bibliographie der Utopie und Phantastik 1650–1950 im Deutschen Sprachraum*, Hamburg, Achilla Presse 2002; Michael Winter, *Compendium Utopiarum. Typologie und Bibliographie literarischer Utopien. Erster Teilband: Von der Antike bis zur deutschen Frühaufklärung*, Stuttgart, Metzler 1968; Anne Decelle, An Faems & Tom Sintobin, *Paradijzen van Papier. Utopie in de Nederlandse Literatuur*, Leuven, Peeters 2009; Luigi Firpo, *Studi sull'Utopia*, Firenze, Olschki 1977; Luigi Firpo & Norberto Bobbio, *L'Utopismo der Rinascimento e l'Età Nuova e Firpo in Utopia*, Alpigiano, Alberto Tallone 1990.

¹⁸ The most degrading example has been given by filmdirector Roland Emmerich and his epigones (*Independence Day*, 1996; *The Patriot*, 2000; *The Day after Tomorrow*, 2004; 2012, 2009; *Independence Day: Resurgence*, 2016). Contrary to the emancipating topos of yore, "last man standing" is the new super hero who will bear the world's entire burden and save it from extinction. It is the final act of free thinking: history is wrapped up to realize the ultimate goal: the eternal status quo. The conservation of existing power structures and a lifeless ideology. These are the real living dead, not the zombies or the vampires. They willingly kowtow before the only possible solution, the restoration and coagulation of the known system.

¹⁹ See my assessment De Vos 1995: 441–464. It is strange that the last (nihilistic) man as opposite to the *Übermensch* in *Also Sprach Zarathustra* (1885) failed to be fictionalized.

(Freeman 2015)²⁰, as men are reborn as implacable jewels. Dead treasures. Equality in the aesthetic. A final solace or common working ground? “Utopia, in fact and in etymology, is not a place; and when the society it seeks to transcend everywhere, it can only fit into what is left, the invisible non-spatial point in the center of space. The question ‘Where is utopia?’ is the same as the question ‘Where is nowhere?’ and the only answer to the question is ‘Here’” (Frye 1973: 49)²¹. ‘Here’ then is point zero, the “mise en abyme,” final entropy when disorder disappears and absolute order reigns. The real end of time.

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²⁰ “Time itself has begun to leak away”, realizes Robert Macfarlane in the same newspaper (April 4, 2014). “It is the central paradox of catastrophe fiction that to destroy the world you must first summon it into being. *The Crystal World* is surely Ballard’s most gorgeous calamity; apocalypse not as abolition but as transfiguration”.

²¹ To that purpose, during the 1975 Colloquium of Cérisy-la-Salle on “Le Discours Utopique”, Michèle Le Doeuff introduced a neutral term to cover all utopian expressions as “atopic” (Paris, 10/18 1978: 327).

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