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"Jimmy didn't envy him. (He envied him.)": Social and personal consequences of liberal eugenics in Margaret Atwood's *MaddAddam* trilogy

Sławomir Kozioł
University of Rzeszów, Poland
ORCID: 0000-0003-0771-2118

Abstract: The article interprets Margaret Atwood's *MaddAddam* trilogy as an important, critical voice in the debate over the desirability of liberal eugenics – genetic programming of children that is regulated only by the market forces of supply and demand. Arguing that the trilogy indicates potential effects of liberal eugenics on both the functioning of society and an individual's sense of self, the article refers to a number of theoretical texts coming from the fields of bioethics, social psychology and anthropology, but its primary source of argumentation lies in the philosophy of Jürgen Habermas.

Key words: Margaret Atwood, MaddAddam trilogy, liberal eugenics, Jürgen Habermas

"Jimmy mu nie zazdrościł. (Zazdrościł mu.)": Społeczne i jednostkowe konsekwencje eugeniki liberalnej w trylogii *MaddAddam* Margaret Atwood

Abstrakt: Artykuł interpretuje trylogię *MaddAddam* Margaret Atwood jako ważny, krytyczny głos w debacie dotyczącej eugeniki liberalnej, czyli genetycznego programowania dzieci, które jest regulowane wyłącznie poprzez rynkowe siły popytu i podaży. Argumentując, że trylogia Atwood wskazuje potencjalne efekty eugeniki liberalnej zarówno w zakresie funkcjonowania społeczeństwa, jak i w przypadku jednostkowego poczucia tożsamości, artykuł odnosi się do teoretycznych tekstów z zakresu bioetyki, psychologii społecznej i antropologii, ale głównym źródłem argumentacji jest filozofia Jürgena Habermasa.

Słowa kluczowe: Margaret Atwood, trylogia *MaddAddam*, eugenika liberalna, Jürgen Habermas

Introduction

Margaret Atwood's *MaddAddam* trilogy—*Oryx and Crake* (2003), *The Year of the Flood* (2009), and *MaddAddam* (2013)—presents a vision of a dystopian future of the US governed by powerful corporations. People

working for the corporations live with their families in the compounds—comfortable gated communities—whereas the rest of the human population eke out a living in the pleeblands, that is to say, slums which cover most of the inhabited area in the universe of the trilogy. This society comes to an abrupt end when one of the main characters of the trilogy, a brilliant genetic engineer called Crake, develops and then releases a killer virus, causing a deadly plague which almost wipes out humanity from the surface of the earth. In this way he prepares space for the Crakers—a new kind of environmentally friendly humanoid beings also engineered by him—who are supposed to take the place of the original humanity.

The trilogy may be seen as a literary embodiment of a neoliberal future dominated by biotechnological corporations[1]: apart from showing how changes in the political and economic structure of the whole country affect almost all aspects of social life, the work also presents a vision of biotechnological development in this kind of future. The most powerful corporations specialize in health and beauty products, a significant number of which are based on genetic engineering. Apart from a variety of methods for the management and improvement of the customers' own selves, the corporations also offer services for genetic modification of babies. The demand for this kind of service—production of "designer babies"—stems from the limitations of genetic engineering: as an organism can be subjected to far more significant modifications at the moment of its creation than after its birth, some of the longings and desires of people can be realized only in their modified offspring. This kind of biotechnological intervention represents what some bioethicists, including the German philosopher Jürgen Habermas, call *liberal eugenics*, that is, genetic programming of offspring by their parents which is regulated only by the market forces of supply and demand. In fact, Crake is able to create the Crakers in a corporate laboratory because he presents them as "the floor models"[2] for his new, better method of producing designer babies and thus—as harbingers of huge profits.

Most of the scholars examining the problem of genetic engineering of humans[3] in the trilogy focus on the Crakers and their significance in the

[1] It could be argued that the trilogy reflects Melinda Cooper's claim that "the emergence of the biotech industry is inseparable from the rise of neoliberalism as the dominant political philosophy of our time. The history of neoliberal theories of economic growth and biotechnological visions of growth therefore needs to be pursued simultaneously" (M. Cooper, *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era*. Washington: University of Washington Press, 2008, p. 19). Throughout the essay I use the term "neoliberal" when I want to stress the economic organization of society that is specifically opposed to the social welfare state, and the term "liberal" when my focus is on the tradition of personal freedom going back to John Locke—bearing in mind that neoliberal thinkers always refer to classical liberalism as the foundation of their reasoning.

[2] M. Atwood *Oryx and Crake*, London: Hachette Digital, 2009 (2003), p. 355. All the following quotations from this edition will be marked in the text as *OC* and page number.

[3] The development of biotechnology represented in the trilogy has also been analyzed in the context of animal rights. Here critics see Atwood's work as condemning anthropocentrism

narrative. Hannes Bergthaller and Gerry Canavan, for example, interpret the Crakers in the context of the problem of the sustainability of human civilization. In their respective essays, however, they do not see the new beings as a serious solution to the problem, but as a figurative representation of the extent of changes in both human subjectivity and organization of human society that would be needed to save both the planet and the human race[4].

Human genetic modification in the trilogy has also been analyzed in the frame of the debate over desirability of liberal eugenics. Examining *Oryx and Crake*, Marie Aline Ferreira notices the problem of designer babies as it comes into existence in the universe of the novel just before the plague, when society starts to be divided between people with modified genes and those without such modifications. This division, as Ferreira indicates, is created along the lines of power and wealth, exacerbating inequalities in Atwood's dystopian universe[5]. Ferreira, however, does not focus on this inequality in her essay—instead, her main interest is in Crake's attempt to eliminate in the Crakers several core features that we associate with humanity: dreaming, the capacity for creation of symbolic systems and desire for the sacred[6]. Crake wants to get rid of these features because he believes that they ultimately contribute to the destructive nature of human civilization. This attempt—essentially reductive as it is supposed to bring the Crakers closer to animals—fails, but Ferreira argues that it constitutes an assault on human autonomy. In this context she points out that the risk of violating this autonomy is one of Jürgen Habermas's main arguments against liberal eugenics, but she does not examine the issue more deeply, concluding only that such deprivation "will deny our common understanding of what being human entails"[7].

In my essay I also explore the problem of liberal eugenics in the trilogy but I argue that Atwood offers her readers a far broader view of the issue than is suggested by Ferreira's analysis—in what follows I contend that in her work Atwood voices extensive and nuanced criticism of unrestrained

of biotech industries and the idea of a firm boundary between humans and animals (see, for example, A. F. Pusch, *Splices: When Science Catches Up with Science Fiction*, "Nanoethics", 2015, vol. 9, pp. 55-73, or T. Warkentin, *Dis/Integrating Animals: Ethical Dimensions of the Genetic Engineering of Animals for Human Consumption* [in:] *Leonardo's choice: Genetic Technologies and Animals*, C. Gigliotti (ed), Dordrecht: Springer, 2009, pp. 151-72).

[4] See H. Bergthaller, *Housebreaking the Human Animal: Humanism and the Problem of Sustainability in Margaret Atwood's* Oryx and Crake *and* The Year of the Flood, "English Studies", Vol. 91, No. 7, 2010, pp. 728-43 and G. Canavan, 2012. *Hope, But Not for Us: Ecological Science Fiction and the End of the World in Margaret Atwood's* Oryx and Crake *and* The Year of the Flood, "Literature Interpretation Theory", Vol. 23, No. 2, 2012, pp. 138-59.

[5] M. A. Ferreira, *"Toward a Science of Perfect Reproduction"?: Visions of Eugenics in Contemporary Fiction*, [in:] *Restoring the Mystery of the Rainbow: Literature's Refraction of Science*, V. Tinkler-Villani and C. C. Barfoot (eds), Leiden: Rodopi, 2011, p. 413.

[6] *Ibid*., p. 410.

[7] *Ibid*., p. 411.

liberal eugenics. In my analysis, I show that Atwood's specific attitude to this issue is visible both in the narrative parts focusing on the extreme form of neoliberal society existing before the plague, and in the parts describing the post-apocalyptic world that is the result of the deadly pandemic. Atwood implies that in the ultra-neoliberal world, in which only a limited set of skills ensures a relatively comfortable life, genetic engineering of humans could lead to a growing uniformity of society—or, rather, of the part of it that would be able to afford liberal eugenics—as most parents would be choosing the same or similar modifications to help their engineered offspring to survive in the fiercely competitive world. On the other hand, the fate of the Crakers in the post-apocalyptic world may be seen as an indirect indication of the consequences of genetic engineering deployed in a more egalitarian society, in which the choice of genetically programmed characteristics would be more varied. Atwood is able to offer here insightful exploration of the issue of liberal eugenics, first by focusing on the perspective of an unmodified man—Jimmy—who appreciates the Crakers' adaptation to the post-apocalyptic environment, and then by placing the Crakers among a larger group of human survivors, that is to say, in an environment that is different from the one intended for them by their creator. This unexpected development allows Atwood to show both the problem of the relativity of the value of genetic modification, whose desirability often depends on the context, and the risk of potential irreconcilability of the values adhered to by variously modified individuals and groups.

As much of Atwood's criticism of liberal eugenics reflects Habermas's philosophy[8], I use this philosophy as the main elucidating frame of reference for my analysis. In the process, I also describe the main tenets of the German philosopher's stance on the subject. In fact, Ferreira's reference to Habermas in the context of Crake's attempts to deprive the Crakers of the "core" features of human nature could suggest that Habermas believes that human autonomy is at risk only when such highly reductive modifications are made, but this is not the case. Apart from Habermas, in my analysis I also use theoretical reflections of a number of other authors, coming from the fields of bioethics, social psychology and anthropology.

Liberal eugenics in the neoliberal world

The narrative focusing on the neoliberal world before the plague is filled with references to genetic engineering, but Atwood is perhaps most revealing as far as her own attitude to the use of this technology is concerned in one significant, however short, passage.

[8] To my knowledge, Atwood does not mention Habermas in her writings or interviews, so the similarities between their positions stem—most probably—from similar evaluations of the problem that were carried out independently, and not from influence.

In the pre-plague universe of the trilogy, an individual's career prospects depend to a great extent on a specific kind of abilities, that is to say, a talent for hard sciences. It is the "numbers people" who generate the greatest wealth through their brain-work and therefore corporations allow them to live in the comfortable—and heavily guarded—compounds. Thus, the parents of a child who can be counted among the talented "numbers people" may be quite sure of the child's career prospects and thus—comfortable adult life.

When Jimmy's father marries again, he and his new wife find it difficult to have a baby and, as a result, they start to consider fertility treatment that allows for a choice of specific mental and physical characteristics in a baby—technology that was not yet available when Jimmy was born. On hearing about this Jimmy reflects:

> Terrific, thought Jimmy. They'd have a few trial runs, and if the kids from those didn't measure up they'd recycle them for the parts, until at last they got something that fit all their specs—perfect in every way, not only a math whiz but beautiful as the dawn. Then they'd load this hypothetical wonderkid up with their bloated expectations until the poor tyke burst under the strain. Jimmy didn't envy him.
>
> (He envied him.) (*OC* 293)

Jimmy's vision of the future life of his half-brother reflects to some extent the lives of many children with over-ambitious parents. Actually, Habermas acknowledges a certain similarity between genetic programming of desirable skills and a situation in which a naturally-born child is supposed to comply with the wishes of ambitious parents and follow the life-project devised for her by them[9]. However, according to Habermas, there is an essential difference between these two situations. For in the case of a naturally-born child the parents' attempt to influence her life proceeds by means of communicative action:

> Due to the interactive structure of the formation processes in which the child always has the role of a second person, expectations underlying the parents' efforts at character building are essentially "contestable." Since even a psychically binding "delegation" of children can only be brought about in the medium of reasons, the adolescents in principle still have the opportunity to respond to and retroactively break away from it[10].

Habermas contrasts this situation with the attempt to shape the child's life through genetic modification: "With genetic enhancement, there is no

[9] As Habermas himself admits, the claim that there is no meaningful difference between early forced education and genetic modification is one of the most frequent arguments against his position on the issue (see, for example, J. Harris, *Enhancing Evolution: The Ethical Case for Making Better People*, Princeton: Princeton University Press, 2007). In Habermas's view, however, even if there was no essential difference between the two practices, one should not invoke one bad practice to justify the other (J. Habermas, *The Future of Human Nature*, translated by Hella Beister and Max Pensky, Cambridge and Malden: Polity Press, 2003, p. 84). It could also be argued that the meaningfulness of the difference between forced education and genetic programming would depend on the extent of the latter.

[10] J. Habermas, op. cit., p. 62.

communicative scope for the projected child to be addressed as a second person and to be involved in a communication process. From the adolescent's perspective, an instrumental determination cannot, like a pathogenic socialization process, be revised by 'critical reappraisal'"[11].

It has to be noted here that for Habermas the problem is not genetic engineering itself, but the scale of its use. Claiming that therapeutic gene manipulation should be allowed, Habermas admits that there might be problems with distinguishing between therapeutic and enhancing modifications, but he believes that "there is a regulative idea that establishes a standard for determining a boundary, one which is surely in need of continuous interpretation, but which is not basically contestable"[12]. This idea is reflected in what he calls the *clinical attitude*, which "draws its legitimizing force from the well-founded counterfactual assumption of a possible consensus reached with another person who is capable of saying yes or no. The burden of normative proof is thus shifted to the justification of an anticipated consent that at present cannot be sought"[13].

In view of such a rule, Habermas believes that non-therapeutic genetic modification should be forbidden, for such future consent cannot be guaranteed. Even in the case of an apparently beneficial genetic enhancement, parents cannot always be sure of its real consequences. That infallible memory could be a curse in the case of someone who has experienced traumatic events is obvious to everyone, but Habermas also focuses on an apparently unambiguous "gift" of superior intelligence in the context of a highly competitive society. He wonders how a person with enhanced intelligence will "interpret her differential talent and put it to use: with calm and control, or ceaseless ambition? How will she come to terms with a capability that both marks her and may provoke envy of others?"[14] Habermas's pessimistic predictions expressed in these questions could be seen as an almost exact reflection of Jimmy's vision of the future of his half-brother. Enhanced skills—and parents' expectations connected with them—could also enhance the ambitions of the child to unreasonable levels.

In general, a feeling of being locked in the genetically programmed mental and physical framework preferred by the parents could be, according to Habermas, responsible for "blurring the intuitive distinction between the grown and the made, the subjective and the objective"[15]. As a result of genetic modification the status of the child is changed, because from a position of an autonomous subject in a universally egalitarian society it changes into an object—it exists *for* its parents or designers and is evaluated in the categories of success or failure from their perspective.

[11] *Ibid.*, p. 62.
[12] *Ibid.*, pp. 90-91.
[13] *Ibid.,* p. 43.
[14] *Ibid.,* p. 86.
[15] *Ibid.,* p. 47.

But Jimmy's final conclusion that he would, after all, *envy* his half-brother changes dramatically the interpretation of the genetic programming of his half-brother. Jimmy himself is very intelligent and talented, but his talents are artistic and not scientific. In the ideal situation of an absolutely free choice of life-projects Jimmy would not envy his half brother, preferring his own artsy, relaxed attitude to life. However, as he lives in a world where the only indicator of human worth—and the only chance for a comfortable life—is professional success in a very limited number of fields, Jimmy, who has experienced the shame of being a complete failure in these fields, would, on second thoughts, change places with his genetically modified half-brother, in spite of the fact that he is aware of the potential threat of mental breakdown. That is why he decides that he would envy his modified brother after all. Therefore, it could be argued that this extreme kind of neoliberalism limits the space for criticism of genetic modification. Although no one forces prospective parents to choose particular features for their children—theoretically, they have their liberal freedom of choice—the range of successful types of life is so heavily limited that if parents want to secure any kind of decent life for their children they have to equip them with scientific talents, regardless of any harmful "side-effects." In this way biotechnology only smoothes out the working of the neoliberal system which already keeps the society in an iron grip. Before the popularization of genetic engineering unfitting individuals are eliminated in the process of education and end up in the pleeblands, whereas genetic engineering helps to eliminate potentially unfitting individuals already at the stage of genetic design and thus, it could be argued, reduces the amount of potential suffering[16]. In view of this, the brunt of Atwood's criticism here may be regarded as directed more at the general socio-economic arrangement of society than at genetic modification itself.

Envying the Crakers

Atwood, however, also indicates consequences of genetic engineering that would, arguably, be used in a more egalitarian liberal society, and she does it using the motif of the Crakers, although her exploration of this issue is less direct here, for the reader has to extrapolate from the post-apocalyptic situation in which the characters of her trilogy find themselves after the plague. In Crake's plan, the place of the corrupted old humanity is supposed to be taken by the Crakers, genetically engineered humanoids who would be less harsh for the environment and for each other. As I indicate in the introduction, officially the Crakers are "the floor models" for the new method of genetic

[16] At least until the moment when *everyone* is modified, as then only the children with the best—and thus, presumably, most expensive—modifications will "survive" the process of selection.

engineering devised by Crake—he tells his corporate masters that he has developed a new, almost perfectly accurate method of production of designer babies. At one point he explains the potential uses of his technology: "Whole populations could be created that would have pre-selected characteristics. Beauty, of course; that would be in high demand. And docility[17]: several world leaders had expressed interest in that" (*OC* 358).

Crake, however, does not create the Crakers to satisfy world leaders or even prospective parents but to carry out his plan of saving the earth. His design is supposed to deprive them of the features of character which, in his view, account for the destructive nature of human civilization. Apart from the "core" features on which Ferreira focuses, Crake primarily wants to eradicate propensity for violence from their character. To make them completely harmless, Crake creates them to be unable to wilfully harm any other living being—as such, they are totally herbivorous—whereas to eliminate sexual jealousy and rivalry he programs in them a complex mating ritual involving one woman and a number of men, during which the buttocks and abdomen of the woman as well as the penises of the men turn blue, and which ends with the woman having sex with four men. Their design also involves other significant changes in the appearance and physiological functioning of the human body, some of which are supposed to make it easier for the Crakers to live close to nature, and some are an expression of Crake's idiosyncratic taste.

The Crakers are created to be the sole inheritors of the earth after the original humanity has been wiped out by the killer virus. Thus, if all other people were actually killed in the apocalypse, the Crakers would not see themselves as different, as there would not be any other standard with which they could compare themselves. As Crake's plan for the complete annihilation of the "old" humanity is not entirely successful, the Crakers have to live in the post-apocalyptic world with other people, who constitute a different norm of a human being[18]. As a result, the motif of the Crakers allows Atwood to indicate potential consequences of genetic modifications

[17] Temperament is already known to be influenced by mutations in the human genome—people with Down syndrome, who have an extra copy of chromosome twenty-one, apart from suffering from a number of afflictions caused by the mutation, are characterized by what Siddhartha Mukherjee calls "an extraordinary sweetness of temperament" (S. Mukherjee, *The Gene: An Intimate History*, New York: Scribner, 2016, p. 262). According to Mukherjee, "if there is any doubt that genotypes can influence temperament or personality, then a single encounter with a Down child can lay that idea to rest" (*ibid.*).

[18] In the laboratory in which they were created, called Paradice, the Crakers knew only a young woman called Oryx, whose role was to explain to them the natural world. After the outbreak of the plague, at the beginning of which both Oryx and Crake die, the Crakers meet Jimmy, who was inoculated by Crake because he wanted Jimmy to take care of the Crakers after the plague. The Crakers see that Jimmy is different from them but they treat him as a kind of semi-divine figure who is able to communicate with Oryx and Crake—both represented by Jimmy as divine creators of the world.

of human beings which are not carried out exclusively to answer the needs of an extreme form of neoliberal economy, but as a result of the freedom of choice that could be enjoyed in a more egalitarian society than the one represented in the trilogy. This kind of modifications, one could imagine, would not be limited to features needed for a successful career in very specific market conditions, but could include a wide array of characteristics reflecting the parents' ideas of what constitutes a happy life and/or what a good human being should be like.

Atwood's use of the Crakers for a nuanced representation of the potential effects of genetic engineering starts with a situation in which they appear to be obvious beneficiaries of the technology. At the beginning of the trilogy, which shows the immediate aftermath of the plague from the perspective of Jimmy, the Crakers live on the seashore where Jimmy took them after the plague killed, as he believes at that point, all other people like him. The Crakers have plenty of food here as the place is lush with vegetation, but Jimmy is constantly hungry and spends most of the time trying to protect his body from various threats—the remorseless sun, various insects, spiders and larger predators—which became significant in his life only after the collapse of the civilization.

The painful shortcomings of Jimmy's body in this situation should be seen in the light of the philosophy of Georges Canguilhem, who points out that the difference between the normal and the pathological—or between illness and health—can be distinguished only in the context of a particular environment in which an organism functions. In Canguilhem's view, "taken separately, the living being and his environment are not normal: it is their relationship that makes them such"[19]. Thus, what is usually understood as illness—departure from the normal functioning of the body—can be seen as similar to the change of environment which impairs the functioning of the body. For example, worse-than-usual functioning of the body can be caused by flu, but also by insufficient amount of oxygen in the air. In the case of Jimmy, the change of his environment includes the disappearance of such things as UVA light filters, air conditioning, or insect repellents, and this incapacitates him to some extent.

But Jimmy is also aware that in this kind of environment his body is worse off than that of the Crakers, who were designed by Crake to thrive in it. At one point at the beginning of *Oryx and Crake* Jimmy watches a group of Craker children who are playing on the beach and bathing in the sea, which he himself avoids in fear of unspecified dangers that could be lurking there:

> He watches them with envy, or is it nostalgia? It can't be that: he never swam in the sea as a child, never ran around on a beach without any clothes on. . . . Sooner or later—he can count on it—they'll seek him out where he sits wrapped in his decaying sheet, hugging his

[19] G. Canguilhem, *The Normal and the Pathological*, translated by Carolyn R. Fawcett and Robert S. Cohen, New York: Zone Books, 1991, p. 143.

shins and sucking on his mango, in under the shade of the trees because of the punishing sun. For the children—thick-skinned, resistant to ultraviolet—he's a creature of dimness, of the dusk. (*OC* 6)

Although sometimes Jimmy wonders whether various defense mechanisms built into their bodies will pass the test of time, most of the time he envies the Crakers, as they are apparently better equipped to exist in this post-apocalyptic world.

According to social psychologists Timothy Owens and Sarah Samblanet, people constantly make "social comparisons," that is to say, they "judge and evaluate themselves in comparison to particular individuals, groups, or social categories"[20]. People may compare themselves with others "in terms of superiority of inferiority, or better or worse, on some criteria of interest" but also "along dimensions of deviance or conformity, or believing one is generally in harmony and agreement with others or in disharmony and opposition to them""[21]. When Jimmy compares himself to the Crakers, he finds their type of body not only superior to his, but also constituting the new standard, as they now represent the overwhelming majority.

These comparisons with the Crakers contribute to Jimmy's identity crisis. When he learned about his inoculation after the outbreak of the pandemic, he assumed the name of the Snowman—a creature that was "existing and not existing, flickering at the edges of blizzards, apelike man or manlike ape, stealthy, elusive, known only through rumors and through its backward-pointing footprints" (*OC* 8)—as he believed that from that time on he would be like that: a kind of freak, not similar to any other creature in the world and hence mysterious and difficult to understand for the new people, that is, the Crakers. The apparent superiority of the Crakers' bodies in the post-apocalyptic environment only further fuels his identity crisis, for Jimmy clearly feels himself to be out of place.

The Crakers' resistance to ultraviolet that Jimmy envies in the quoted passage, but also their built-in insect repellent, are modifications that could hardly be objected to and it seems that Atwood herself is not critical of them—they are never ridiculed by Jimmy or by any other character who meets the Crakers. In fact, these features, making people better adjusted to their environment, could be said to represent the dream case of the advocates of genetic enhancement of human beings[22]. These modifications

[20] T. J. Owens and S. Samblanet, *Self and Self-Concept* [in:] *Handbook of Social Psychology. Second Edition*, J. DeLamater and A. Ward (eds), Dordrecht: Springer, 2013, p. 228.

[21] *Ibid.*

[22] See, for example, A. Buchanan, *Better than Human: The Promise and Perils of Enhancing Ourselves*. Oxford: Oxford University Press, 2011. Answering critics of genetic enhancement like Francis Fukuyama, who oppose any kind of genetic modification on the grounds that it changes the essential and fixed human nature, Buchanan points out that human evolution is not perfect and there should be no ban, in principle, on improving what evolution botched. Strangely enough, though, in his book Buchanan does not address Habermas's concerns and does not even mention him (although Habermas's *The Future of*

could also be seen as fitting in the Habermasian category of therapeutic genetic engineering because, apart from increasing the immediate comfort of life, they would also reduce the risk of skin cancer or malaria[23]. Thus, with this kind of genetic modification the main problem—however complex and potentially insolvable—seems to be the question of the availability of the treatment[24]. Potential consequences of unjust distribution of the treatment may be illustrated by Jimmy's attitude to his situation vis-à-vis the Crakers. Although his discomfort is greatly exacerbated by the circumstances—lack of shelter and other aids that disappeared with the destruction of the civilization—it may be easily imagined that his bitterness colored by envy would characterize many people who, for a variety of reasons, would not be able to benefit from a genetic modification enjoyed by a significant part of the population.

Not envying the Crakers

Atwood, however, also uses the Crakers to indicate far more controversial consequences of genetic engineering of humans, as the appearance of other people brings to the fore those of their modifications that, instead of stirring envy, could put them at a disadvantage in relations with others. One day the Crakers tell Jimmy that they saw a small group of other people like him—two men and a woman. The strangers ran away after the male Crakers tried to approach the woman, whom they assumed to be waiting

Human Nature is included in the bibliography). Habermas himself contrasts his criticism of genetic enhancement with the kind of objection that is represented by Fukuyama, claiming that his "argument doesn't proceed on the assumption that the technicization of 'inner nature' constitutes something like a transgression of natural boundaries" (J. Habermas, *op. cit.*, p. 87). Instead, his argument "draws its strength completely from the fact that a genetic designer, acting according to his own preferences, assumes an irrevocable role in determining the contours of the life history and identity of another person, while remaining unable to assume even her counterfactual consent" (*ibid.*).

[23] These modifications can be seen in terms of medical treatment especially in the light of recent developments in the field of health care, as a result of which treatment is more and more frequently aimed at elimination of the risk of disease rather than disease itself (see, for example, J. Dumit, *Prescription Maximization and the Accumulation of Surplus Health in the Pharmaceutical Industry: The BioMarx Experiment*, [in:] *Lively Capital: Biotechnologies, Ethics, and Governance in Global Markets*, K. Sunder Rajan (ed.), Durham and London: Duke University Press, 2012, pp. 45-92). Certainly, a built-in insect repellent would be very important in the regions affected with malaria, whereas in the areas where mosquitoes are seen solely in the category of nuisance it would lose much of its medical significance. In fact, the example of a built-in insect repellent shows very well the potential haziness of the boundary between sheer enhancement and therapeutic genetic modification.

[24] For the ethical consideration of this problem, see A. Buchanan, D. W. Brock, N. Daniels, and D. Wikler, *From Chance to Choice: Genetics and Justice*, Cambridge: Cambridge University Press, 2000, especially chapters 3 and 7.

for sexual intercourse. The Crakers cannot understand this reaction, but Jimmy imagines the situation: "The sight of these preternaturally calm, well-muscled men advancing *en masse*, singing their unusual music, green eyes glowing, blue penises waving in unison, both hands outstretched like extras in a zombie film, would have to have been alarming" (*OC* 424; italics in original). On the one hand, he is excited after learning that there are other human survivors apart from him, but, on the other, he realizes the potential consequences for the Crakers:

> His mind is racing; behind his half-closed eyes possibilities flash and collide. Maybe all will be well, maybe this trio of strangers is good-hearted, sane, well-intentioned; maybe he'll succeed in presenting the Crakers to them in the proper light. On the other hand, these new arrivals could easily see the Children of Crake as freakish, or savage, or non-human and a threat. (*OC* 425)

In *The Year of the Flood*, in which the narrative runs parallel to the one in *Oryx and Crake*, the reader actually learns about the reaction of the strangers to the Crakers. Two of them are painballers—vicious criminals who have survived the plague locked up in an arena for gladiator-like fighting—whereas the third is a woman that the painballers treat as a sex slave. Ren, one of the main characters of the second volume, overhears the conversation they have after seeing the Crakers. They focus on the Crakers' blue penises and on their interest in the woman they themselves have mercilessly raped many times:

> "Maybe it's some fuckin' savages thing," the dark-bearded one is saying. "Blue paint."
> "Nah. Tattoos," says the shorthair.
> "Who'd get their dick tattooed?" says the bearded one.
> "Savages will tattoo anything," says the other. "It's some cannibal thing."
> "You been watching too many dumb movies."
> "Bet they'd human-sacrifice her in about two minutes," says the bearded one. "After they all had sex with her."[25]

In their conversation the painballers show interest in the features of the Crakers' bodies which are different from what they are used to, and they immediately associate these features with monstrosity—cannibalism and human sacrifice. According to the anthropologist Nora Jones, "[w]hen we look without understanding, with only a dismissive, derogatory, or fearful response, we de-humanize and force a passivity upon the object of the gaze. Looking becomes a violent act"[26]. The painballers, however, decide not to approach the Crakers, afraid of their number and apparent strength, and, as a result, the Crakers do not meet with any hostility on their part.

But disparaging remarks are made behind the Crakers' backs also by the inhabitants of the cobb house, who are supposed to represent the better part

[25] M. Atwood, *The Year of the Flood*. London: Hachette Digital, 2010 (2009), p. 500.

[26] N. Jones, *Embodied Ethics: From the Body as Specimen and Spectacle to the Body as Patient*, [in:] *A Companion to the Anthropology of the Body and Embodiment*, F. E. Mascia-Lees (ed.), Malden and Oxford: Wiley-Blackwell, 2011, p. 79.

of humanity after the plague. The group includes MaddAddamites, former geneticists fighting against the system with acts of bioterrorism, who were blackmailed by Crake into helping him with engineering of the Crakers in the Paradice laboratory. When the Crakers enter the encampment for the first time, Manatee, one of the MaddAddamites, does not seem to be particularly pleased at the sight of them: "'Wow,' said Manatee, surveying the Crakers who were crowding in through the gate, talking among themselves. 'It's the Paradice dome circus'"[27]. Another inhabitant is even less enthusiastic: "'I hope Crake's Frankenpeople aren't moving in with us,' said a blond woman who'd come out of the main cobb building with Tamaraw" (*M* 28). As these reactions make clear, even familiarity with the sight of the Crakers would not necessarily entail a positive attitude. The feelings of surprise or shock, experienced by the painballers at the sight of the Crakers, are replaced in this situation by the feeling of superiority, as a significant aspect of this feeling is the assumed knowledge of the other. In fact, racist sentiments in the nineteenth and twentieth centuries were often fuelled by "scientific" studies of the "savages"[28]. The Crakers' situation could be potentially even worse than that of the natives of the period of colonization, as the MaddAddamites do have a better knowledge of the Crakers than any anthropologist could ever have of the objects of his study—they have knowledge of their creators, as the term "Frankenpeople," alluding to Shelley's story of a creature created by a scientist, clearly suggests.

Although at the encampment no one makes any disparaging remarks about the Crakers openly to their face, they become aware of differences between their bodies and the bodies of other inhabitants of the cobb house. At one point a Craker child asks a human woman, Toby, if she has breasts—the Crakers always go naked whereas humans observe the rules of decency from before the plague. A moment later the child asks her if she also eats her "droppings" (*M* 113). He asks the question because Crake, inspired by the digestive system of some herbivorous animals, designed the Crakers in such a way that they have to eat the caecotrophs—"semi-digested herbage, discharged through the anus and re-swallowed two or three times a week" (*OC* 187)—in order to maximize the absorption of nutrients from the plants that constitute their staple diet. Uncomfortable with the question, Toby quickly changes the subject, but the Crakers' awareness of this difference indicates that they have started to make social comparisons. Although Atwood's narrative does not focus on this psychologically sensitive development again, its appearance is not gratuitous. The point is that the consequences of the apparently unforeseen survival of original humans, with whom the Crakers can now compare themselves, could be treated

[27] M. Atwood, *MaddAddam,* London: Virago, 2013, p. 27. All the following quotations from this edition will be marked in the text as *M* and page number.

[28] See, for example, C. Guillaumin, *Racism, Sexism, Power and Ideology*, London and New York: Routledge, 1995.

as an allegorical representation of the situation in which parents design a baby following their own notions of the ideal human being and disregard their child's potential future feelings resulting from social comparisons. This disregard could stem from the firmness of the parents' convictions, but it could also reflect their belief that their child could live among other people modified in the same way, and thus would not be different from other members of her community. In this case they would represent what Buchanan et al. call "genetic communitarianism," which would appear if members of a subculture, religious community etc., decided to pursue their ideal of a good life by means of modifying all their offspring in the same, specific way. Buchanan *et al.* also see the risk that Atwood's narrative indicates: "By altering phenotype through genetic means or through somatic interventions that use genetic knowledge, offspring might be locked into suitability for a particular community in a way that shared beliefs and values do not trap them"[29].

The situation of being locked in a specific subjectivity is not limited to the appearance and functioning of the body, but may also have its source in "designed" psychological features. And it is because of their psychology that the Crakers suffer from obvious discrimination. Writing about inequalities between groups of people, Habermas distinguishes two types—one having its source in unequal access to resources and goods, and the other in unequal inclusion in the public life of society:

> Discrimination or disrespect, nonpresence in the public arenas of society, or a collective lack of self-respect point to an incomplete and unequal inclusion of citizens who are denied full status as members of the political community. The principle of civic equality is violated in the dimension of membership, not in the dimension of social justice. The degree of inclusion concerns the horizontal relations among members of the political community, whereas the scope of the system of statuses concerns the vertical relations among citizens of a stratified society[30].

The Crakers do not seem to suffer inequality in the dimension of social justice, which, according to Habermas, appears when, "depending on their rank, citizens have at their disposal greater or lesser resources and a greater or lesser variety of opportunities for shaping their lives according to their own preferences and values"[31]. The reason for the lack of this inequality is that the Crakers, who feed on abundantly available plants and go naked, simply do not need any resources that the original humans would have to share with them. As far as life opportunities are concerned, the post-apocalyptic situation does not allow for much choice of life-paths. It is not clear, though, whether inequality in this dimension would not appear if, during the development of this community, things or opportunities appeared that both the humans and the Crakers would crave.

[29] A. Buchanan *et al.*, *op. cit.*, p. 177.

[30] J. Habermas, *Between Naturalism and Religion: Philosophical Essays*, translated by Ciaran Cronin, Cambridge and Malden: Polity Press, 2008, pp. 193-194.

[31] *Ibid.*, p. 194.

What is clear, however, is that the Crakers suffer inequality in the other dimension mentioned by Habermas: that of participation in the public life of the community. This is made obvious at the moment when the fate of the captured painballers, who were guilty of murdering and raping some of the inhabitants of the cobb house, is to be decided. Making a decision concerning their fate follows a long discussion and takes the form of voting among the members of the community—even pigoons, genetically modified pigs with human-level intelligence, are allowed to take part in the voting. The voice of the Crakers, however, is completely ignored as they are not asked for their opinions and are excluded from the voting[32]. This seems to be natural, as the Crakers, genetically programmed to feel aversion to any kind of violence, would never vote for any kind of severe punishment. However, what their exclusion from the discussion and voting means in political-philosophical terms is that they are "denied full status as members of the political community"[33]. Because of their genetic programming, they simply cannot be expected to respond to the situation considering all possible courses of action and their consequences. Actually, voting ends with the sentence of death for the painballers and their subsequent execution in a secluded place, out of the Crakers' sight.

The exclusion of the Crakers from the discussion and voting en masse can also be seen in the light of the idea of genetic communitarianism. Foreseeing some problems connected with potential development of genetic communitarianism, Buchanan *et al.* write:

> Beliefs and values can be revised. Indeed, one reason members of different communities have for supporting a liberal view of individual liberties is that each can imagine changing those beliefs and values and requiring the liberty to do so, even though each person is as committed as possible to the conception of a good life they have at the moment. If someone has been made more competitive or aggressive "by nature" through parental use of the genetic marketplace, however, it may be more difficult to imagine being in a community bound by love of neighbor and turning the other cheek[34].

What happens in Atwood's trilogy is exactly the opposite: a group is genetically modified to be bound by love of neighbor. In fact, it would not be difficult to imagine this kind of modification in a liberal, affluent society—if genetic engineering had been available during the hippie revolution, for example, a large part of young hippie parents very probably would have chosen for their children features characterizing the personality of the Crakers: peacefulness and aversion to violence. After a dozen or so years it would

[32] The fact that they do not object against this exclusion—docility being one of their main features—does not neutralize in any way its discriminatory nature. Otherwise, it could be argued that there is nothing wrong in the production of slaves who have artificially limited capacity to understand their exploitation—this kind of situation is represented in Aldous Huxley's *Brave New World*. Of course, in Huxley's novel eugenic breeding is part of a technocratic system of government, and thus it is very different from what Habermas understands as liberal eugenics.

[33] J. Habermas, *Between Naturalism and Religion*, p. 194.

[34] A. Buchanan *et al.*, *op. cit.*, p. 177.

turn out that these modified children would have to face a society which had forgotten about the flower children's values—however commendable they were—and limited access to certain jobs in the legal profession would be just one issue out of a number of potential problems that could affect their lives (ending up as a natural victim for bullies—whether engineered or not—being probably the most common of them).

Habermas agrees completely with the vision of the potential consequences of genetic communitarianism indicated by Buchanan *et al.* However, quoting the following passage from their book: "Even if an individual is no more locked in by the effects of a parental choice than he or she would have been by unmodified nature, most of us might feel differently about accepting the results of a natural lottery versus the imposed values of our parents. The force of feeling locked in may well be different"[35], Habermas points out that this risk would be present not only in the case of genetic communitarianism, but also as a result of liberal eugenics practiced on single children[36].

Conclusion

In conclusion, it may be argued that Atwood's representation of genetic modification of human beings indicates its possible consequences on two planes, social and individual. As far as the social plane is concerned, Atwood suggests that in ultra-neoliberal societies liberal eugenics could contribute to the growing uniformity of the affluent part of society as more and more parents would choose features of character to help their children to survive in an extreme form of neoliberal economy. On the other hand, if the Crakers were seen as figurative representations of genetically modified people in a more egalitarian liberal society, the trilogy might be interpreted as suggesting that liberal eugenics could also lead to insuperable differences—and possible discrimination—between various groups of genetically modified people as a result of the appearance of genetic communitarianism.

It could also be reasoned, however, that the second scenario would ultimately lead to the first one, as the group that would be modified in such a way as to increase their competitiveness and career prospects would quickly widen the power gap between themselves and the rest of society. As a result, their features would be increasingly desired by other people and demand for this kind of modification would dwarf other choices. Thus, although advocates of liberal eugenics argue that it would create "space for diversity and experimentation in relation to the character of future persons"[37], Robert Sparrow contends that "the logic of a concern with

[35] A. Buchanan *et al.*, op. cit., pp. 177-178

[36] J. Habermas, *The Future of Human Nature*, p. 123 n. 52

[37] R. Sparrow, *A Not-So-New EUGENICS: Harris and Savulescu on Human Enhancement*, "The Hastings Center Report", 2011, Vol. 41, No. 1, p. 36.

improving the wellbeing of future persons points toward quite a different conclusion—that, in any given environment at least, there is a 'best' genome, which parents are obligated to provide for their children"[38].

As far the personal dimension is concerned, the narrative shows positive consequences of genetic engineering of humans in the form of reduction of health risks which would result from a better adjustment to the environment, although even here Atwood indicates possible consequences of unequal access to the technology. When it comes to modifications that cannot be interpreted as therapeutic, Atwood appears to be far more cautious. On the one hand, she suggests that the value of genetic modifications will depend on the future situation of the engineered children, which may differ from the one assumed by their parents. On the other hand, and even more importantly, she indicates that non-therapeutic genetic modifications could negatively affect the self-conception of modified subjects, undermining their sense of autonomy and equality. In fact, she also points out this potential effect in her more theoretical take on the issue of genetic engineering—in her review of Bill McKibben's *Enough: Staying human in an Engineered Age* Atwood describes, with full approval, the book's claims about the consequences of the genetic engineering of humans: "Our achievements won't be 'ours' but will have been programmed into us; we'll never know whether we are really feeling 'our' emotions, or whether they . . . are off the shelf. We won't be our unique selves, we'll just be the sum totals of market whims"[39]. Again, Atwood is in line here with Habermas, who argues that liberal eugenics will lead to "shopping in the genetic supermarket"[40] as designer babies will be produced according to the wishes of parents that could be eccentric or influenced by the logic of the market: "eugenic decisions would be transferred, via markets governed by profit orientation and preferential demands, to the individual choice of parents and, on the whole, to the anarchic whims of consumers and clients"[41]. In other words: the liberal freedom of choice enjoyed by the parents in the act of designing their child will limit the capacity of this child to lead her own, unique life.

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[38] *Ibid.*

[39] M. Atwood, *Arguing Against Ice Cream:* Enough: Staying Human in an Engineered Age *by Bill McKibben* [in:] *In Other Worlds: SF and the Human Imagination*, New York: Doubleday, 2011, p. 133.

[40] J. Habermas, *The Future of Human Nature*, p. 75.

[41] *Ibid.*, p. 48.

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