

The Bible's Paradise and *Oryx and Crake's* Paradise: A Comparison of the Relationships between Humans and Nature

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Abstract: This paper explores the relationship between humans and plant life as depicted in two creation stories: that in the Bible, and that in Margaret Atwood's novel, *Oryx and Crake*. An analysis of the relationship between Genesis' first two humans and nature is revealing in terms of Crake's possible motivation when creating the Crakers. Specifically, it appears that Crake's purpose may be to re-access a state of pre-fall Paradise. A comparison of the two creation stories foregrounds the question of whether human qualities - the characteristics that separate humans from other creatures - might be at odds with a harmonious state of nature.

In her 2003 novel *Oryx and Crake* Margaret Atwood invokes the biblical story of Genesis in several ways. The primary and most direct conjuring stems from the MaddAddam group and their game of Extinctathon. Upon logging on to the game's website, one reads "*EXTINCTATHON, Monitored by MaddAddam. Adam named the living animals, MaddAddam names the dead ones. Do you want to play?*" (80). This references Genesis 2:19 and 2:20, in which God brings the animals to Adam so that he will name them. Atwood further invokes Genesis with God's Gardeners and their religion – briefly mentioned several times in *Oryx and Crake* and taking a central role in the 2009 follow-up, *The Year of the Flood*. Genesis is also implicated in Crake's attempts to recreate Paradi[c]e with a new set of inhabitants: a genetically engineered human species referred to as the Crakers.

A comparison of the creation story in Genesis to that in *Oryx and Crake* – specifically, a comparison of the relationship between man and the environment that is depicted in each – affords us a clearer view of the purpose, design, and potential of the Crakers. It suggests

that what Crake attempts to do in his design of the Crakers is akin to a rewinding of history to a point analogous to Paradise before the fall. Crake tries to accomplish the rewinding by releasing a pathogen that is meant to eradicate from Earth all humans but the Crakers. Moreover, Crake resets the parameters of nature by changing the qualities of “human nature” in the Crakers’ design. Upon a mere rewinding, history would ostensibly repeat itself. Crake has to both rewind and reset.

An analysis of man’s relationship to his environment – the surrounding plant life – in each story indicates that Crake might question whether human qualities are at odds with equilibrium in nature. By ascertaining man’s relationship to the plant life that surrounds him in each of the two scenarios, we can determine a corresponding degree to which he exhibits human qualities: the qualities that differentiate him from the other creatures in his kingdom of classification. The qualities in question are not genetic differences – markers or traits that taxonomically separate the *Homo sapiens*. Rather, the qualities in question are those that pertain to capacities for complex reasoning, agency, and theory of mind. The beings that Crake forms are – whether for the purpose of survival or as a result of his own whims – designed to be similar to man before the fall and to remain in that state perpetually.

Plants in the Creation Story: Genesis

In my analysis of biblical passages, I rely for the most part on two sets of commentary: that by Rashi (1040 – 1104), and that by Rabbi Elie Munk (1900-1981). Rashi is the acronym by which Rabbi Shlomo Yitzhaki is known. Rashi is perhaps the most prominent, canonical, and widely read of biblical commentators and his insight is indispensable to our analysis of biblical verse. Munk’s perspective is likewise especially useful: In *The Call of the Torah*, Munk offers his own astute perspectives on the Bible in conversation with the scores of commentators he references.

Genesis 1-3 tells the story of creation and culminates in man’s fall from Paradise. The relationship between man and the environment is clarified when we read the story with an eye to the depiction of vegetation – when and how it is mentioned, and the manner with which it is to be treated. The first mention of vegetation is in Genesis 1:11 and 1:12, which convey that vegetation came to be on the third day of creation:

And God said, "Let the earth sprout vegetation, seed yielding herbs and fruit trees producing fruit according to its kind in which its seed is found, on the earth," and it was so. And the earth gave forth vegetation, seed yielding herbs according to its kind, and trees producing fruit, in which its seed is found, according to its kind, and God saw that it was good.¹

On the sixth day, upon the creation of man and woman, God reveals the type of relationship that he intends for there to be between humans and their environment:

And God said, "Behold, I have given you every seed bearing herb, which is upon the surface of the entire earth, and every tree that has seed bearing fruit; it will be yours for food. And to all the beasts of the earth and to all the fowl of the heavens, and to everything that moves upon the earth, in which there is a living spirit, every green herb to eat," and it was so. (Gen. 1:29–1:30)

We can deduce from the order of creation and from what God tells man that vegetation is available for human sustenance. In Genesis 2, we find out more about the relationship between man and vegetation:

Now no tree of the field was yet on the earth, neither did any herb of the field yet grow, because the Lord God had not brought rain upon the earth, and there was no man to work the soil. And a mist ascended from the earth and watered the entire surface of the ground. And the Lord God formed man of dust from the ground [...] And the Lord God planted a garden in Eden from the east, and He placed there the man whom He had formed. And the Lord God caused to sprout from the ground every tree pleasant to see and good to eat, and the Tree of Life in the midst of the garden, and the Tree of Knowledge of good and evil. (Gen. 2:5–2:9)

Rashi comments on Genesis 2:5 as follows:

[T]hey [the plants] had not yet emerged, but they stood at the entrance of the ground until the sixth day. And why? [...] Because there was no man to work the soil, and no one recognized the benefit of rain, but when man came and understood that they were essential to the world, he prayed for them, and they fell, and the trees and the herbs sprouted.

¹ While my analysis of the Biblical texts is done in the original Hebrew, all translations of the Bible in this paper, as well as of Rashi's commentary, are from Chabad.org, copyright The Judaica Press.

Here Rashi is referring to a section in the Halakhah, which states:

R. Assi pointed out a contradiction [between verses]. One verse says: And the earth brought forth grass, referring to the third day, whereas another verse when speaking of the sixth day says: No shrub of the field was yet in the earth. This teaches us that the plants commenced to grow but stopped just as they were about to break through the soil, until Adam came and prayed for rain for them; and when rain fell they sprouted forth. This teaches you that the Holy One, blessed be He, longs for the prayers of the righteous. (Chul. 60b)

This creative reading of Genesis 2:5 implies that while the potential for vegetation was existent, its growth hinges on the active participation of man. Munk adds to the above interpretation Recanati's conclusion, "it follows that the benediction which comes from Heaven, to "water the ground everywhere" and to make the earth fertile, depends on man, on his prayer, on his active will" (Munk 26). Munk continues,

Just as the work of the six days of creation reaches completion, the Torah makes us see that from now on, man is to play a key role in developing this creation. He is to be God's collaborator; he is charged with keeping the harmony of the universe. Everything will depend on his acts, on his conduct, and on his efforts. (26-27)

The choice of words – 'key role,' 'collaborator,' 'charged with,' 'depend on' – is indicative of a very high level of participation on the part of man. Considered together, these commentaries from Rashi, the Halakhah, Recanati, and Munk reveal something quite fascinating: in the biblical story of creation man's role as far as vegetation is concerned is that of an associate. Man's active will draws the plants from the seeds that are waiting at the gate of the ground. Man "activates" the plants via his collaboration.

Contrasted to this is man's role with relation to the animals. God grants man dominion over both nature and animals: "And God blessed them, and God said to them, "Be fruitful and multiply and fill the earth and subdue it, and rule over the fish of the sea and over the fowl of the sky and over all the beasts that tread upon the earth"" (Gen. 1:28). However, within this dominion, man's relationship to each is quite different. While in terms of plant life man is collaborator, in

terms of the animals he is the characterizer and classifier. In Genesis 2:19 and 2:20 Adam names the animals:

And the Lord God formed from the earth every beast of the field and every fowl of the heavens, and He brought [it] to man to see what he would call it, and whatever the man called each living thing, that was its name. And man named all the cattle and the fowl of the heavens and all the beasts of the field, but for man, he did not find a helpmate opposite him.

Munk comments,

Adam characterized and classified the animals when he gave them their names [...] This name-giving required profound wisdom on Adam's part, for the name had to correspond to the nature, species, and sex of each creature [...] man possesses the faculty of recognizing the nature of things and of giving them names [...] the Torah stresses that the name given to each animal by man – הוּא שְׁמוֹ – is a valid, definitive name. (38-39)

This interpretation is in line with the kabbalistic notion that Hebrew is a holy language, and that the letters of the Hebrew alphabet are far from arbitrary: they are in fact the building blocks of creation. According to this idea the name of an object corresponds to the object's nature or essence. In his overview to Rabbi Michael L. Munk's book *The Wisdom in the Hebrew Alphabet*, Rabbi Nosson Scherman describes the power of the Hebrew letters as follows: "The twenty-two sacred letters are profound, primal spiritual forces. They are, in effect, the raw material of Creation. When God combined them into words, phrases, commands, they brought about Creation, translating His will into reality, as it were" (19).

We can see this view of the Hebrew letters depicted in several ancient Jewish texts and legends. In his collection *The Tree of Souls: The Mythology of Judaism*, Howard Schwartz includes a section entitled "Myths of the Holy Word." Recounting the various myths in the section, Schwartz relates:

God looked into the Torah and created the world and all created beings through it [...] God consulted only the Torah, and let the Torah serve as a blueprint for all creation. So too did the Torah serve as an artisan in all the work of creation [...] not only was the Torah created prior to the creation of the world, it was the vessel

by which the world was created. Thus the universe was created through the letters of the Torah [...] With letters, heaven and earth were created, the oceans and rivers were created, all the world's needs and all the orders of creation. (249, 251)²

We thereby have a better understanding of why Munk emphasizes Adam's faculty of recognition and his profound wisdom. To name each animal Adam had to have been able to completely comprehend the animal's nature. Scherman writes, "Once we have achieved a rudimentary understanding of the spiritual content of the Hebrew letters [...] Adam's task takes on major dimensions [...] this man was truly being asked by God to demonstrate a spiritual insight that was profound beyond our imagination" (20). He continues with an example:

When Adam said that a bull should be called שור and an eagle should be called נשר, he was saying that the spiritual forces expressed by those letters, in the formula signified by those unique arrangements of letters and vowels, were translated by God into the nerve, sinew, skin, size, shape, strength, and ability that we see when a sturdy bull pulls a plow or a soaring eagle excites our imagination." (20).

In naming – and therefore characterizing and classifying – each animal, Adam participates in nature in a manner different from the aforementioned collaboration with regard to vegetation. While in both cases there is participation, the nature and duration thereof is different. There is a finality in the naming of the animals: "and whatever the man called each living thing, that was its name." Rashi comments on 2:19, "Every living creature to which man would give a name—that was to be its name forever." Sherman writes, "The spiritual forces that Adam identified in the form of a name remain active for all time. The same spiritual forces that God translated into a שור at the dawn of creation remain the essence of a שור for all time" (20). The essence of the animal is recognized, the animal is classified, and that part is completed.

On the other hand, man's active participation in plant life is ongoing. As mentioned above, Munk notes that "from now on" man has a "role in developing this creation," and man's charge of "keeping the

² Schwartz provides extensive comments and citations after each myth, and so the interested reader can trace the myths back to their sources in rabbinic commentary kabbalistic texts, and ancient parables. For the sake of clarity and simplicity, I am limiting my own citations to Schwartz's formulations of the myths.

harmony of the universe.” This is echoed later on when we read that man must tend to the vegetation: “Now the Lord God took the man, and He placed him in the Garden of Eden to work it and to guard it” (Gen. 2:15). Man’s collaboration in this case is therefore clearly continuous.

Aside from – but related to – this difference between final and continuous, we have a difference in the nature of each participatory act. Naming (recognizing and classifying) is active, but far less active than developing, tending, and keeping. The act of naming calls on the faculties of reasoning and intellect, and is therefore more cerebral than physical, while the act of tending is more physical than cerebral: the nature of each act requires a different balance in the engagement of physical and cerebral faculties.

The relationship between man and his environment changes drastically after the fall. Munk compares the state of Adam’s soul before the sin and after the sin in his interpretation of the role of the Tree of the Knowledge of Good and Evil:

The tree which wakens in man the knowledge of good and evil. Right from creation Adam possessed free will, but as long as he did not taste the forbidden fruit his soul was suffused with an eternal inner glow [...]

Only after Adam had tasted the forbidden fruit was desire kindled within him. Then forces of evil were roused in him and, along with them, instincts and sexual passions. The first sin destroyed the marvelous harmony of the beginning. (31)

Whereas before the fall Adam and Eve are in harmony with their surroundings in Paradise, after the fall they must toil both physically and spiritually to restore equilibrium. Munk writes, “We learn from the story of Paradise that the earth holds out to man the possibility of perfect harmonious co-existence with the elements of nature and with the animals” (48). Since the sin, however, everything man does is geared toward reaccessing Paradise and this harmonious co-existence with his environment. “The supreme aim of the Torah will henceforth be to have the gates of Paradise re-open and to restore the harmony which reigned on earth between the animal kingdom and mankind” (Munk 48-49).

Among the punishments that God delivers to man as a result of man’s sin is the following pronouncement: “Because you listened to

your wife, and you ate from the tree from which I commanded you saying, ‘You shall not eat of it,’ cursed be the ground for your sake; with toil shall you eat of it all the days of your life” (3:17). The sin therefore changes the very nature of the relationship between man and his environment. Munk interprets this verse as follows: “The fall of Adam entails that of all of nature [...] This is the important lesson of the unity of creation which this verse teaches: everything is closely connected. Everything is interdependent” (54). This notion of interconnection places an even greater emphasis on man’s participation in the development of his surroundings. Munk notes that an improvement of man’s situation now, after the fall, is possible but demanding: “the task has become more complex for it is much more difficult to restore an equilibrium that has been disturbed than to maintain one in its initial state. Henceforth, the whole problem of existence is to restore the harmony which originally existed” (55).

Having changed the essence of his nature by eating of the forbidden fruit, man is now faced with needs that were previously nonexistent. He has to develop tools so as to clothe himself, work the land, and build his shelter. He must now deal with pain and suffering. The break in the equilibrium that existed in Paradise creates the first sparks in what eventually become the fires of man’s problems in the world: personal, physical, economic, social, and political.

Plants in the Creation Story: *Oryx and Crake*

Not unlike the attempts of linguists such as John Wilkins to recover the pre-Babel Adamic language, Crake attempts to reaccess Edenic conditions by re-creating/designing the human being in his own Paradise. There are two sets of humans in *Oryx and Crake*, and therefore two sets of relationships between people and nature: the relationship between the original humans and nature, and the relationship between the Crakers (humans 2.0) and nature. Regarding the first relationship, if we see present-day life as a continuation of the Bible’s creation story, the humans in the setting Atwood describes have collaborated in creation to the extreme. Both forms of participation – that with animals and that with vegetation – have overtaken what is described and prescribed in Genesis. In terms of animals, man has ventured well beyond naming: he has mixed and spliced, thereby altering the very essences that he formerly characterized and classified. In terms of vegetation, man has moved beyond prayer and development: he has

mixed and spliced within this kingdom as well, designing hybrid plants. And in both cases, partly in designing these new forms of life, man has also destroyed.

The animal splices are more apparent in the novel, what with the wolvogs, pigeons, and rakunks running around and often threatening humans, but the plant splices are substantial as well. There are the gaudy plants created by students in "Botanical Transgenics (Ornamental Division)": "a whole array of drought-and-flood-resistant tropical blends, with flowers or leaves in lurid shades of chrome yellow and brilliant flame red and phosphorescent blue and neon purple" (199). There are also the zucchinis that produce cheese (208). When Crake shows Jimmy around, presenting all the different splices, inventions, and genetically engineered innovations, Jimmy (understandably) expects "Some gruesome new food substance [...] A liver tree, a sausage vine. Or some sort of zucchini that grew wool" (302).³ Even though none of these have been developed (yet), they are likely products because of the splices that we know have already been formed.

Perhaps the most prominent and environmentally, socially, and politically damaging creation in the vegetable kingdom is the Happicuppa bean.

Until then the individual coffee beans on each bush had ripened at different times and had needed to be handpicked and processed and shipped in small quantities, but the Happicuppa coffee bush was designed so that all of its beans would ripen simultaneously, and coffee could be grown on huge plantations and harvested with machines. This threw the small growers out of business and reduced both them and their labourers to starvation-level poverty. The resistance movement was global. (Atwood 179)

In the case of the Happicuppa bean, the genetically engineered vegetation has led to some of the most horrific situations man has inflicted upon himself and the environment. We see in Atwood's apocalyptic novel the worst-case outcome of man's extreme meddling with his

³ This is especially interesting because here we have plants that grow organs or flesh. It is a combination of the animal and vegetable kingdoms. We see that pigeons grow human organs, and encounter chickens that are grown without most of their brains and are therefore closer to vegetables, but the concept of a plant growing organs or flesh is a different one altogether. Rather than splicing within kingdoms, the engineers would be splicing kingdom with kingdom.

surroundings: a collaboration so exaggerated that it leads not to harmony with creation, but rather to the destruction thereof.

An analysis of the second aforementioned relationship – that between the Crakers and their environment – reveals that their design is an attempt to rewind and a reset the damage inflicted by humans and their extreme collaboration. The Crakers originate as altered human embryos, and are *sui generis* (303). They are programmed to die at the age of thirty, without sickness, thereby doing away with the issues of old age. They have “UV-resistant skin, a built-in insect repellent,” and “an unprecedented ability to digest unrefined plant material” (304). They have an innate immunity from microbes. In terms of the make-over of the Craker’s brain,

Gone were its destructive features, the features responsible for the world’s current illnesses. For instance, racism [...] had been eliminated [...] the Paradise people simply did not register skin colour. Hierarchy could not exist among them, because they lacked the neural complexes that would have created it. Since they were neither hunters nor agriculturalists hungry for land, there was no territoriality: the king-of-the-castle hard-wiring that had plagued humanity had, in them, been unwired. They ate nothing but leaves and grass and roots and a berry or two; thus their foods were plentiful and always available. Their sexuality was not a constant torment to them, not a cloud of turbulent hormones: they came into heat at regular intervals, as did most mammals other than man.

In fact, as there would never be anything for these people to inherit, there would be no family trees, no marriages, and no divorces. They were perfectly adjusted to their habitat, so they would never have to create houses or tools or weapons, or, for that matter, clothing. They would have no need to invent any harmful symbolisms, such as kingdoms, icons, gods, or money. (305)⁴

Before discussing the implications of the Crakers’ design, let us note several key differences between the creation of Adam and Eve and the design of the Crakers. The primary difference is the manner in

⁴ An interesting consequence of the Crakers’ design is that they would have no need for the genetically engineered vegetation that their makers – humans 1.0 – created. Many of the novel’s genetically engineered plants were designed so as to profit corporations and cater to greed, the need of and propensity to which Crake has genetically engineered *out* of the Crakers. They will have no hierarchies and cannot conceive of profit. Moreover, the Crakers will have no need for the new plants as they are designed to feed on the “old” plants. This leads to curious pairings: the new plants correspond to the old humans; the new humans correspond to the old plants.

which the creatures are formed. Crake's creation is a second-tier one: God creates man (the progeny of Crake) and Crake created the Crakers. The first is a creation *ex nihilo*⁵ and the second iteration is in fact not really a creation at all: Crake does not *create* life – he mixes, splices, and engineers existing life into a new breed.

Further, Crake does not develop a new breed of vegetation for with the new breed of human: he places the new breed of human among existing vegetation. We see from the description of their design that no collaboration is asked of the Crakers. They are made to be compatible with the vegetation as is: "They are perfectly adjusted to their habitat." They are not required to pray, to actively develop vegetation, or tend to and work the soil. The Crakers are designed *according to* the vegetation that is already around them. Crake thus put into place, along with these new humans, an entirely new set of stipulations. The Crakers are designed for co-habitation and compatibility – not active collaboration.

These differences in formation point to the fact that Crake's is not a redoing of human life on Earth, but a rewinding thereof. After rewinding, Crake also resets the parameters of human interaction with the environment, and it is here that we can note the implications of his specific design of the Crakers. The aforementioned unwiring and rewiring of the Crakers' brains and the altered demands of their bodies in effect recreate the possible outcome of communication and society. Many of the forces that have led to the most horrifying events in human history are eliminated in the Crakers through the engineering of their drives, impulses, and needs.

It is important to note that the kind of society that would arise from this rewiring would be more likely to come about only if the Crakers are alone on Earth; they would have to completely replace humans 1.0. Were they to live in a vacuum, as it were, their design would ideally accomplish its purpose. In the novel, however, we see that many of the "safety valves" that Crake incorporates into the design of the Crakers are compromised because of the Crakers' contact with humans 1.0. For instance, in the time he spends with the Crakers Snow-

⁵ There is considerable debate among rabbinic commentators and Kabbalists as to whether God created the universe *ex nihilo*. As this debate is outside the scope of this paper, for our purposes here suffice it to note that God's creation represents the materials of Crake's bio-engineering, and that God is attributed with creating life while Crake splices existing life.

man often has to explain why he does not look like they do and why he acts differently. He ascribes several natural phenomena to Oryx and Crake (such as lightning and thunder to the latter), and tells the Crakers stories – mythologies of origin. It is apparent that this contact with Snowman slowly “infects” the Crakers with needs and qualities of which they were designed to be free.

The Crakers’ communication with Snowman leads them to form the kinds of ritual and worship that are associated with religion. In one instance, after Snowman’s prolonged absence, the Crakers assemble an effigy of him. When Snowman returns the Crakers are overjoyed to see him, and tell him, “We made a picture of you, to help us send out our voices to you” (361). Snowman recalls Crake’s concern: “*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 afterlife, and sin ... and kings, and then slavery and war” (361). In an ideal situation, it is possible that in the absence of contact with non-Crakers, the Crakers would remain free of the qualities, needs, and ideas of which Crake tries to keep them innocent. However, as it turns out, the Crakers are not left on the Earth in a vacuum, and so the ideal situation cannot be realized.

It is revealed toward the end of the novel that Crake’s plan is indeed for the Crakers to replace *Homo sapiens* upon the latter’s extinction due to the release of a pathogen. That is, while he and the rest of the engineers create humans 2.0 as prototypes so that potential parents can have children according to their design, Crake’s real plan is to replace one species with the other. The eradication of humans 1.0 would accomplish the rewinding of history (without, of course, undoing the damage inflicted on the environment). The Crakers’ unwiring and rewiring, on the other hand, is meant to ensure that history does not repeat itself. The unwiring and rewiring would prevent the repetition of history because it removes from humans the qualities that led to the ruin described in the novel. In fact, these are the same qualities than man is faced with upon his expulsion from Paradise. Not for naught is the Crakers’ environment called Paradise: the Crakers are similar to man before his fall from Paradise. Both are naked and unshamed, both are pain-free and content, both need not labor so as to survive. Snowman, who first saw the Crakers when they were still in

the Paradise Dome, and who lives close to them by the beach afterward, describes them:

They seemed happy enough, or at least contented. They grazed, they slept, they sat for long hours doing what appeared to be nothing. The mothers nursed their babies, the young ones played. The men peed in a circle. One of the women came into her blue phase and the men performed their courtship dance. (339)

With no need for clothes, shelter, tools, or elaborate processes, the Crakers' lives resemble those of Adam and Eve in the Garden of Eden.

While the harmony and comfort experienced by Adam and Eve and the Crakers is similar, there is a difference in the level of participation required of them. The Crakers are asked of far less participation than man, even before his fall. Even though man's working of the earth was to be more grueling and painful after the fall (Rashi interprets "With the sweat of your face you shall eat bread (Gen. 3:19) as "After you toil with it very much" (Mid. Tadshei, Otzar Midrashim)), he was asked to till the soil even in Eden ("Now the Lord God took the man, and He placed him in the Garden of Eden to work it and to guard it" (Gen. 2:15)). Man's action in terms of prayer and development of vegetation was required. The Crakers, on the other hand, are not designed to collaborate or in any way participate in developing their surroundings. Moreover, the Crakers do not share Adam's role in characterizing and classifying the animals, that is, they are not portrayed as recognizing the intrinsic qualities of or having dominion over the animals that share their space. We see therefore that the Crakers participate in maintaining God's creation even less than Adam does, if at all. Without this attribute of naming and recognition, and without a role in the development of creation, the Crakers' role is not very different from that of the animals. There is yet another indication that the Crakers are designed to be more animal than human. In his commentary to Genesis 2:16, Munk notes,

The fact that God first of all pronounces a prohibition instead of giving a command means implicitly that the one He addresses enjoys a new privilege: freedom [...] God no longer imposes a formal materialized order in the form of instinct as He did for the animals; He leaves man free to choose between obedience and dis-

obedience and this, for the first time, introduces conscience and will as the means by which man will progress. Man thus becomes master of his own fate. (34)

The unwiring and rewiring of the Crakers' brains and the design of their bodies preclude not their freedom to choose, but the very need to make a choice. They are unknowingly bound by the "formal materialized order in the form of instinct," as are animals.

Yet a third reference to the biblical story supports the comparison of the Crakers to animals. Upon Adam and Eve's sin, God says, "Behold man has become like one of us, having the ability of knowing good and evil" (Gen. 3:22). Rashi interprets this verse as follows: "He is unique among the earthly beings, just as I am unique among the heavenly beings, and what is his uniqueness? To know good and evil, unlike the cattle and the beasts" (from Targum Jonathan, Gen. Rabbah 21:5). After they eat from the forbidden fruit, Adam and Eve become less like animals. The Crakers never gain "the ability of knowing good and evil" because their design does not allow them to access such a distinction. What Adam gains by eating from the fruit of the Tree of Knowledge of Good and Evil is something that the Crakers are designed to never attain: they are genetically engineered out of desire of such a fruit and what it represents, and will never have the knowledge it affords. The Crakers are thus incapable of wreaking the kind of havoc humans did upon the earth. Denied, through genetic engineering, the means by which to fall from Paradise, the Crakers are designed to remain there forever. In other words, populated by beings such as the Crakers, the Earth can remain Paradise.

In the setting of *Oryx and Crake's* Paradise, the fruit of the forbidden tree – the means to fall – essentially has no equivalent. Accordingly, the narrative in this case is not one of prohibitions, commandments, temptations, and tests, as in Genesis 1 – 3. The wielding of biotechnology has rendered the novel's narrative of the Crakers one of sustainable cohabitation – sustainable harmony. In other words, it is a kind of inactive survival – a survival that does not depend on active participation on the part of the actors.

Munk writes that "The first sin destroyed the marvelous harmony of the beginning" (31). It is possible that the Crakers are designed to maintain this harmony specifically by *not* participating. The underlying notion is that if the harmony of creation is to be maintained, perhaps man, as we know him, as a participating creature, cannot exist.

He should be modified to be more like an animal, with less of an actively collaborative role in nature. Crake attempts to ensure a permanent state of Paradise – perpetual equilibrium and harmony – by removing any qualities that either lead to the fall, or to the actions of the already fallen. It would seem that a permanent state of this harmonious Paradise can only be attained if the Crakers are stripped of – more specifically – many of the qualities that would differentiate them as human. This raises the possibility that according to Crake, these eliminated qualities may be at odds with a state of equilibrium between man and his environment.

It appears that the being that participates less in his environment is also the being that exhibits few of the qualities and capabilities that are associated with the human. This is the type of being that Crake bets will survive in the next round of human life on Earth, and the being that will in turn allow for the Earth's survival. An analysis of man's relationship to nature in the biblical story foregrounds the purpose behind the Crakers' specific design, and suggests that this design is considered by Crake to be conducive to a perpetual harmonious state of pre-fall Paradise.

The etymology and semasiology of “paradise” and “Eden” reveal that they are characterized in terms of plant life. According to the entry for “Eden” in Oxford's *A Dictionary of the Bible*, “The garden of Eden came to be thought of as paradise, before the fall.” The entry for “Paradise” in *The Oxford Companion to the Bible* states, “Originally a Persian word meaning ‘park’ or ‘enclosure,’ paradise first appears in the Septuagint with reference to the garden of Eden (Gen. 2) and became associated with a pristine state of perfection free of suffering.” In the entry for “The Garden of Eden,” the same reference states,

A garden of trees and lush vegetation planted by God and occupied by Adam and Eve (Gen. 2–3). The meaning of the word “Eden” in Hebrew is uncertain. Some scholars connect it with a Sumerian word meaning “wilderness” or “plain,” while others have proposed a derivation from the Hebrew word for “delight” or “pleasure.” Thus, Eden came to be identified as an ideal garden of delight, or paradise.

We see that the distinctive, defining feature of paradise/Eden is plant life. That Crake seemingly chooses to return to and perpetuate paradise as the site of the euphonious existence of man and environment

indicates that the relationship between humans and plant life is paramount in this harmony.

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