

The Nature of Artifacts: An Aristotelian Response to Katz

Keith Bustos

University of Tennessee

kbustos@utk.edu

Second Annual Meeting

Joint IAEP-ISSEE Conference

In his article, “The Big Lie,” Eric Katz attempts to draw a distinction between the natural and the artifactual, in an attempt to demonstrate that restored natural areas are actually artifacts. For Katz, natural entities are more valuable in that they have not been stained with human intention. That is, unadulterated nature is autonomous in the sense that it is free to fulfill its own purposes, whereas adulterated nature is dominated and coerced into fulfilling anthropocentric intentions. The former is to be valued, from an environmental ethical standpoint, for its own sake since it has a good of its own that is separate from (and Katz appears to think opposed to) the human good. So, in this article Katz explicit aim is to “argue against the optimistic view that humanity has the obligation and ability to repair or reconstruct damaged natural systems” since “restored nature is an artifact created to meet human satisfaction and interests” and as such “it is an unrecognized manifestation of the insidious dream of the human domination of nature.”¹

I intend to demonstrate that although there may be something unsavory about imposing human intentions onto nature, Katz offers a weak understanding of artifacts that does little if anything to advance the discussion concerning how the land (as Aldo Leopold conceived of it) should be treated. In order to get a more coherent understanding of the nature of artifacts, we will examine Aristotle’s conception of the artifactual. Once we have a coherent conception of the nature of artifacts, relative to Katz’s view, we will see how Aristotle’s perspective can be used to refute Katz’s claim that when humans interfere with nature they necessarily create artifacts. As a result, the aim of this essay will be to demonstrate that no living thing (either plant or animal) can accurately be construed as artifactual.

¹ Eric Katz, “The Big Lie: Human Restoration of Nature,” *Research in Philosophy and Technology* 12 (1992): 232.

Katz on the Nature of Artifacts

By way of articulating his view Katz says that “my initial reaction to the possibility of restoration policy is almost entirely visceral: I am outraged by the idea that a technologically created ‘nature’ will be passed off as reality.”² In this same article, Katz talks about humans attempting to use technology to copy nature when engaged in nature restoration projects. He cites Robert Elliot as claiming or at least agreeing with the assertion that “To value the restored landscape as much as the original is thus a kind of ignorance; we are being fooled by the superficial similarities to the natural area, just as the ignorant art ‘appreciator’ is fooled by the appearance of the art forgery.”³ It seems as though Katz sees restoration projects as replacing natural areas with plastic trees, concrete rock formations and silicone streams. If this is in fact what Katz’s intuitions are, I contend that he is fundamentally mistaken about both the metaphysical and ontological status of restored nature.

Before getting to why I believe Katz has committed a fundamental error in his characterization of restored nature, let us understand Katz’s conception of artifacts. This is important because, as Katz puts it, “the recreated natural environment that is the end result of a restoration project is nothing more than an artifact created for human use.”⁴

Katz understands artifacts to be the product of human design and as such tools solely intended to meet the demands of human needs or purposes.⁵ He also believes that although not all artifacts are actually used for their intended purposes, they would not exist at all unless some human need had demanded their creation.⁶ Katz stipulates:

² Ibid., 234.

³ Ibid., 233.

⁴ Ibid., 234.

⁵ Eric Katz, “Artifacts and Functions: A Note on the Value of Nature,” in *Nature as Subject: Human Obligation and Natural Community* (New York: Rowman & Littlefield Publishing Inc., 1997), 121-122.

⁶ Ibid., 122.

Artifacts thus stand in a necessary *ontological* relationship with human purpose. The existence of a human purpose...is a *necessary* condition for the existence of the artifact. Human purpose and intention are clearly not sufficient conditions for the characterization of an entity as an artifact, for some things are the result of human intentions although we would hesitate to call them artifacts. Human infant, for example, may be the result of intention and purpose. Interhuman relations – for example, my friendship with John – may also be intentional [sic].⁷

Apparently, according to Katz, artifact's mere existence is owed to the artisans who produced it, since it is the artisans' vision and design that give the artifact its intended function and form. As such, artifacts can only be understood as implements intended to fulfill human-centered (anthropocentric) ends.⁸

In contrast to artifacts, Katz understands natural entities to have no design or intended function since there was no divine artisan who imposed such a blueprint onto nature: natural entities are products of natural selection, which is not governed by some intelligent being. Katz realizes that we may use natural entities as means to fulfilling anthropocentric ends by imposing a function onto an entity that lacks an innate function, but even though we “graft our design” onto them, natural entities remain “natural” since they have no intrinsic function.⁹

Katz chooses to reject an Aristotelian conception of the artifactual. It is not completely clear why he does this (we will return to why I think he does later) but it is clear that he accepts Michael Losonsky's conception of artifacts, since he explicitly refers to Losonsky's position, which is itself a refutation of Aristotle's view. Katz weaves Losonsky's view into his own by claiming that:

Artifacts have a ‘nature’ that is partially comprised of three features: ‘internal structure, purpose, and manner of use.’ This nature, in turn, explains why artifacts ‘have predictable lifespans during which they undergo regular and predictable

⁷ Ibid.

⁸ Ibid., 123.

⁹ Ibid.

changes.’ The structure, function, and use of the artifacts determine to some extent the changes which they undergo.¹⁰

Consequently, since an artifact’s nature can be discerned by its structure, purpose and manner of use, Lososky maintains that we need not search any further to discover an artifact’s essence.¹¹ Since this is such a stark contrast to Aristotle’s position (as we shall soon see), bear with me as I elaborate on Lososky’s perspective.

To begin with, Lososky’s refutation of Aristotle’s view is questionable at best since he never directly demonstrates how his view falsifies any of Aristotle’s premises nor does he provide any cogent counter examples to Aristotle’s view. Lososky levels what I call the Nuh-Uh Argument against Aristotle’s position: he merely says that Aristotle’s view is lacking and then proceeds to espouse his own view while disregarding how Aristotle might respond.¹²

Lososky contends that “the Aristotelian view of artifacts, underestimates the power of artifacts,” because artifacts actually have the causal power to reproduce themselves.¹³ For example:

In so far as certain types of artifacts are necessary for certain types of work, artifacts are animated, that is have natures, and these natures underlie the changes artifacts undergo. One important feature of an artifact’s nature is its internal form or structure...Moreover, the structure of an artifact also contributes to its permanence and its reproduction. A chair can bring about in me the desire to sit on it (just as a cinnamon roll can cause me to have an appetite for it)...In addition, if the artifact invites use, and use eventually leads to its disintegration, and its disintegration causes a demand for another token of the same type, then the structure of the artifact also contributes to the reproduction of its kind.¹⁴

As it seems, Lososky is claiming that artifacts such as chairs, crayons, and clocks can perpetuate themselves by causing their users to produce more of them (or at least demand their

¹⁰ Eric Katz, “The Big Lie: Human Restoration of Nature,” *Research in Philosophy and Technology* 12 (1992): 234.

¹¹ Ibid.; Michael Lososky, “The Nature of Artifacts,” *Philosophy* 65(1990): 84.

¹² I call this the Nuh-Uh Argument because many of my students who are new to philosophy tend to attempt to debunk unsavory philosophical positions such as Nietzsche’s claim that God is dead, by merely claiming that they disagree without offering reasons why they disagree, which is similar to merely saying “Nuh-uh”.

¹³ Michael Lososky, “The Nature of Artifacts,” *Philosophy* 65(1990): 83-84.

¹⁴ Ibid., 84.

production).¹⁵ Such a notion of causation seems suspect, since we normally do not think of chairs causing us to sit in them or clocks causing us to produce more of them. If such objects do in fact have such causal powers they are derived extrinsically and are not from within.

Such a misunderstanding of the causal powers of artifacts completely neglects Aristotle's conception of the Internal Principle Principle (as we shall soon see). In fact, Lososky's position is incongruous with Aristotle's IPP at all since the dynamis (in the sense of potency or power) of these artifacts would be external to the artifact (i.e., the dynamis would merely be potentiality).¹⁶ Moreover, such a capacity for replication is completely dependent upon the artisan, whereas the perpetuation of natural objects (or areas) is not dependent upon artisans in the same way. Granted, restored nature owes its existence to the artisan, but this does not necessarily require the further involvement of humans.

So, why does Katz appeal to Lososky's position? Admittedly, Katz does not explicitly say why nor does he even explicitly utilize Lososky's conclusion to support his own position. I suspect that Katz appeals to Lososky's argument to show how artifacts are able to replicate themselves and possibly to side with a position that is contrary to Aristotle's conception of artifacts. For if he had consulted Aristotle's view, Katz may not have been able to arrive at his intended conclusion: that the restored natural environment is an artifact.

Aristotle on the Nature of Artifacts

At this point it would be helpful to explain Aristotle's understanding of the necessary and sufficient conditions for a thing to be an artifact. In order for a thing to be an artifact, for Aristotle, the thing must meet the following criteria.

¹⁵ Ibid., 81-85.

¹⁶ Errol G. Katayama, *Aristotle on Artifacts: A Metaphysical Puzzle* (Albany, NY: SUNY Press, 1999), p. 106.

1. The entity must lack an internal principle for change or stasis (except qua its matter).
2. It must lack the capacity to perpetuate itself or its own species.
3. It must be ontologically dependent upon another thing which itself is a substance.
4. It must have at least a low level of unity.

(The first criterion seems to be a both necessary and sufficient condition that separates the natural from the artifactual. Even though I have stated three additional criteria, 2-4 appear to be dependent upon 1.)

As does Katz, Aristotle contrasts nature with artifacts. In Book II of the *Physics* Aristotle states:

Of things that exist, some exist by nature, some from other causes. By nature the animals and their parts exist, and the plants and the simple bodies (earth, fire, air, water) – for we say that these and the like exist by nature. All the things mentioned plainly differ from things which are *not* constituted by nature. For each of them has within itself a principle of motion and of stationariness (in respect of place, or of growth and decrease, or by way of alteration). On the other hand, a bed and a coat and anything else of that sort, *qua* receiving these designations – i.e. in so far as they are products of art – have no innate impulse to change. But in so far as they happen to be composed of stone or of earth or of a mixture of the two, they *do* have such an impulse, and just to that extent – which seems to indicate that nature is a principle or cause of being moved and of being at rest in that to which it belongs primarily, in virtue of itself and not accidentally.¹⁷

Here we can see that Aristotle conceives of those things that exist by nature to have an internal principle of change or stasis, whereas those things created by art have no inherent tendency for change (i.e., they have an extrinsic principle of change), and any tendency for change that can be attributed to things that do not exist by nature have such a characteristic insofar as they are comprised of natural things.¹⁸

¹⁷ *Physics* 192^b10 – 192^b20

¹⁸ Errol G. Katayama, *Aristotle on Artifacts: A Metaphysical Puzzle* (Albany, NY: SUNY Press, 1999), 109; Sheldon M. Cohen, *Aristotle on Nature and Incomplete Substances* (New York, NY: Cambridge University Press, 1996), 25.

Plants and animals (or more specifically, their forms) are substances in the metaphysical sense because they are responsible for their perpetuating their own species.¹⁹ Even within the realm of plants and animals there is a gradation of substantiality. A plant or animal is considered a substance to the extent that it can perpetuate its own species.²⁰ Males, in general, are considered to be more of a substance than females since they are able to produce semen, which itself possesses the active potency or power to procreate another being. Females on the other hand, are a substance to a lesser degree since they are, according to Aristotle, substances with qualification, which is to say that they are substances only to the extent to which they are able to reproduce. Furthermore, the young and the old are substances to the extent to which they will be able to reproduce (in the case of the young) and to the extent to which they were able to reproduce (in the case of the old).²¹ As for those animals or plants that are totally infertile, such natural beings would not be properly considered, by Aristotle, to be substances since they are unable to perpetuate their species.²²

This gradation is merely a way of understanding different capacities. It would not be that natural beings that lose the ability to reproduce would then cease to be substances. What Aristotle may be attempting to articulate here is that a being is a substance most of all when it enacts all of its natural capacities. For the most part, natural beings are in fact capable of perpetuating their own species, and merely losing the ability to fulfill such a capacity through some event would not then strip substantiality from such a being. So, plants and animals remain substances as long as they are the sorts of beings that possess the capacity to perpetuate themselves by nature.

¹⁹ Errol G. Katayama, *Aristotle on Artifacts: A Metaphysical Puzzle* (Albany, NY: SUNY Press, 1999), 103.

²⁰ *Ibid.*, 104.

²¹ *Ibid.*, 105.

²² *Ibid.*, 104-105.

In contrast, mules are infertile by nature, which renders them incapable of perpetuating their own species, and, according to Aristotle, are therefore not substances at all.²³ There are two points that can be made regarding the insubstantiality of mules (or other beings infertile by nature). First, mules are not themselves part of a species: even though they may exist by nature, they do so as accidents of natural beings interacting with each other. The point here is that since mules do not belong to any species, and cannot create a species due to their infecundity, they lack the inherent telos of perpetuation. That is, since they lack a species, of which they would otherwise be responsible for perpetuating, they cannot be held responsible for not perpetuating it. Second, although mules lack the power to replicate their own species they are still capable of reproduction in the sense that they are capable of reproducing their own flesh and bone through nutrition and growth. And since they have such a capacity they can be considered to possess an IP, which is a necessary and sufficient condition for being a substance. So, mules are natural in the sense that they possess an IP, are not ontologically dependent upon an artisan, and they have a high level of unity equal to that of other plants and animals. Consequently, mules satisfy all but criterion 2 for constituting a natural being. And merely failing to satisfy one criterion does not necessarily relegate them to the artifactual.

Artifacts, in contrast to natural entities, are not substances because they are ontologically dependent upon artisans. That is, the existence of an artifact depends upon the prior existence of an artisan, for the design and production of artifacts exist in the minds of artisans prior to material existence of the artifact.²⁴ Natural entities, on the other hand, are ontologically dependent upon their own species which, from an evolutionary perspective, has evolved through natural selection. One may argue at this point that natural entities are themselves designed by

²³ Ibid., 104.

²⁴ Ibid., 107.

God, and God can be understood as an artisan of sorts, and therefore natural entities are ontologically dependent upon God. By way of this argument, one may conclude that natural entities are actually a kind of artifact, but this would not be helpful in making any real distinction between those things that exist by nature and those that exist by art. In other words, by using such an argument, all entities would be artifactual.

The point that I take Aristotle to be making is that artifacts not only owe their initial existence to the artisan, but more importantly they owe their *further* existence to the artisan. Since things such as beds and coats lack an IP: they are not autonomous in the sense that they control the perpetuation of their species. Instead, their further existence directly depends upon an artisan. For without a carpenter or a tailor, beds and coats would cease to exist. So, even though it may be possible to argue that all things (both natural and artifactual) are actually artifacts in that they ontologically depend upon an artisan (divine or mortal), natural entities that possess an IP are capable of autonomous reproduction whereas artifacts are not.²⁵

Artifacts are not substances because they lack the unity that natural entities possess. Beds and coats are mere assemblages insofar as a bed is comprised of different pieces of wood fastened together, or a coat consists of different pieces of cloth sewn together. That is, beds and coats owe their unity to each of their parts being contiguous with some other part.²⁶ On the other hand, trees (in addition to other plants and animals) owe their unity not only to their parts' being contiguous with their other parts but because there is a functional bond between these parts that allows them to engage in certain sorts of transactions with one another.²⁷ Plants and animals, then, are considered by Aristotle to be substances due to their high level of unity whereas

²⁵ Ibid., 101 & 106.

²⁶ Sheldon M. Cohen, *Aristotle on Nature and Incomplete Substances* (New York, NY: Cambridge University Press, 1996), 32.

²⁷ Ibid.

artifacts lack any degree of substantiality since they have a low level of unity consisting of the mere contiguity or proximity of their parts.

Additionally, Aristotle does not consider artifacts to be *things* since for something to be a thing is for it to be *one* thing and mere contiguity or proximity of parts does not make something *one* thing.²⁸ In Book V of the *Metaphysics* Aristotle says:

We call one (1) that which is one by accident, (2) that which is one by its own nature. (1) Instances of the accidentally one are Coriscus and musical, and musical Coriscus (for it is the same thing to say ‘Coriscus’ and ‘musical’, and ‘musical Coriscus’), and musical and just, and musical Coriscus and just Coriscus. For all these are called one by accident, just and musical because they are accidents of one substance...Of things that are called one in virtue of their own nature some (a) are so called because they are continuous, e.g. a bundle is made one by a band, and pieces of wood are made one by glue...the continuous by nature are more one than continuous by art...Those things are continuous by their own nature which are one not merely by contact....²⁹

Here we can see that Aristotle thinks that we typically call things “one” that are mere accidents or substances. Even though we treat things such as bundles and piles as one thing, these things are not really *things* for Aristotle, since they are mere products of things that are themselves substances, namely humans.

Also, Aristotle thinks that those things that are continuous by nature have one motion, i.e., they are inseparable and move as one continuous thing. By applying this sole criterion, one may argue that a bundle of sticks is one thing whereas the pile of sticks is not, for the former is capable of one movement whereas the latter is not, since it has no unity whatsoever. Granted, in such an instance, a bundle of sticks is more of *a* thing than a pile of sticks, but this still does not get at what it is that Aristotle meant about one movement. The bundle of sticks is capable of one

²⁸ Ibid., 118.

²⁹ *Metaphysics* 1015^b1 – 1016^a1.

movement due to the twine binding the bundle and is not due to the bundle itself.³⁰ Plants and animals, on the other hand, are capable of one movement due to their inherent high level of unity. So, from an Aristotelian perspective, those entities continuous by their own nature, and thereby the sorts of entities that are capable of one movement, are the only sorts of entities that can accurately be considered *things*; i.e., just by bringing things closer together or even binding, gluing, or nailing them together does not itself create a new substance.

Aristotle adds one further criterion which prohibits entities such as bundles and piles from being accurately considered *a* thing: proper things cannot be comprised of things that are themselves substances.³¹ Put another way, a bundle is not *a* thing because it is comprised of sticks which are themselves substances and Aristotle explicitly states that “no substance is composed of substances.”³² So, a bundle of sticks is not a substance because it lacks a high level of unity, and it is composed of substances.

An Aristotelian Response to Katz

We can now return to Katz’s position: restored nature is an artifact. In dealing with Katz’s position, I am inclined to ask a question that might give us a better perspective from which to respond to Katz. The question is: Are forests or ecosystems the appropriate sorts of things that can be artifacts? Aristotle would apparently say that such entities as forests and ecosystems are not the appropriate sorts of things that can be artifacts for the following reason. Both forests and ecosystems have such a low level of unity that a bundle of sticks actually has more unity than either of these two. A bundle of sticks is one in virtue of the twine holding the

³⁰ Sheldon M. Cohen, *Aristotle on Nature and Incomplete Substances* (New York, NY: Cambridge University Press, 1996), 122.

³¹ *Ibid.*, 129.

³² *Metaphysics* 1041^a5

bundle together. Forests are merely conceptually united, for what marks out one forest from another is an arbitrary boarder such as a road, a greenway, or even a certain species density. For example, what distinguishes the Smoky Mountain National Forest from the Cherokee National Forest is merely a human convention (a park boundary) and what distinguishes a northern hardwood forest from a spruce-fir forest within the Smoky Mountains is merely the population density of a particular species of tree. Ecosystems are even less distinct in that it is difficult to draw a strict line distinguishing two contiguous ecosystems from one another. Specifically, ecosystems blend into each other in such a way as to ultimately constitute a global ecosystem. As a result, individual forests and ecosystems are merely arbitrary entities demarcated by anthropogenic categories and do not exist by nature – there are no physical things unifying forests or ecosystems. This means that forests and ecosystems cannot be considered things even in the weak sense that bundles are things, since there is no material thing unifying such entities (such the twine that unifies the bundle). So, we may *treat* an individual forest or ecosystem as *a* thing, but it is not *one* thing since it lacks even a low level of unity and therefore is not kind of thing that can be appropriately considered an artifact.

Here some may contend that forests or ecosystems are in fact unified in the sense that there is an interdependency of all organisms living within a particular forest or ecosystem, and such interdependency grants the forest or the ecosystem unity. But such a conception of unity is merely based on a nexus of symbiotic relationships formed between organisms and is itself nothing that physically unites a particular forest or ecosystem. Instead, this conception of unity is so weak that it does not grant one movement of a forest or ecosystem. More specifically, if we were to transplant a particular wetland by moving its constitutive flora to a different location, the fauna would not necessarily follow. Conversely, if I were to transplant a tree from my front yard

to the back yard, the limbs and trunk would necessarily accompany the roots. So, any unity that particular forests or ecosystems may have is relatively weak in the sense that it does not allow for one movement and therefore is less of a thing than a bundle of sticks. Even if forests and ecosystems had a higher level of unity similar to that of a bundle of sticks, forests or ecosystems could not themselves be considered natural things (i.e. substances) since their constituent parts are themselves substances, and as we saw above, Aristotle thinks that a thing itself cannot be constituted by other substances. That is, forests and ecosystems are composed of plants and animals which are themselves substances.

Furthermore, from this same perspective, some may argue that a forest or an ecosystem may be thought to have an internal principle of change or of stasis due to the changes that occur within the ecosystem itself, i.e., ecosystems can be understood as both having the capability maintain a certain level of stability by maintaining a certain level of functionality in the face of mild disturbances and moving toward stability after a major disturbance (some understand such a tendency toward stability as an ecosystem improving in health similar to a human returning to health after an ailment). However, any changes that an ecosystem undergoes are not due to the fact that it is an ecosystem; it is due to the nature of the entities that make up the ecosystem. Ecosystems undergo change or stasis due to the natural entities that comprise the ecosystems.

Consequently, Katz's assertion that restored forests or ecosystems are artifacts can be defeated from an Aristotelian perspective since, for Aristotle, forests and ecosystems are not things, even in the weakest sense and therefore are not the sort of entities that can accurately be construed as artifacts. I can imagine Katz himself, or those sympathetic to his view, conceding the point that forests and ecosystems are not themselves artifacts, while maintaining that the plants and animals used to restore a natural area to a particular state are themselves artifacts

because they are (1) infused with human intention and (2) their existence is dependent upon humans. Katz might argue that human planted trees and human introduced animals (even indigenous varieties of plants and animals) are used as a mere means to satisfy some human intention or goal. Furthermore, such introduced plants and animals are artifacts to the extent that they owe their existence to humans. Here it seems that Aristotle would definitely disagree with the notion that plants and animals can accurately be understood as artifacts. This would be due to the following reasons. First, plants and animals possess an IP, which grants each individual the capacity to maintain their health through nutrition and growth. Second, plants and animals are autonomous in the sense that they are capable of perpetuating their own species. Third, plants and animals possess substantiality due to their high level of unity. So, even though the plants and animals used in nature restoration projects may be used to merely satisfy some anthropocentric goal, these living beings are left to engage in their own nutrition, growth, and reproduction – they are not necessarily stripped of their autonomy or their substantiality – thereby remaining well within the realm of those things that exist by nature.

Katz may throw out a red flag at this point by claiming that this is exactly one of his key points: plants and animals used in restoration projects do not exist by nature – their existence is dependent upon humans. Granted, those particular plants and animals used in a particular restoration project may not have come to exist in that location merely through natural processes and therefore could not be accurately considered (in some sense) to exist by nature. However, the plants and animals themselves do not owe their entire existence to anthropogenic means – they came to exist through natural selection or at least through a means that was not anthropogenic. So, even though such living organisms used in restoration projects may owe their individual existence to anthropogenic means, they do not owe the existence of their species to

such means; and even at that, such organisms remain part of the natural world because they cannot accurately be assimilated into the artifactual world.

What about a situation where a particular nature restoration project involved the introduction of genetically modified organisms (GMOs) into a certain area so as to recreate a forest or ecosystem that has gone extinct? More specifically, could the GMOs be accurately construed as artifacts? From Katz's position, it seems that such organisms would be artifacts because they would owe their entire existence to anthropogenic means – they would never have come into existence (or back into existence) without the help of humans. But here again, we should consider the whole gamut of criteria that Aristotle provides so as to gain a bit of philosophical clarity regarding how to classify such organisms. Even though GMOs may properly owe their initial existence to human ingenuity, the capacity to further their own existence is inherent. In addition to possessing the capacity to perpetuate their own species, they would also possess an IP, and a high level of unity – all of which would grant them substantiality.

But not all GMOs are actually able to perpetuate their own species, namely those that have been engineered to produce sterile seeds. Would these sterile GMOs be assimilated into the category of artifacts? Remember that Aristotle thought that to be a substance most of all is to be potent, and those beings impotent by nature, such as mules, are not substances at all. But we must also remember that such a stipulation considered in relation to the other criteria allowed us to grant mules substantiality because they cannot be expected to perpetuate their species because no such species exists and that they remain capable of reproduction in the sense of nutrition and growth. Moreover, even though a particular living organism may be sterile by nature, if it possesses an IP, then it cannot accurately be considered an artifact, since this condition is both

necessary and sufficient for assimilating it into the category of the natural, which is opposed to the artifactual.

As it seems, nature restoration projects cannot be considered artifacts in any way, even if they are comprised of GMOs. Nature restoration projects as Katz has construed them is fundamentally flawed in that as long as living organisms are used in such a project, these beings cannot accurately be construed as artifacts because they will have an IP, which, as I have argued, is the necessary and sufficient condition for separating the natural from the artifactual, and these beings would have a high level of unity granting them substantiality. Based on these two factors alone, we can see that, from an Aristotelian perspective, living organisms cannot be properly assimilated into the realm of the artifactual. So, I have argued that restored natural areas are not artifacts since forests and ecosystems, which are typically the main focus of restoration projects, are not the sorts of things that can accurately be construed as artifacts and since the living organisms used in such projects are themselves substances.

The implications that my conclusion has for the discussion concerning nature restoration projects is that no matter how much humans interfere with nature it has a way of retaining a level of autonomy (even if minimally), which itself warrants at least a minimal level of respect. When attempting to discern the moral considerability of nature (be it restored or pristine) I suggest that we focus on some aspect other than the distinction between the natural and the artifactual, which may require us to search for some inherent quality of those living organisms that may demand our moral consideration.