

A FLAME DELUGE, A WATERLESS FLOOD: TWO DYSTOPIAN NARRATIVES ON THE END OF DAYS

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RESUMO: A distopia tem sido um meio significativo de investigar o presente e imaginar o futuro desde o final do século XIX, mudando de forma a fim de se adaptar a novos contextos culturais. Sendo uma crítica à razão instrumental, ela é parte integrante da própria modernidade. Este artigo discute duas obras distópicas, *A Canticle for Leibowitz*, de Walter M. Miller Jr., publicado em 1960, e a trilogia *MaddAddam*, de Margaret Atwood, publicada entre 2003 e 2013, dando ênfase às suas concepções de conhecimento, à conexão deste com a religião, e ao papel que ele desempenha na civilização. O objetivo da minha análise é comparar como esses dois textos distópicos abordam questões semelhantes num intervalo de cerca de cinquenta anos.

PALAVRAS CHAVES: *A Canticle for Leibowitz*; trilogia *MaddAddam*; distopia; conhecimento

ABSTRACT: Dystopia has been a significant means of investigating the present and imagining the future since the late nineteenth century, changing its form in order to adapt to new cultural contexts. As a criticism of instrumental reason, it is an integral part of modernity itself. This article discusses two dystopian works, Walter M. Miller Jr.'s *A Canticle for Leibowitz*, published in 1960, and Margaret Atwood's *MaddAddam* trilogy,

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published between 2003 and 2013, focusing on their conceptions of knowledge, its connection to religion, and the role it plays in civilization. The aim of my analysis is to compare how these two dystopian texts approach similar questions over an interval of roughly fifty years.

KEY WORDS: *A Canticle for Leibowitz*; MaddAddam trilogy; dystopia; knowledge

In his introduction to *Global Dystopias*, a thematic issue of the *Boston Review* published in 2017, Junot Díaz states that the future has arrived, and that it is dystopian (Díaz, 2017, p. 5). He is not alone in making this assessment: other critics, such as Raffaella Baccolini and Tom Moylan (2003, p. 233-235), Zygmunt Bauman (2007), Fredric Jameson (2009), and Darko Suvin (2010, p. 404-406), to mention only a few, have similarly voiced the sensation that we already live in a dystopian society. Ruth Levitas refers to “the dominance of the dystopian mode in contemporary culture” (Levitas and Sargisson, 2003, p. 14), a phenomenon that can be easily attested by the large quantity of dystopian fiction that has been published in recent years, by the rise of classic dystopias, such as George Orwell’s *1984*, to the top of best-sellers lists after the election of Donald Trump to the US presidency, and by the creation of TV shows with a high production value and an openly dystopian vision, such as *The Handmaid’s Tale*, *Philip K. Dick’s Electric Dreams*, and *Altered Carbon*. Even if the assertion that we live in dystopian times is debatable – depending as it does on political affiliation and one’s own perception of social conditions – there can be little doubt that dystopia plays an important part in contemporary culture.

M. Keith Booker (1994, p. 18) also calls attention to “the rise of a dystopian mood in popular culture as a whole” in the decades preceding the 1990s, the mark of “a widespread pessimism” in the description of alternate societies throughout the twentieth century (Booker, 1994, p. 15-16). Indeed, as Gregory Claeys points out, the “term ‘dystopia’ enters common currency only in the twentieth century, though it appears intermittently beforehand” (Claeys, 2010, p. 107). For Claeys, too, “in the twentieth century dystopia becomes the predominant expression of the utopian ideal, mirroring the

colossal failures of totalitarian collectivism” (Claeys, 2010, p. 108). But although the rise of totalitarian states, in the form of either fascism or socialism, would be an incentive for the consolidation of dystopian thought in the twentieth century, for Claeys a more clearly defined “turn” towards dystopia begun in the late nineteenth century, with the defining work of H. G. Wells. However, he places the origins of dystopian literature even further back, in early reactions against the French Revolution and satires upon Enlightenment conceptions of the perfectibility of social life through reason (Claeys, 2010, p. 108-110). Similarly, Booker argues that technological achievements in the nineteenth century revealed that science would not be necessarily emancipatory, since it made possible the exploitation of a legion of workers in factories, not to mention the worldwide expansion of imperialism. At the same time, new scientific discoveries, such as Darwin’s theory of evolution and the Second Law of Thermodynamics, cast doubt on the Enlightenment notion of unlimited progress and on the possibility of reason overcoming all obstacles (Booker, 1994, p. 6). For both Booker and Claeys, the origins of dystopian thought lie in a distrust of reason as the guiding principle for the betterment of the human condition, and in the fear of science and technology as means of control and domination. Dystopian literature, then, is to a large extent an expression of a crisis in the project of the Enlightenment, a reaction against the encroachment of instrumental reason on social organization and everyday life. As such, it is an integral part of modernity itself, a reaction to the formation of modern states and to the epistemological models that inform them.

The expansion of capital on a global scale, on the basis of what Negri and Hardt, following Foucault, term biopolitical power, or simply biopower, which aims at a form of control that extends to the conscience and bodies of the population, and to social relations as a whole, within a logic of efficient productivity (Negri and Hardt, 2000, p. 22-30), has made even more urgent the discussion of the imbrication between science, technology and social organization which has informed the dystopian imagination from the late nineteenth century – in this sense, it is interesting that the main metaphor used by Negri and Hardt to describe biopower is that of the machine. If biopower involves the internalized control of all daily practices, it adopts the form of an extensive network that goes beyond traditional social institutions, which become largely irrelevant (Negri and Hardt, 2000, p. 23). This involves a shift from what Bauman (2010) calls solid modernity, with its rigid institutions and clear-cut power hierarchies, to a liquid modernity in which

power has been dispersed and everything seems to be fluid and to depend on the actions of individual agents. For Bauman, this means that it is impossible to write dystopias today, since there is no longer a centralized instance of power that “would punish those who stepped out of line” (Bauman, 2010, 61). But Bauman is referring here to the classic dystopias written as a reaction to the totalitarian states of the solid phase of modernity (his model is Orwell’s *1984*), and not to the wave of dystopian fiction which has come to light in recent decades. As modernity has changed over the twentieth century, the form of dystopian fiction has also adapted itself to new social arrangements, ideologies and structures of thought.

Dystopia, then, is a dynamic form, at the same time that it revisits its previous incarnations – the vigilance of Big Brother is revisited in the TV spectacle of *The Hunger Games* or the work of the Securitat in Cory Doctorow’s “The Things that Make Me Weak and Strange Get Engineered Away”; the visual landscape of *Blade Runner* is virtually reconstituted in *Altered Carbon*; echoes of the pseudo-academic appendix of *1984* can be found in the appendix of Margaret Atwood’s *The Handmaid’s Tale*. Comprehensive histories of dystopian literature have already been written, offering a broad view of its development starting from its founding texts – Claeys (2017) and Booker (1994) are two examples. What I intend to do here is more focused and necessarily more modest. I will compare two works of dystopian fiction in order to investigate how some of the issues frequently present in the genre have been developed in different contexts and time periods. My objects of study will be Walter M. Miller Jr.’s novel *A Canticle for Leibowitz*, published in 1960, and Margaret Atwood’s MaddAddam trilogy, published between 2003 and 2013. Set far in the future, *A Canticle for Leibowitz* chronicles the efforts of a religious monastic order to preserve the remnants of human culture after a nuclear holocaust has destroyed civilization, an event called by later generations the “Flame Deluge”. The MaddAddam trilogy also revolves around a catastrophic event, the “Waterless Flood”, an artificially created pandemic that also wipes out civilization. Both narratives explore the conditions of a post-apocalyptic setting, but while *A Canticle for Leibowitz* can be said to be dystopian in its depiction of a new dark age, the world devastated by the Waterless Flood in the MaddAddam trilogy was already dystopian, suffering the ravages brought by climate change, ecological collapse, and the rampant actions of ruthless corporations. In both cases, dystopia is set on the verge of social

collapse, either as its cause or its consequence, or both: *A Canticle for Leibowitz* ends with a new nuclear holocaust. What is at stake in both narratives, then, are the implications of a dystopian order carried to the extreme, to the point in which civilization itself is dissolved.

This dissolution is the direct consequence of technology and human agency. On the other hand, the way the central catastrophic events are called in each narrative – the Flame Deluge and the Waterless Flood – relate them to the Biblical flood, creating an explicit association with religious discourse. The focus of my analysis, then, will be the way these two narratives approach reason and technology, and their effect on human action and social organization, a question that is central for the dystopian imagination. In both *A Canticle for Leibowitz* and the MaddAddam trilogy, the limitations and dangers of science are thrown into tension with other manifestations of the human imagination, especially religion. This tension is an essential aspect of both narratives, where it is seen as a central aspect of human development. I will begin my analysis with a discussion of the settings of the two narratives and their possible symbolic meanings. Then I will investigate how certain issues related to the fictional worlds depicted in the two works affect their conceptions of knowledge, its connection to the social order, and the possible risks it presents to civilization itself, focusing first on Miller's novel, and then on Atwood's trilogy. In my analysis, I hope to show how these issues have received a different treatment in the roughly fifty years that separate the two texts, providing some indications of the ways dystopian fiction has changed in order to adapt to new circumstances.

Places

A Canticle for Leibowitz opens in a desert, where Brother Francis Gerard of Utah, a young novice, is fasting before taking his vows into the order founded by the soon-to-be canonized Saint Leibowitz. The landscape is barren and empty, save for the crumbling remains of old constructions scattered here and there, from which Brother Francis painstakingly gathers stones to build a shelter to protect him from the wolves that menace him during the night. He sees in the horizon someone approaching, initially only “a wiggling iota of black caught in a shimmering haze of heat” (Miller Jr., 2007, p. 3). He is relieved to find out that the figure is not an apparition created by heat demons, but only a

pilgrim. Although they will never meet again, the pilgrim plays an essential role in Brother Francis' life, for he points to the location of holy relics left by Leibowitz himself, which include a racing form, a notebook, a shopping list and a circuit blueprint. These would be an important addition to the texts stored in the abbey where Brother Francis lives some distance down the road, the only human habitation for miles around in the desert, a fortified construction with towers to spot approaching enemies. The relics were hidden in a partially buried fallout shelter, one of the ruins dotting this arid landscape.

Oryx and Crake also opens with a description of a landscape, although here the effect is rather different: the sea is nearby, the protagonist awakens to the rhythmic sound of its waves, and he climbs down from the tree where he had slept after carefully scanning the ground for dangerous animals. Unlike Brother Francis, Jimmy, a.k.a. Snowman, is surrounded by life, but ruins are also visible nearby: deteriorating skyscrapers stand out against the early-morning horizon, the "shrieks of the birds that nest out there and the distant ocean grinding against the ersatz reefs of rusted car parts and jumbled bricks and assorted rubble sound almost like holiday traffic" (Atwood, 2009a, p. 3). The language employed in this description is conventionally poetic and ominous: "On the eastern horizon there's a greyish haze, lit now with a rosy, deadly glow. Strange how that colour still seems tender" (Atwood, 2009a, p. 3). Conflicting sensations are evoked in the whole passage, beauty blended with intimations of death, the pleasures of vacations by the sea with annoying insect bites, Snowman's hunger with the opulence of the vegetation that surrounds him.

In both novels, the landscapes described are to a large extent conventional. They are two versions of the trope of the wilderness – the desert and the jungle – and as such they function as markers of the absence of civilization. The presence of the ruins of modern buildings – the fallout shelter, the skyscrapers – point, however, to a dislocation in time, not in space: these are clearly post-apocalyptic landscapes. The crumbling buildings, the barren heat of the desert, even the lush vegetation taking over what was originally a city are familiar images, already used with enormous frequency by 1960, when *A Canticle for Leibowitz* was published. The initial landscapes in the two novels also function as generic markers of the post-apocalyptic dystopia. They not only indicate to the readers the kind of text they should expect to find in each narrative, but also place the two novels in a literary tradition that already ran the risk of being exhausted by the

middle of the twentieth century, after a wave of fictional works dealing with the nuclear holocaust. Dystopian fiction, especially in its post-apocalyptic version, often relies on a set of established tropes that act as a shorthand for some of its most basic themes: devastation, the conspicuous display of power, the presence of instruments of control, the chaos and claustrophobia of the urban sprawl. The repetition of these tropes, coupled with the commercial success dystopian fiction has enjoyed, especially in recent times, threaten to turn it into a commodity, into an “obscene surface”, with “nothing left to tell us that we do not already know”, as Mark Bould points out (2017, p. 194). In other words, the dystopian text is always on the verge of meaninglessness.

Potential meaninglessness, however, is also a concern of the dystopian genre as a whole. As Tom Moylan argues, following the work of Raffaella Baccolini, the dominant power structure depicted in dystopian narratives frequently relies on the control and manipulation of language to the extent of reducing it to a propaganda tool and despoiling it of real meaning (2000, p. 148-149) – Orwell’s *1984* is a paradigmatic example, with the creation of “newspeak” by the ruling party, a version of English that aims to reduce linguistic expression to its bare minimum, making it impossible to even conceive, much less express, any idea outside official orthodoxy. The potential meaninglessness of the dystopian narrative could be seen, then, as an example of content being imbricated in the form. As Moylan further points out, with its self-reflective awareness of the power of language, the dystopian narrative is deeply concerned with its own conditions of production and reception (2000, p. 150). The conventional elements in the description of the landscapes in *A Canticle for Leibowitz* and *Oryx and Crake* could be seen as a kind of self-reference, as an attempt to highlight the status of the dystopian narrative as a fictional form, its possibilities and limitations. The use of humor in Miller’s novel and Atwood’s trilogy, even in some of their most disturbing passages, creates a distancing effect which interrogates the conventions of the genre and urges the reader not to take it too seriously.

Humor also highlights the absurdity of many of the situations depicted in both narratives, either as a form of criticism or as a way to reveal the precarious position of the characters, who often lose their footing when trying to cope with a world that defies their comprehension and control. It is not by chance that the beginning of both narratives revolves around comical anti-heroes clearly puzzled by their condition. It is through the

eyes of Brother Francis and Jimmy that we are introduced to the worlds of *A Canticle for Leibowitz* and *Oryx and Crake*, respectively. Vision, the very act of seeing, is a central aspect in the description of landscapes in the two texts. The moment in which Brother Francis first spots the pilgrim in the opening pages of *A Canticle for Leibowitz* is riddled with references to the distorting effects of the haze and the heat waves rising from the floor, which make it impossible for the novice to see clearly. Haze is also mentioned in the beginning of *Oryx and Crake*, and we have an impression of the landscape gradually taking shape before Jimmy's eyes as the sun rises, affected by the changing light of the dawn, and always transformed by his subjective sensations and associations. The landscape becomes fragmented and disorienting, ambivalent in the blend of contradictory perceptions. Different times are juxtaposed in these landscapes; the beach near Jimmy's tree is cluttered with the debris of an industrial civilization that has been destroyed, just as the desert where Brother Francis contemplates his vocation is dotted with the decaying constructions of a techno-military past.

The sense of incongruity and disorientation created by these descriptions is reinforced by the intense use of strategies of estrangement in both narratives. For Keith Booker (1994, p. 19, 175-176), defamiliarization is the main technique of dystopia, changing the way we see the present through shocks of recognition of familiar elements set in a different context, thus promoting a new perspective on social and political practices that otherwise could have been considered natural or unchangeable. The discovery of a fallout shelter by Brother Francis near his improvised dwelling in the desert raises interpretive questions that call attention to his precarious situation and to the absurdity of the existence of the shelter in the first place. Because he lives some 600 years after the nuclear holocaust, he lacks the knowledge to understand what he sees. He can read the words "Fallout Survival Shelter" on the entrance to the building, but he is unable to comprehend the way nouns can adjectivize other nouns without inflection in "pre-Deluge English", a language that is no longer spoken. As a consequence, he believes the aim of the shelter is to house a Fallout, a feared demon from the time of the Flame Deluge, although he cannot conceive why a fiend from Hell would need the food, water and air promised by the sign on the door (Miller Jr., 2007, p. 22-23). As in other instances of estrangement in *A Canticle for Leibowitz*, what happens here is a kind of riddle game for which the reader has all the answers, while the characters do not. Relics from the past,

such as Leibowitz's blueprint, are clear to us – at least we can identify what they are – but they remain a mystery for those who confront them in the novel. This brings to light the fragility of our own world, with its assumptions and structures of meaning, and how utterly it could be erased by a nuclear war, a pressing threat at the time the novel was published. Nevertheless, this strategy of estrangement works on the assumption that there was a highly organized order in the past, that the world familiar to the public the novel addresses is readable in the sense that its artifacts and institutions are easily recognizable and meaningful, as opposed to the apparently absurd world it portrays. The world of *A Canticle for Leibowitz* revolves around fundamental losses: the loss of previous order – however fragile that order might prove to be – and the loss of knowledge. The latter constitutes the main dystopian element in the novel.

In *Oryx and Crake*, Jimmy also finds himself surrounded by objects from the past which have also lost their meaning. Most of these objects, however, are garbage. They have been gleaned from the ruins of a nearby city or from flotsam on the beach. The usefulness of these objects is often dubious, and they carry an excess of merchandising traits from the previous world that renders their superfluity even more salient. Jimmy's watch has a "stainless-steel case" and "burnished aluminum band", but it no longer works; he also wears an "authentic-replica Red Sox baseball cap" (Atwood, 2009, p. 3). Later on, as other survivors of the Waterless Flood gather at an improvised shelter in what was the city park, Toby, one of the protagonists of the second novel in the trilogy, is struck by the luxury of the items at the collective breakfast table: antique plates, crystal glasses, expensive chairs. Another character mentions linen napkins and frets over the impossibility of using them, since there is no way to have them ironed, unconsciously echoing the complaints of many bourgeois housewives (Atwood, 2014, p. 45-47). The incongruity of these items in the post-apocalyptic landscape, their status as merchandise overblown by emptied-out marketing strategies, points to their superfluity even in the world before the plague, which, as in *A Canticle for Leibowitz*, can be easily identified as a reflection of our own. But unlike the world that precedes the Flame Deluge in Miller's novel, the world destroyed by the Waterless Flood in the MaddAddam trilogy is already chaotic, plagued by a rampant consumerism that threatens to exhaust the Earth's natural resources. It is also a world where meaning is threatened by the lack of distinction between what is fake and what is authentic – Jimmy's "authentic-replica" baseball cap is

the most explicit example, but it is joined by chocolate bars made of chocolate substitute, or chicken meat that is not really chicken. The fundamental paucity of this world is revealed in the tension between a profusion of consumer goods and the scarcity of reliable non-industrialized food. In that sense, conditions after the Waterless Flood, despite their terrible cost, are an improvement, abolishing the fetish-value of the merchandise, ending excessive consumption, and promoting a return to more basic needs. Indeed, the Waterless Flood seems to bring about the dream voiced by Adam One, the leader of the God's Gardeners, a religious group that plays a prominent part in the two last volumes of the MaddAddam trilogy, of erasing an existence "so crammed full of materiality that no one thing could be distinguished from another" and establishing a new garden of Eden (Atwood, 2009b, p. 51, 371).

Landscape, then, has a symbolic aspect in the MaddAddam trilogy. It points to a return to nature and the possibility of purification, dramatizing the relation between humans and the natural world that is a central concern in the three novels. The intellectual question of how the human species is supposed to deal with nature finds a concrete expression in the interactions between the survivors of the Waterless Flood and the plants and animals that surround them, as well as in the choices they make in their struggle for survival. The post-apocalyptic landscape of *A Canticle for Leibowitz* also has strong symbolic overtones. The desert is reinvested with its status as the hagiographic scene of meditation and revelation, a place where an encounter with the divine is possible, even though this encounter requires interpretation. The apocalypse represents more than radical change, "the only power left that could still create a renewed, free space in which another kind of life might be possible," at a time when it has become increasingly hard to imagine a fundamentally different future away from the dominion of global capitalism (Canavan, 2012, p. 139). It also offers the opportunity to reenchant the world. The Waterless Flood in the MaddAddam trilogy opens the possibility of finding a new spiritual existence in a renewed contact with nature in a landscape where fantastic new creatures spliced from different animals now roam free, having broken away from the laboratories in which they were born, blending into an environment that bears the marks of human imagination, now indistinguishable from natural creation. In *A Canticle for Leibowitz*, the Flame Deluge recreates the space of mystical revelation, peopled by mutated humans and monsters whose presence is accepted as indisputable truth, blurring the boundaries between fact

and myth. In the second part of the novel, the abbey in the desert is visited by an emissary from the Holy See, “a monsignor with small horns and pointy fangs, who announced that he was charged with the duty of opposing the canonization of the Blessed Leibowitz”. When he leaves, this devil’s advocate seems to have acquired some sympathy for the cause of the monks; he even praises Brother Francis’ work on an illuminated copy of Leibowitz’s blueprint, and as a consequence “Monsignor Flaught’s horns immediately shortened by an inch, and his fangs disappeared entirely” (Miller Jr., 2007, p. 92-95). The diabolical aspect of the monsignor is a matter of some confusion, as it is first introduced as fact – something entirely possible in the world of *A Canticle for Leibowitz*, where two-headed mutants are not a rare occurrence – and then treated as a purely subjective impression. This introduces an epistemological doubt in the readers themselves, since the rules that govern this world seem to totter on the edge of science and myth. The post-apocalyptic landscape is uncertain, its lawlessness going beyond the absence of a firmly instituted social authority to contaminate the physical universe, thus raising the question of the possibility of any kind of stable knowledge.

Relics

The blankness of the desert and its emptiness always lurk in the background of the narrative of *A Canticle for Leibowitz*. Its presence is a constant menace, since it is a concrete translation of the paradoxical menace at the center of the novel: the absence of knowledge (the barrenness of the desert is also the aridness of ignorance), and its resurgence (books and technological artifacts are hidden in the buildings of the old civilization scattered in the desert, but teams of archaeologists have been inadvertently blown up by bombs found in abandoned military installations). The world seems reduced: most of the action of the novel is concentrated in the abbey in the desert, and although the ravages of savage tribes are mentioned, as well as the wars caused by new rising states, the abbey remains untouched, unaffected by the social world. In *New Maps of Hell*, published in the same year as *A Canticle for Leibowitz*, Kingsley Amis argues that science fiction is a generalizing medium; it

shows us human beings in their relations not with one another, but

with a thing, a monster, an alien, a plague, or a form of society, and while it is true that a society is a human thing, the aspects of it which engage these writers can be validly treated as impersonal. (Amis, 2012, p. 67, 94)

The reduction of the world to the symbolic spaces of the desert and the abbey involves a concentration that effects a generalization of this kind: physical reality becomes a stage for the discussion of the nature of knowledge, its role in human development, and the problem of its preservation.

The horror of the destruction of knowledge is epitomized in the vivid description of the Simplification, a series of riots which occurred shortly after the nuclear holocaust. Blamed for the development of the atomic bomb, scientists – and later all intellectuals – were persecuted, their books burned. What follows is an age of ignorance, in which few can read and the technology of the twentieth century is lost. This state of affairs is openly described as opposed to civilization, associated in the novel with culture or, to put it more precisely, with scientific knowledge – the artistic achievements of mankind seem to be little mourned. Some of this knowledge, however, is preserved by the catholic Church, in the form of the few books and technical texts saved from the Simplification and copied by hand over the centuries by the monks in the order of Leibowitz. The abbey, then, is a receptacle for all that remains of the culture of the former civilization. But the degradation caused by the loss of knowledge remains, not only in the aggressive behavior of wild tribes that have reverted to a kind of animalism, but also in the frustration to the absence of meaning in the relics that have been stored – which also makes impossible any real understanding of the physical world. Indeed, the knowledge preserved with religious devotion by the brotherhood of Leibowitz remains latent: it is fragmented and incomprehensible, since the context needed to interpret its texts is now in the past. Knowledge, then, is precarious, and it seems to depend on its conditions of production.

The Church itself is in danger of succumbing to superstition, but its role as the sole guardian of knowledge forces it to pursue logic and to attempt a reconciliation with science. Rumors that the pilgrim Brother Francis met in the desert was actually a divine manifestation of Leibowitz himself are promptly curtailed, and when a scholar visits the abbey in the second part of the novel, as a new movement of Enlightenment is taking

shape, one of the novices proposes to him an evolutionary explanation for the origins of human beings based on the writings of Saint Augustin (Miller Jr., 2007, p. 213). The approximation of religion to science finds its culmination when one of the monks in the abbey manages to build a generator and recreates electric light. The new apparatus seems uncomfortably incongruous in the library of the abbey, where the sacred relics gathered by Leibowitz and his followers were kept, and it is with a sense of relief that the abbot allows the librarian to take down the electric bulb and hang once more the crucifix it had replaced.

The lightbulb is yet another concrete representation of an abstract idea: the return of scientific knowledge after an age of darkness. The second part of the novel is titled “Fiat Lux”, and this refers both to the recreation of electric light and to the beginning of the new Enlightenment. If so far the narrative of *A Canticle for Leibowitz* has sided with the enthusiasts of science, and has coupled faith in technology with religious faith, the ambivalent reaction of the monks to the generator reveals a tension within this scheme. Science and religion seem to be in dispute, and religion appears to have gained the ascendancy by the end of the second part of the novel.

The replacement of the light bulb with the crucifix is to a large extent a reaction to a speech delivered by the visiting scholar on the scientific researches being conducted in his university. For the scholar, science is a form of power, and its aim, more than providing knowledge about the physical world, is to give man absolute control over nature. This raises misgivings among the monks, marking a division between the Church and laic institutions of research regarding the application of knowledge, and introducing a second dystopian motif in the novel. The conception of science as a cultural inheritance from the past implies that science is socially constructed and that it is influenced by external circumstances involving the power structure and system of beliefs of a given society. This seems to be confirmed by the emphasis given in *A Canticle for Leibowitz* to the conditions in which knowledge is appropriated and to the fact that it requires interpretation and contextualization. However, knowledge is also believed to have “a symbolic structure that was peculiar to itself, and at least the symbol-interplay could be observed. To observe the way a knowledge-system is knit together is to learn at least a minimum knowledge-of-knowledge” (Miller Jr., 2007, p. 66). Seeing knowledge as a symbolic system reinforces the idea that it is a cultural creation, but the fact that it is “peculiar to itself” also suggests

that it is an autonomous system governed by its own internal logic that could be deciphered once the interplay of its components is understood, as if it were a mechanism.

While musing on the muted resentment of the visiting scholar after he has studied the manuscripts stored in the abbey, the abbot reaches the conclusion that the scholar's pride had been hurt by the realization that he could never discover something new; he could only rediscover what had already been known in the past, until the world reached the same level of development of the time before the holocaust (Miller Jr., 2007, p. 209). Science, then, follows a fixed path of development, and only after a certain stage has been reached the next one can be tried. Knowledge is indeed preserved as an independent domain, and again the image of the manuscripts stored by the monks act as a concrete representation of an abstract notion of the nature of knowledge as an autonomous system, unalterable by the human imagination, which can only reconstitute its progression, and whose ultimate referent is not cultural, but the inflexible laws of nature itself.

Knowledge is a matter of decoding, not creation. As such, it follows a necessary progression, and it inevitably reconstitutes itself, following more or less the same path. The new age of Enlightenment and of a "newly evolving science" (Miller Jr., 2007, p. 146) occurs independently from the manuscripts stored in the abbey, which can only speed this process. The social conditions for this new Enlightenment are largely left out of the picture, although the formation of a strong organized state seems to be necessary requirement for this achievement. But this only subsumes social development to the same notion of progress: the rise of centralized states is seen as an inevitable stage of historical evolution. Science and the state are connected as parts of the same organic growth, and because states are concerned with power and control, the necessary endpoint of this evolution is the nuclear holocaust.

It is at the crucial juncture of the rebirth of science that art makes its most significant appearance in the narrative. It had already appeared in the form of Brother Francis' illuminated copy of the Leibowitz blueprint, a beautiful object whose value is purely aesthetic. Now it resurfaces in the guise of a poet who visits the abbey at the same time as the scholar. The poet explicitly plays the part of the fool in the banquet organized in honor of the scholar, addressing the need for responsibility in the new ascension of science and its alliance with instituted power (Miller Jr., 2007, p. 202-207). He acts, then, as the scholar's conscience, and this is again turned into a concrete symbol: the poet's

glass eye, through which he claims to see “true meanings”, and which he jokingly calls a “removable conscience”. The scholar steals the glass eye, the poet tries to retrieve it, but finally declares the scholar has more need for it than he does (Miller Jr., 2007, p. 221-223). The poet ends up being killed on the road from the abbey, more or less on the same spot Brother Francis had been killed after his illuminated blueprint had been stolen, and his glass eye, still in the possession of the scholar, is appropriated as a state symbol. Art, then, proves to be ineffectual in providing a moral check to the development of science. The death of these characters connected to the arts on the road indicates that their movement renders them fragile and unreliable. A more fixed institution is required to act as a moral conscience to science.

Not surprisingly, it is the Church that takes up this role. By the end of the second part of the novel, the division between science and religion has widened, but in the third and final part, which takes place 600 years later, when a new atomic age has been reached, a reconciliation seems to have occurred. The abbey is now equipped with computers and a laboratory it uses to measure radioactive emissions after isolated nuclear attacks from a foreign nation threaten to escalate into a new global war. But this apparent assimilation of science by the Church hides a deeper separation of roles. As the monk in charge of monitoring ambient radiation muses,

Here in the new aluminum and glass buildings, he was a technician at a workbench where events were only phenomena to be observed with regard to their *How*, not questioning their *Why*. On *this* side of the road, the falling of Lucifer was only an inference derived by cold arithmetic from the chatter of radiation counters, from the sudden swing of a seismograph pen. But in the old abbey, he ceased to be a technician; over there he was a monk of Christ (...). Over there, the question would be: “Why, Lord, why?” (Miller Jr., 2007, p. 263)

While science is concerned only with objective phenomena, with the workings of observable events (the “how”), the Church is concerned with a different kind of

knowledge (the “why”), understood here as their fundamental meaning and moral underpinnings.

Three distinct but interrelated realms emerge in relation to knowledge by the end of *A Canticle for Leibowitz*. Religion is involved with the search for ultimate causes and the moral implications of all human action, absorbing the critical role first glimpsed in the arts. Science is confined to the understanding of the mechanical operation of physical events; being morally neutral, it can be used as an instrument by political rulers, concerned only with the expansion of their power. *A Canticle for Leibowitz* is a transitional work in that it straddles the two main attitudes in relation to science that are pertinent dystopian thought through the twentieth century: faith in scientific progress and fear of destruction through scientific development. While it rejects the reliance of science of empirical phenomena and its mechanizing impulse, it nevertheless adopts some of its logic. The proposition of three domains of influence in the production and application of knowledge reproduces the system of checks and balances instituted by the U.S. constitution which serves as a model for the organization of political power in Western liberal democracies, and which Leo Marx sees as a reflection of the modern conception of the universe as a mechanism, since it sees the interaction of the different branches of government as the finely tuned operation of the pieces of a machine (Marx, 1967, p. 163-165). This system of checks and balances is also an attempt to reconcile the contradiction between the two attitudes to science expressed in the main dystopian drives in the novel: the degradation of humanity brought by the relinquishing of knowledge and the fear of annihilation caused by scientific development gone rampant. *A Canticle for Leibowitz* is also transitional in acknowledging the need for religion to accept the findings of science, at the same time that it tries to recover the relevance of the catholic Church as an institution in an increasingly secular world, looking with nostalgia to its role in the Middle Ages as preserver of knowledge and focus of intellectual activity. The relevance of the arts must be downplayed, since Miller attributes to the Church some of the functions they had acquired with the advent of modernity. Finally, it offers glimpses of the complexity of the production and transmission of knowledge, only to revert to a more traditional belief in the inexorability of scientific progress and ultimate independence from a broader sociocultural context.

Scraps

If in *A Canticle for Leibowitz* we witness a world reduction, the world depicted in Margaret Atwood's MaddAddam trilogy is remarkable in its excess. As I have argued above, its landscapes are cluttered, either by the remnants of civilization and the growing luxuriousness of nature in their post-apocalyptic phase, or by the urban sprawl of a post-industrial society and its objects of consumption in the period before the Waterless Flood. And although protected spaces of order are present in the trilogy – the exclusive residential compounds of the corporations, the rooftop community of the God's Gardeners – the overall impression is one of chaos and fragmentation. *A Canticle for Leibowitz* alternated between an evocation of disorder – in the representation of the dissolution of society or the threat of violence from warring states – and a general organizing principle – in the highly regulated space of the abbey, in the liturgies of the Church, and in the structure of the narrative itself, with its division into three equivalent parts, separated by a regular interval of 600 years, the repetition of similar episodes at the end of each part, and the reappearance of the same objects, such as the poet's eye and a wooden statue of Saint Leibowitz, in the many time periods covered in the novel, as if to testify to their permanence and an underlying sense of stability. Further, the use of concrete images to symbolize abstract ideas, and the tendency to conceive of thought in terms of autonomous domains leads to a fixation of elements that otherwise would remain in flux or even in conflict. In the MaddAddam trilogy, on the other hand, the very abundance of elements at play hinders their coalescence into a coherent view. Just as Jimmy's view of his surroundings in the first pages of *Oryx and Crake* is fragmented and tinged by conflicting sensations, the vision of knowledge, religion and human nature is dynamic and often contradictory in the trilogy.

Although Jimmy and other characters in the narrative often long for the past, there is no real sense that it can be recreated, or that this is even actually desirable. Most of their memories are traumatic, and the past is often described as the chaos erased by the Waterless Flood. What it leaves behind is not a treasure of knowledge to be eventually deciphered in order to rebuild the world, but rather garbage. This includes the passages from self-help books and motivational speeches that creep into Jimmy's mind as tentative pieces of advice for his survival after the plague. The remembered "wisdom" from the

past is too glib, vacuous, tainted by its marketable function of being easily digested tips for proper behavior. Memories and knowledge from the past come haphazardly, often unbidden, like the flotsam on the beach.

They also come from different sources, not all of them noble or useful. Knowledge, in particular, is far from pure. It often appears in the guise of isolated information in the frequent mentions of online games involving quizzes, historical events or biology. In their conversation, the survivors of the Waterless Flood, many of them former scientists, often drop tidbits of information on genetics or bioengineering. Knowledge is a part of human interaction and entertainment, and it seems to be everywhere. In the form of technology, it affects virtually all aspects of everybody's life before the plague. Knowledge is also property, and not only in the shape of technological products. Corporations zealously guard their research and go as far as kidnapping scientists working for their competitors. Science is not an autonomous system simply following its own internal logic; its development is dictated by the economic interests of the corporations and by the demands of the market. The spliced animals which are a constant source of humor in the narrative due to their absurdity, but which are also a source of danger when released in the wild, are the creations of these corporations, and are targeted to specific market niches. One of these animals, a sheep that grows a substitute for human hair instead of wool, is even called by its brand name: Mo'Hair.

In the MaddAddam trilogy, science is connected to power, not only because of its apparently unlimited ability to alter nature, but also because of its association with the corporate world. The state seems to be irrelevant, or even inexistent. The only instance vaguely resembling a centralized power structure is the CorpSeCorps, a private corporation in charge of public security which acts only in the interest of the other corporations. These interests are often diffuse and they do not follow a centralized plan. The profusion of new spliced species that populate the landscape after the plague, and which erases the boundaries between the natural and the artificial, is a sign of the unregulated activity of these corporations. Their abundance is in stark opposition to the gigantic number of natural species that have become extinct.

Abundance, then, is coupled with scarcity. And neither is the power of science absolute. Many of the artificially created species become a menace that cannot be controlled. One of them, the pigoon, an enormous pig developed to furnish transplant

organs, proves to be a dangerous and omnivorous predator, its cunning the result of human neural tissue growing in its brain. Released into the wild during the plague, the pigeons grow tusks that make them even more lethal, even though they were genetically programmed not to grow them. Something in the natural order seems to remain outside the control of scientific manipulation, ready to reassert itself at the earliest possible opportunity.

Science can also be a weapon of resistance. *The Year of the Flood* and especially *MaddAddam*, the second and third novels in the trilogy, bring to the fore the actions of a group of eco-terrorists, the MaddAddamites, who bioengineered life forms to sabotage the infrastructure of the corporations and stop their predatory encroachment on the environment. The dissemination of technology and the absence of a fully centralized instance of planning and control mean that science can be appropriated for the most diverse ends by virtually everyone. Science in the MaddAddam trilogy is not a unified, organic body as it seems to be in *A Canticle for Leibowitz*. It is the product of social forces, often expressing conflicting interests. Its development does not follow a clear path, and it can be a terrain of ideological disputes. One of its creations, the liobam, is a splice between a lion and a lamb created by a religious sect to concretize the prophecy that the lion will lie down with the lamb.

Religion also offers ideological support for the actions of the MaddAddamites, who were formed by a splinter group of the God's Gardeners, the main focus of *The Year of the Flood*. The God's Gardeners was a religious sect founded by Adam One, who preaches a harmonization with nature, the need to see man as the equal of animals, which are all supposed to have souls, and the end of materialism. Although Adam One's teachings seem to offer the moral backbone for the last two volumes in the trilogy, it is important not to take his religion too seriously. As Nazri Bahrawi (2013, p. 253) points out, "the all-permeating irony of the two texts problematizes the very idea of 'faith' itself," and the God's Gardeners are often presented as comical in the narrative. More importantly, Adam One himself admits in a conversation with Toby, a rather reluctant member of the God's Gardeners, that he uses God as a tool:

"The truth is," he'd said, "most people don't care about other Species, not when times get hard. All they care about is their next

meal, naturally enough: we have to eat or die. But what if it's God doing the caring? We've evolved to believe in gods, so this belief bias of ours must confer an evolutionary advantage. The strictly materialist view – that we're an experiment animal protein has been doing on itself – is far too harsh and lonely for most and leads to nihilism. That being the case, we need to push popular sentiment in a biosphere-friendly direction by pointing out the hazards of annoying God by a violation of His trust in our stewardship.” (Atwood, 2009b, p. 241)

What emerges from this passage is that Adam One's religion is a consciously ideological construct with the view of convincing people to preserve the environment. However, it is not any less natural because of that. As Adam One puts it, religion is a product of evolution, and as such it serves a natural purpose, being an integral part of human mental constitution. At the same time, it is a construction, a product of the imagination. Adam One's argument in this passage is scientific, both in its logic and its rhetoric, in a formal exercise in which the truth of science and the truth of religion confirm each other. This blend between science and religion is necessary, for as Adam One acknowledges, the “strictly materialistic” – or strictly scientific – view is too barren, leading to nihilism and meaninglessness. It opens up the possibility that science as a form of understanding the world is also a manifestation of the human imagination – and the abundance of fantastic animals that it produces in the pages of the MaddAddam trilogy may represent that. Conversely, this fusion between science and religion, which is at the center of the God's Gardeners' faith system, turns religion into yet another form of knowledge. Both religion and science are defamiliarized in the process, creating a distancing effect which allows us to see them as hybrid created objects – just as Adam One's notion of nature includes the new species created by man. “Like the ‘new-old’ creatures of the MaddAddam realm, ‘faith’ too has been spliced into something between science and religion” (Bahrawi, 2013, p. 253), going beyond the uneasy alliance between science and religion that we see in *A Canticle for Leibowitz*.

This fusion of two discourses that are traditionally seen as conflicting in Western culture demands from the God's Gardeners a constant revision of their doctrine which

often leads to an abstruse discussion of apparently frivolous articles of faith, such as the shape of Adam's teeth. As Adam One points out, however, this point is actually important, since it is necessary to explain why our teeth have been adapted to eat meat if God meant us to be vegetarian, according to the Gardeners' beliefs. This shows that the construction of religious faith is a continuing process which is unlikely to solidify into a fixed form. Also, this process involves quite a lot of improvisation, especially when it comes to the religious system Jimmy starts teaching the Crakers, the post-human race that was supposed to repopulate the planet after the Waterless Flood.

As we learn towards the end of *Oryx and Crake*, the plague was created by Crake, Jimmy's childhood friend, who later became a scientist working for one of the most powerful biopharmaceutical corporations. Crake's plan was to wipe out civilization, which he believed to be on the verge of causing a catastrophic ecological collapse, and replace it with bioengineered humans tailored to his specifications. This new version of humanity would be strictly vegetarian, eating almost any kind of leaves, which meant they would never need to invent agriculture. They would be unable to see differences in skin color as significant, which would erase racial prejudice. Their sex life would be perfectly regulated into cycles of fertility and turned into a purely biological drive, as in most other mammals, and the sexual act would involve four males, so as to make it impossible to determine paternity; this would eliminate patrilineal descent and the fixation on private property – not to mention sexual abuse, rape and the frustrations of love. They would not need laws or a moral code either, since they are genetically encoded for good behavior: “they don't need commandments: no *Thou shall nots* would be any good to them, or even comprehensible, because it's all built in” (Atwood, 2009a, p. 428). Perfectly adapted to their environment, they would never need to wear clothes. The Crakers – as Jimmy calls them – would be a realization of Adam One's fantasy of a prelapsarian life: “to live the Animal life in all simplicity – without clothing, so to speak” (Atwood, 2009b, p. 52). Indeed, Crake had contact with the God's Gardeners as a young man, and it is likely that he was influenced by their ideas, which shows that even the benevolent religion of the Gardeners can have sinister consequences – in this case, genocide on a global scale.

Crake has a strictly scientific view of human development, similar to the one that informs the narrative of *A Canticle for Leibowitz*:

Watch out for art, Crake used to say. As soon as they start doing art, we're in trouble. Symbolic thinking of any kind would signal downfall, in Crake's view. Next they'd be inventing idols, and funerals, and grave goods, and the after-life, and sin, and Linear B, and kings, and then slavery and war (Atwood, 2009a, p. 419)

Crake's vision precludes any form of humanism. But as Hannes Bergthaller argues, what he fails to see is that his disgust with the destructive potential of mankind is a sign that human beings are not fully determined by their biological inheritance (2010, p. 737). Despite their genetic programming, after Jimmy leads them away from the corporation compound where they were raised, the Crakers begin to develop their own religion based on their curiosity concerning their origin, in which Crake himself figures as supreme god of creation, and Jimmy as his prophet. For Bahrawi, this is an indication that to have faith "is almost the default position of humankind" (2013, p. 256). But this religion is also a creation, a fruit of Jimmy's and also the Crakers' imagination, often improvised, especially in the moments when Jimmy is impatient or trying to patch up unintentional inconsistencies. The consolidation of religion is associated with storytelling, as Jimmy and later Toby spin out the story of the creation of the Crakers and of the adventures of Crake himself and his helpers. It also leads to the inception of art, as the Crakers sing in praise of their god or fashion dolls to replace his prophet when he is absent. Rather than a return to Crake's belief that faith was a biological instinct – his idea that God was "a cluster of neurons" (Atwood, 2009a, p. 185) – this points to religion as a representation of symbolic thinking. In *MaddAddam*, Toby teaches Blackbeard, one of the Craker boys, how to read, and the trilogy ends with the last pages of his book, telling his story and that of the survivors of the Waterless Flood. Toby herself had begun a diary, uncertain that there would be any future generation to read her narrative but determined to believe in the future in order to create it (Atwood, 2014, p. 165-166). At the same time that it has the function of recording the past, writing can be a gratuitous act of creation with no objective purpose, since it is possible that there will be no one to read it or understand it completely. As Cavanan (2012, p. 146) points out, humanism is an excess that transcends Crake's attempt to reduce the human to a mechanism. In insisting on the sovereignty of

the human imagination (Bergthaller, 2010, p. 741), Atwood reinforces the belief in an ineffable human nature that escapes biological determinism.

The logic of excess in the MaddAddam trilogy can be seen, then, as a symbolic preparation for the affirmation of humanism as an excess. This is also an affirmation of liberty, a liberation from both historical and biological determinism. Accordingly, while history is cyclical in *A Canticle for Leibowitz*, structured as a succession of construction and destruction that necessarily leads to the final erasure of the apocalypse only to begin again, it is open-ended in the MaddAddam trilogy. As Atwood's narrative ends, there is no clear indication of where further events will lead. Canavan (2012, p. 153) notes that the first two books in the trilogy end in a moment of radical choice, and the last volume closes with Blackbeard's hope in future generations and the possibility that new pages may be added to his book (Atwood, 2014, p. 469-474). Further, while history was a unified movement in Miller's novel, by the end of *MaddAddam* humanity has been divided into at least three groups: the original humans, the Crakers, and the pigoons, who begin to display signs of symbolic thought due to their human neural tissue – not to mention the appearance of the first human-Craker hybrids. The image of hybridity in the end of the novel symbolically reenacts the indistinctness of categories that characterizes the whole trilogy, with its blending of the human and the animal, the artificial and the natural, science and religion – categories that had already begun to be questioned in *A Canticle for Leibowitz*, despite its attempts to keep them discrete. This points to a shift in the dystopian imagination in response to the dissolution of solid institutions that accompanies the transition to what Bauman (2007, 2010) terms liquid modernity. This shift can be perceived in the form of the novels themselves, and in the delineation of their fictional worlds. The instances of power in the MaddAddam trilogy are indeed biopolitical in Negri's and Hardt's (2000) formulation in that they pervade every aspect of the characters' lives, and that they find their culmination in the manipulation of the human genetic inheritance in order to control its future. As argued above, liberation comes in the form of the humanist reaffirmation of the imagination and the indefinable excess of the human spirit, represented in the expression of religious and artistic thought in the Crakers and in the abolition of social laws in the post-apocalyptic landscape outlined in the novels – in itself an imaginary landscape populated by fantastic beings which

reenchant the world. This landscape, then, is a new rendition of the pastoral fantasy that Leo Marx sees in *Walden*, a mix of myth and reality (1967, p. 246). It is also a scene of conciliation, represented in the end of *MaddAddam* by the pact of non-aggression between humans and pigeons intermediated by the Crakers, who are mysteriously able to communicate with animals. If, as Canavan argues, the Crakers should be read as an allegory of the radical change we must go through in order to save the planet (2012, p. 152), then it is also possible to see them as a symbolic representation of the desired conciliation between humans and nature. As both Canavan (2012, p. 152) and Bahrawi (2013, p. 155) point out, it would be a mistake to see the Crakers or the teachings of the God's Gardeners as blueprints for a utopian future – Atwood's work is too satirical for that; besides, the post-apocalyptic landscape is neither a utopia nor a dystopia, exactly. The open-ended conclusion of the narrative rather points to a desire to leave behind the dichotomy between these two categories altogether.

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