

AN ECOLOGICAL READING OF INTERSPECIES MUTATION IN *ANNIHILATION*

IRENE SANZ ALONSO
Universidad de Alcalá (UAH)
irene.sanza@uah.es

Recibido: 3-09-2022
Aceptado: 6-05-2023



ABSTRACT

Humans' detachment from nature, as justified by an alleged exceptionalism falsely granted by our ability to reason, has resulted in the ecological crisis we face today. Besides, our fear and suspicion of wilderness has also prompted us to master the natural world on our terms. This article aims at exploring how Alex Garland's film *Annihilation* (2018) discomforts the audience by challenging our assumptions about a nature that we believed already conquered. The analysis will focus on how the film portrays mutations that produce hybrid creatures mixing animal and plant DNA thus destabilizing the limits between human and non-human. This crossing of porous boundaries illustrates our vulnerability as species and our dependance on the ecosystem that surrounds us.

KEYWORDS: *Annihilation*; mutation; vegetation.

UNA LECTURA ECOLÓGICA DE LA MUTACIÓN INTERESPECIES EN *ANIKUILACIÓN*

RESUMEN

El desapego de los humanos hacia la naturaleza, justificado por una supuesta excepcionalidad falsamente otorgada por nuestra capacidad de raciocinio, ha desembocado en la crisis ecológica actual. Además, nuestro temor y recelo hacia lo salvaje nos ha llevado a dominar el mundo natural según nuestros términos. Este

artículo tiene por objetivo explorar cómo la película *Aniquilación* (2018), de Alex Garland, incomoda a la audiencia al desafiar nuestras conjeturas sobre una naturaleza que ya creíamos conquistada. El análisis se centrará en cómo la película retrata las mutaciones que producen híbridos al mezclar ADN animal y vegetal, desestabilizando los límites entre lo humano y lo no-humano. Este paso entre barreras porosas ilustra nuestra vulnerabilidad como especie y nuestra dependencia en el ecosistema que nos rodea.

PALABRAS CLAVE: *Aniquilación*; mutación; vegetación.



Our current climate crisis has been interpreted by some scientists and environmentalists as the obvious consequence of our hierarchical relationship with the Earth and its non-human inhabitants. Our progressive detachment from the more-than-human world has resulted in an exploitative instrumentalization of the Earth and Earth others to satisfy our ever increasing demands as a species. Some science fiction, fantasy, fantastic and horror works have attempted to show what would happen if nature decided to strike back in revenge after decades of abuse, and in most of them humans are usually on the losing end. An example of this within the genre of the fantastic would be the film *The Happening* (2008), in which trees start producing a toxin that makes humans commit suicidal and/or violent acts in order to control overpopulation, something that stops all of a sudden leaving the spectator without any real explanation towards these seemingly impossible and inexplicable events. These films usually portray a vengeful Nature that has agency of its own and that to self-regulate itself decides on attacking the most dangerous species on Earth, i.e., human beings.

It is interesting to see how some of these attempts to present Nature as a vindictive entity, when in Western thought it has usually been conceived as static, passive, and subjugated to human exploitation, seem to be remorse tales of our unsustainable management of natural resources. Nature has been considered in recent centuries as a mystery to be solved through science, usually not to better understand it in order to develop more sustainable practices, but rather to control it in a more efficient way from a capitalist approach. This exploitative behavior can only be justified if we do not consider ourselves part of the ecosystem, because, otherwise, our unsustainable attitude could only

be explained in suicidal terms. This detachment from nature is falsely supported by the idea that human beings are exceptional creatures when compared to non-human others and to the environment itself. Then, what would happen if we were confronted with our real role as just part of a larger system which would survive better without us?

In the film *Annihilation* (2018), director Alex Garland invites the audience to join an expedition team entering a region on Earth that seems to be «polluted» by some strange organism. This region, known as Area X, seems an ordinary earthly ecosystem, but we progressively discover that there is some alien/weird wildness in it that defies our knowledge of natural processes such as mutation. This way, the film approaches the fantastic as the spectators—together with the characters—face a series of events that seem to be impossible according to the laws that rule our world and if we consider our idea of what is real (Roas, 2008: 94-95). The purpose of this article is to explore how the environment portrayed in the film, with a special focus on the role of the vegetal world, makes us reflect on how we would react as humans if we realized that our exceptionalism is false and that our survival does not only depend on us but rather on our understanding of the world that surrounds us. In order to do so, I will analyze different scenes from the film, as well as the roles of the protagonists, in order to show how the boundaries that we have set with our anthropocentric attitudes have imprisoned us, making us blind to the interconnectedness on which our survival as a species depends.

1. AGENCY AND THE VEGETAL KINGDOM

When we think of the vegetal kingdom, we tend to see it as an essential part of our world although a silent and passive one. If we think about the relationship of humans towards plants, we can see how we have progressively removed them—both metaphorically and literally, as in the case of weeds—from our existence, and mostly relegated them to their wild existence in regions not urbanized yet. Although we can see some green areas in urban spaces—and perhaps this is hopefully a rising tendency in some policies—plants seem to find no place in human existence if they are not part of our carefully arranged gardens or grown in pots that quite frequently become neglected in our homes. If we were to search for the origins of this general apathy towards the vegetal kingdom, we could perhaps blame our

value-hierarchical thinking in which plants are at the base of a system designed for and by humans. Making use of a vegetal-related vocabulary, Michael Marder comments on the «deracination of human beings from their material foundations, their transplantation into the heavenly domain, and the correlative devaluation of the literal plant mired, with its roots, in the darkness of the earth as well as in nonconscious existence» (2011: 471). By establishing reason as a requirement to take up the top position of our world hierarchy, humans justify the dominion of the other spheres of existence, from non-human animals to plants. This hierarchical arrangement of living organisms also entails the subjugation and exploitation of the lower levels in benefit of the highest one, separating ourselves from the world that surrounds us while denying our evident dependence on it.

In recent years, our understanding of the vegetal world has increased exponentially. Besides, it seems people are becoming more and more interested in learning more about plants, which is reflected on the growing numbers of publications on the issue, such as Peter Wohlleben's *The Hidden Life of Trees* (2015) or Stefano Mancuso's *The Revolutionary Genius of Plants* (2018), among many others (Concilio and Fargione, 2021: 2). Although we still have much to learn about plants, we have begun to realize that our image of vegetation as static and inanimate is completely wrong. Actually, this apparent «absence of visible movement» (Calvo *et al.*, 2017: 3), but for a few exceptions as Venus flytraps, has been wrongly interpreted as a lack of behavior, thus justifying the conception of plants as inanimate organisms closer to rocks than to animals. This is very interesting from a strictly scientifically objective point of view since if we think about life on Earth, most of it is vegetal so that «the commonest form of behavior is not movement we see but that expressed by plants» (Calvo *et al.*, 2017: 4).

In any case, we need to be aware that we cannot judge the agency of the vegetal kingdom based on human or non-human animal agency. This change of perspective would entail leaving anthropocentric judgments behind, thus opening our minds to alternative understandings of agency that would consequently help us develop more ecological attitudes:

Now we know that plants communicate and remember. They taste, smell, touch, and even hear and see. We, the species that figured this out, have learned so much about who we share the world with. We've begun to understand the profound ties between trees and people. But our separation has grown faster than our connection (Powers, 2018: 451).

As Richard Powers explains in *The Overstory* (2018), although we are progressively improving our knowledge of the natural world, we still have a long way to go. This better understanding of forests and plants should be reflected in a more sustainable relationship with the vegetal world, which so far has been basically conceived in exploitative terms: «Forests are under assault by the hands of primarily Western capitalistic societies that keep considering trees as mere objects for human use» (Concilio and Fargione, 2021: 1).

Thanks to scientific research, it has been proved that in contrast with the erroneous idea of plants' lack of behavior, trees do communicate with each other «through a symbiotic fungi system and a complex root network, sharing information and warning each other about external attacks or other perils» (Concilio and Fargione, 2021: 2). This is really significant as this type of communication was already foreseen by Ursula K. LeGuin in her short story «Vaster than empires and more slow» (1971), in which the vegetal species that cover the surface of a planet are able to send messages to each other as they are all part of an interconnected web. Plants have been traditionally believed to be non-sentient because they seem to lack a nervous system, but, once again, it is necessary to bear in mind that we should not judge plants according to human/animal standards: «the lack of obvious neurons does not preclude a functional, excitable but unrecognised, equivalent, capable of electrical transmission which most certainly is present» (Calvo *et al.*, 2017: 8). Therefore, we need to observe the natural world on its own terms and not on human ones, but in order to do so we should abandon anthropocentrism and adopt a more ecocentric approach.

In this sense, it is necessary to reconsider the concept of agency, as independent of reasoning and movement, which would help us see the similarities between all living species on Earth instead of continuing widening the breach in interspecies relationships. However, redefining agency to encompass more than human life standards means that we should be willing to sacrifice our exceptionalism in search of a deeper understanding of the other species we share this planet with. In this sense, Simon Estok comments on how philosophical movements such as material feminisms and material ecocriticisms contemplate the idea of agency as ascribed to «nonhuman things—biotic and nonbiotic» (2017: 300). This redefinition of agency would therefore entail a shift in our hierarchical organization of the ecosystem, and humans would see their anthropocentric position of power threatened: «Agency is precious to humanity—so precious that the loss of it puts in peril not only our sense of exceptionalism but our very sense of human identi-

ty» (Estok, 2017: 300). This discomfoting thought is precisely illustrated in the film *Annihilation*, as we will see in the following pages, as the boundaries between species—and thus the very idea of identity and agency—become porous. Besides, this feeling of being threatened is enhanced by the fantastic elements in the film, as the protagonists, despite their expertise in different scientific fields, are unable to explain what is happening within the shimmer: «The incursion of the impossible, of the inexplicable, in a world that functions as ours provokes reality to become strange, unknown, and, as such, incomprehensible. And, for this reason, threatening» (Roas, 2018: 10; my translation).¹

2. ALEX GARLAND'S *ANNIHILATION*

The film *Annihilation* (Alex Garland, 2018) is based on Jeff VanderMeer's homonym novel, published in 2014, which is the first one of the trilogy *Southern Reach*. This article focuses on the self-contained film rather than on the novel and on its interesting visual imagery regarding nature, and more specifically the vegetal world. The film follows the expedition of a group of women, the biologist Lena, the psychologist Dr. Ventress, the paramedic Anya Thorensen, the geomorphologist Cassie Sheppard, and the physicist Josie Radek, in an attempt to understand what is happening in the region labelled as Area X, where some unknown phenomenon known as «the shimmer» is taken place. All the previous expeditions, mainly formed by military men, have disappeared within Area X with the exception of the biologist's husband, who returns behaving strangely—he somehow remembers who he is but his behavior is completely different from the one shown in the flashbacks in the film—suffering first from amnesia and then developing some kind of terminal illness that deteriorates his body.

The premise of the film situates it within the fantastic with «the shimmer» as the transgressive element:

the fantastic story initially positions us within the limits of the world as we know it, the world that (one could say) we control, in order to immediately violate it with a phenomenon that alters the natural and habitual way in which

1 «La irrupción de lo imposible, de lo inexplicable, en un mundo que funciona como el nuestro provoca que la realidad se vuelva extraña, desconocida y, como tal, incomprensible. Y, por eso mismo, amenazadora.»

events occur in this routine space. And this turns this very phenomenon in impossible and, as such, inexplicable, incomprehensible (Roas, 2006: 99; my translation).²

Although from the beginning of the film we see that the alterations in Area X seem the consequence of the fall of some extraterrestrial materials—which is clearly explained—in the film the focus is not so much on the origin of the «the shimmer» but rather on what it does and how it affects the protagonists, which emerges as the fantastic element as these effects are impossible, inexplicable and incomprehensible, following Roas' definition of the genre.

The film succeeds in keeping the audience on alert as the events unfold through jumps in the chronology so that we follow the protagonists through flashbacks within flashbacks. At the beginning, Lena the biologist (played by Natalie Portman) is interrogated about her stay in Area X but she is unable (or unwilling) to answer many of the questions she is posed, and while she feels she has been out for some days or weeks, she discovers that her trip had lasted four months and that she is the only member of her expedition returning alive. This inability to explain what has happened—which is the feeling that accompanies the spectator throughout the film—reinforces the fantastic nature of this work. During the scenes of her interrogation, we can perceive that she is not the same person that went into Area X, and, at the end of the film, when she faces her suddenly-recovered husband, the audience can perceive in her eyes some kind of shimmer, a proof that what has come back from Area X is more-than-Lena. The audience may wonder, without a clear answer, if that this creature is a better version of the original Lena or just an alien parasite ready to colonize Earth—we are left with the doubt—but what we can guess is that this being is more able to understand how our world functions from a biochemical point of view, and thus, it may be more prepared for survival.

3. TERR(OR)IFIC VEGETATION

From the beginning of the film, we can perceive the constant presence of the natural world, as well as the need of humans to understand (and control) it, which plays an essential role in the development of the plot. When the

² «Así pues, el relato fantástico nos sitúa inicialmente dentro de los límites del mundo que conocemos, del mundo que (digámoslo así) controlamos, para enseguida quebrantarlo con un fenómeno que altera la manera natural y habitual en que ocurren los hechos en ese espacio cotidiano. Y eso convierte a dicho fenómeno en imposible, y, como tal, inexplicable, incomprensible».

character of Lena is introduced, we can see her teaching a university class on cancer cells and how they mutate and multiply. This can be interpreted as foreboding since mutation becomes a decisive element in the plot of the film and in the evolution of the characters. Mutation illustrates how the more-than-human world may challenge our understanding of it, since in many cases—as with the deadliest types of cancers—humans can only contemplate the deterioration of the human body without any option to fight against it. This way, we can perceive from the start of the film that even though humans have attempted to understand—and control—nature, there are still unknown processes that have not been fully understood and that escape humans' capacities. As such, humans seem to be vulnerable and become mere spectators of the world that surrounds them, something that we can see precisely in this scene of Lena teaching her students because, while they are inside a modern building with all new technologies at hand, through the huge windows we can see the green nature outside. In this sense, the natural world is portrayed as a constant presence from which humans separate themselves through walls (whether physical or psychological), but which is surrounding us and reminding us that we are part of it.

The choice of the protagonist is significant regarding human attempts to master nature as Lena's precise field of expertise is the genetically programmed life cycle of a cell. The aging process of cells is something that scientist have been trying to understand for many years without success., thus creating a sense of helplessness. Precisely, this frustration provoked by our limited scientific knowledge permeates the events in the film, as «the shimmer» is an inexplicable phenomenon as Area X expands without control. Once they enter trespass the barrier between what is real and what is fantastic, they encounter a wilderness that is ordinary and familiar but which at the same time is somehow alien, a feeling that increases as they encounter some vegetation which is not the one expected in such a geographical location: «A transgression that at the same time provokes estrangement from reality, which is no longer familiar and becomes something incomprehensible and, as such, threatening. And directly linked to this transgression, to this threat, there appears another fundamental effect of the fantastic: *fear*» (Roas, 2006: 97; emphasis in original; my translation).³ Despite the beauty of the nature that surrounds them, we can perceive the pro-

3 «Una transgresión que al mismo tiempo provoca el extrañamiento de la realidad, que deja de ser familiar y se convierte en algo incomprensible y, como tal, amenazador. Y directamente ligado a esta transgresión, a esa amenaza, aparece otro efecto fundamental de lo fantástico: el *miedo*.»

tagonists start to feel some sort of foreboding, enhanced by the inexplicable events that start to take place.

We can see lush vegetation everywhere, as if they were walking into a jungle, but with the same strange shimmer that surrounds Area X, which gives us the impression that there is something unnatural (and fantastic) to it. In fact, the vegetation is so abundant that it is difficult to see beyond the trees, and the expedition seems to have entered a whole different world—despite being aware of their location. Their confusion is such that they do not remember having entered Area X, nor setting the camp (30:49), and they are only able to guess the approximate time they have spent within «the shimmer» because of the amount of food that has been eaten.

Therefore, Area X is presented as a new world within our very own world, as the transgressive element in fantastic narratives, and as such, the natural rules in that region, as the team discovers, are also different from the ones they know. It is precisely this unnaturalness in what seems to be natural that creates a state of anxiety in the characters, reinforced by the malfunctioning of communications and compasses. This weirdness is clearly illustrated in the more-than-human world, both in vegetation and animal creatures. For example, when the team approaches a sinking house near a swamp, they can see several bushes and plants intertwined in the railings of the porch. They observe that the flowers seem to be part of the decoration for a wedding, but even in that beautiful sight there is an element of discord: «These are very strange (...). To look at them, you wouldn't say they are the same species... but they are growing from the same branch structure...so it has to be the same species» (33:40-33:57). Lena comments that although the flowers seem to belong to different species, they all grow from the same branch, thus defying natural laws and what the protagonists know of botany. This vegetation, which is impossible according to the laws of our world is another fantastic element in the novel, as for the fantastic to exist, the strange phenomena need to occur in our world and challenge the rules that govern it (Roas, 2006: 95).

The impossibility of this vegetation lies on the fact that these plants are the result of a natural (but altered or denaturalized) process: «It's like they're stuck in a continuous mutation» (34:02). In his article «Terror and Terroir: Porous Bodies and Environmental Dangers», Brian Onishi points out that this lush vegetation portrayed in *Annihilation* is a «dramatization and reversal of the cultivated garden. It is a dangerous garden full of wildness that not only expels the totalizing knowledge of human project, but works to capture and restore a sense of wildness to the human» (Onishi, 2017: 65). The flowers from

different species growing out of the same branch defy our concept of gardens as controlled areas in which nature is mastered to please humans as when they first think the flowers have been arranged as for a wedding:

The garden likewise represents a microcosm of our relation to nature. It is the subdued, controlled, and organized growth of bounded biotic communities. It promotes the idea that humans have control over the natural elements and are within the bounds of reason to bring forth the seeds of fruit and flower for our own use. However, the garden always exceeds the gardener's intentions (Onishi, 2017: 65).

Just as the garden exceeds the gardener's intentions, Area X challenges our perception of nature and proposes a new (and weird) wildness that escapes human understanding, and that is deemed impossible, and thus fantastic, according to our understanding of the world. Then, once they trespass the foggy boundaries of the «the shimmer» they encounter an Earthly-but-alien ecosystem that progressively shows its weirdness, an ecosystem that resists humans' scientific explanations: «The fog and mist of Area X eludes the controlling and revealing light of science, stands outside of our simple epistemic categories and thus resists the attempts to master it» (Onishi, 2017: 63). Therefore, the wilderness of Area X does not only escape the scientific laws established by humans according to the processes observed on Earth, but in so doing this is a natural system that cannot be controlled: «The unpredictability of the transformations caused by the Shimmer obfuscate any attempts at mastery over (contaminated) environment or human body» (Butler, 2021: 1117).

At the beginning, the constant mutation within «the shimmer» is perceived in beautiful creations, but as the film progresses, we perceive its dark side and the efforts of the members of the expedition when trying to disentangle what is happening from a scientific point of view. For example, Lena reflects on the mutations in the flowers and highlights how such a mutation would be considered a pathology if it were seen in a human while in the flowers it is somehow stunning (34:12). The mutation process is first seen in plants and trees, and then in animals, as when they are attacked by a huge caiman with clear signs of mutation. This phenomenon challenges these scientists' principles as they assert that it is impossible to crossbreed between different species. And even though some of them are horrified at the changes their bodies are experimenting, from the scientist's perspective there is some charm in these mutations: «Sometimes it was beautiful» (38:16). One of the best examples of the wonders that «this shimmer» produces is the scene in which Lena

encounters two deer whose bodies have mutated so that the antlers of one of them are made up branches with flowers.

4. MUTATION AS THE END OF EXCEPTIONALISM

When the members of the expedition see the effects of «the shimmer» in their own bodies, they start to understand that the mutation affects anything alive within the boundaries of Area X so that the genes of plants and human and non-human animals get mixed with unpredictable results: «Animal DNA, plant DNA. All DNA» (1:05:55-1:05:59). Some of these new creations result in astounding creatures such as the deer mentioned above, or in surprising walls that used to be made of concrete and are now covered in a mixture of fungus and plant growths. However, some of the mutated organisms become terrifying beings such as a bear-boar that can reproduce faithfully the voice of one of the deceased members of the expedition. Perhaps the most striking image of this horrific genetic hybridity is represented by a corpse the team finds in a former military base. We can see some remnants of the human body, but from it emerges a strange growth that can be described as half plant half fungus resulting in a shocking and inhuman configuration.

The world within «the shimmer» seems hostile to humans, as all the expeditions have perished, or at least mutated and become part of it. However, just as humans seem to be out of place in Area X, the natural world is there in all its splendor. After the remaining members of the team leave the base, they arrive at an abandoned village where all houses, parks and human constructions are covered by lush vegetation, giving the audience the feeling of nature conquering back its territory. This is precisely one of the reasons why Area X results so discomfoting, because it seems a place not apt for human beings: «Area X is dangerous precisely because it does not reflect human activity or show a human footprint» (Onishi, 2017: 63). This absence of human life becomes even more significant when we see anthropomorphous bushes in the once-populated town, which is a striking view as they look like people walking: «And the plants have human body plan. Arms attached to shoulders. Legs to hips» (1:05:34-1:05:40). The scene presented to the audience makes us reflect on the idea of agency, and how we can perceive that through the subtlest of movements, vegetation is winning territory, even if it is helped by an alien entity. Regardless of the presence of «the shimmer» apocalyptic narratives depict urban areas as completely overtaken by plants and wild an-

imals, showing that life goes on without human beings on the scene—something that we could see to a lesser extent when wild animals moved freely in cities during COVID-19's lockdowns. These settings may be interpreted as threatening as they challenge human exceptionalism on the grounds that human existence may be pointless and that the Earth would go on—and probably better—without our species.

In *Annihilation* we see how humans are not exceptional beings at all since all the creatures within Area X, regardless of their species, are affected by «the shimmer» with their genes refracted and mutated together with the genes of everything else, whether animal or plant. Mutation thus becomes a fantastic transgression as it does not obey the natural laws but performs impossible deeds by mingling genes from different species, in this way it substitutes «familiarity with what is strange, worrisome, introducing dark areas built upon something completely «other» and hidden: the spaces beyond the limiting structure of what is «human» and what is «real»» (Roas, 2018: 11; my translation).⁴ Besides, as a fantastic transgressor, this mutation process has unpredictable results depending on the affected species. In the film we appreciate several animal and vegetal species that have undergone some transformation in a successful way. In fact, we can see that some of their attributes have been enhanced so that predators become more dangerous—as exemplified by the bear-boar and the caiman-shark—and other creatures astonishingly beautiful—as the deer with floral patterns. In contrast, from what we perceive in the protagonists, the mutation is traumatic in most cases. For example, one of the members of the team is killed by the bear-boar, and while dying some part of hers mutates into the animal making it able to emit her voice reproducing constantly her cry for help. This results extremely discomfoting as the only part of hers that remains somehow alive is her plea while dying. Another instance of how traumatic it is this process for some of the protagonists is the reaction of utter terror when one of them realizes that her fingerprints are disappearing. As a consequence, when she realizes her body is changing and that she cannot do anything to prevent it, she becomes quite paranoid and aggressive towards the rest of the team.

The two examples in the previous paragraph illustrate the most negative psychological response to the mutation, and this could be extrapolated as a response to a change in the status quo of humanity itself. Acknowledging

4 «familiaridad por lo extraño, lo intranquilizador, introducir zonas oscuras formadas por algo completamente “otro” y oculto: los espacios que están más allá de la estructura limitadora de lo “humano” y lo “real”».

the mutation of «the shimmer» implies recognizing that human bodies are transformed into something else, something which seems impossible, and which is no longer (only) human. In a way, this can be seen as a process of contamination from a more biochemical perspective, but in a deeper level, this is an open threat to human exceptionalism altogether. Considering the image of the abandoned village with nature taking over and seeing human bodies mutating without them being able to control it, it is demonstrated how vulnerable humans are and the suffering involved when confronted with a situation in which they become subjects of an experiment.

This idea of being experimented with implies once more the loss of the supposed human exceptionalism since «the shimmer» does not differentiate between species when the mutations occur. This way, humans become subjected to a process of animalization and their reasoning ability is ignored as they are reduced to a set of genes that are mixed with other beings' genes in Area X. This process and this experimentation without consent make us reflect on how humans experiment with non-human animals for the benefit of humanity, and not for the animals themselves. This change of perspective in which the human becomes the subjugated other, not being exceptional anymore, raises ethical issues on animal experimentation that may create in the audience the same discomfort and confusion we can perceive in the protagonists of the film.

As the film progresses, the consequences of the mutation process are noticed by all the members of the expedition, both on a physical and a psychological level: «We are disintegrating. Our bodies as fast as our minds», as Dr. Ventress comments (1:17:52-1:17:55). Nevertheless, not all the protagonists face the mutations within «the shimmer» in the same way, as some of them seem to embrace changes in a more open-minded way, just as the non-human beings seem to have done by instinct, as if realizing it is better for their survival. We can see Dr. Ventress, who organized the expedition and chose its members, trying to understand «the shimmer» as if it was her last hope to cure the terminal cancer she suffers. And Lena seems suspicious though curious when she checks her blood under the microscope and sees her own cells mutating. But one of the best examples of the embrace of mutation is represented in the physicist Radek, who willingly accepts the transformation and disappears from the scene to, from what the audience interprets, become one of the anthropomorphous bushes they encounter in an abandoned village. Lena does not seem really surprised by her decision, as she is aware that she had suffered from mental issues in the past, and we can even see scars from self-in-

flicted wounds in her arms. In fact, just before Radek disappears, we witness an interesting conversation with Lena in which the former is seen caressing her scars, which have transformed to branch-like drawings on her skin. Therefore, these scars that remind her of a troubled and hurting past have mutated into some plant-like structure, a new life she seems willing to accept: «Ventress wants to face it. You [Lena] want to fight it. But I don't think I want either of those things» (1:20:57-1:21:05). And it is then when we see her calmly walk away behind some trees and disappear from a scene in which we can only see human-shaped bushes. This very scene is remarkably fantastic as the impossible, according to the rules of our world, occurs, while the spectator does not see the end of the mutation process thus making the phenomenon completely inexplicable.

5. FROM ANTHROPOCENTRISM TO ECOCENTRISM

Although several teams have entered Area X, none of them has returned, and perhaps that is the reason why Dr. Ventress tries a different approach and decides on an all-women team for the new attempt. Previous expeditions had had a military profile, with teams made up of mostly soldiers—as we can deduce from what we see in the film—but the last expedition encompasses a group of five women whose motivation is to scientifically understand what is happening in Area X. Although they carry weapons and some seem to have some military training—Lena herself served in the Armed Forces for several years—they enter «the shimmer» fearful and anxious, but with the open-mind of a scientist. In fantastic narratives fear plays a significant role as it is the feeling that emerges in characters and readers—or spectators as in this case—when confronted with the transgressive element that defies their reality in an unknown and impossible way (Roas, 2018: 9). From the beginning they experience confusion and fear towards Area X as they venture into it, but most of them try to fight that fear, instead of succumbing to it, by trying to find an explanation for what is happening to their bodies. This way we can see them observing mutated plants and animals with suspicion but also with the questioning look of a scientist that tries to find an answer for the strange events in Area X.

The choice of an all-female team is also interesting if we analyze the traditional role of women in the history of natural sciences. It is only very recently that the presence of female scientists throughout history has started to

be acknowledged since their contributions used to be neglected or hidden behind some male counterpart. This neglect was also evident in much of the cultural production with a scientific component, as traditional science fiction stories and films also relegated women to the role of the wife of/ daughter of/ prize (Hollinger, 2003: 126) instead of giving them a prominent position as scientists themselves. For this reason, it is very significant that the expedition in *Annihilation* is made up by only female scientists of different branches and with renowned experience in their fields. In the film we also find that some of the members of the team belong to non-white ethnic groups, although the director was criticized on the grounds that the film did not portray correctly the origins of the protagonists as presented in the novels, in which the Lena, featured by Natalie Portman, is an Asian American. Director Alex Garland explained, however, that when the cast for the film was prepared, the second and third parts of the trilogy, where the physical characteristics of the protagonists are explained, had not been published yet (Wong).

Despite the accusations of whitewashing of several ethnic groups, in the film we can see that two members of the team are portrayed by black actress Tessa Thompson and by Puerto Rican actress Gina Rodriguez, respectively. Therefore, the last team to enter Area X, and the one that more or less successfully disentangles its secrets, is made up of scientist women belonging to different ethnic groups, as a way of vindicating the role of women in science. If we approach the novel considering traditional gender roles, we see that these women that enter «the shimmer» encompass roles of different types as they are familiar with survival techniques. Besides, they have both scientific and military trainings that enable them to explore the weirdness of Area X with objective rigor as well as with an open desire to understand what processes are involved within «the shimmer». In fact, it is precisely this scientific motivation that helps some of them see Area X as not only a threatening presence but as a place for change.

Regarding the election of the protagonists of the story, we should take into account that in different moments of the film we discover that all the members of the expedition have some kind of traumatic experience they have more or less overcome. For example, Lena feels guilty because she has cheated on her husband, which is the reason why he decided to be part of one of the previous teams entering Area X, and so she thinks she is to blame for his ill state. But the other members have traumas of their own, as Dr. Ventress suffers from terminal cancer, Josie Radek used to hurt herself and the geomorphologist Cassie Sheppard lost a child. These traumatic experiences make

these characters vulnerable and perhaps more open to what «the shimmer» has to offer, which would explain why some of them—or at least a part of them—survive in some way or another: «Part of the characters’ refractive capacity is driven by their past trauma which leave them open to trans-corporeal relations instead of a more static mode of being» (Butler, 2022: 1115).

As we have seen in this essay, in general «the shimmer» is perceived as danger as it threatens the order established by human beings from an anthropocentric—and androcentric—perspective: «It was mutating our environment. It was destroying everything» (1:44-59-1:45:00). Nevertheless, some others are able to see that beyond this disintegration there is an act of reconfiguration. For example, Lena thinks that what Area X does is more an act of creation: «It wasn’t destroying. It was changing everything. It was making something new» (1:45:03-1:45:10). This newness is seen as something negative because of the fear it entails to undergo a mutation in an uncontrolled way and with unpredictable consequences. However, and as some of the characters seem to foresee, the mutation may also have a positive consequence, as Cameron Butler states: «So, what is at risk of annihilation? The racial colonial order that separates human from nonhuman, which sustains white supremacy and renders the nonhuman as extractable property» (Butler, 2022: 1118). This alien presence that plays with the genes of every kind of being within Area X as it pleases shows that the boundaries between species may not be that static, and that all the inhabitants of the ecosystem may be more closely related than what we had thought: «The narrative breaks down the boundaries between human and Nature by literally breaking down the physical boundaries between them» (Blazan, 2021: 82). In this sense, Alison Sperling comments on how skin stops being a frontier that separates us from the world around us to become a porous layer, «the most vulnerable and open system of the body in its relation to the nonhuman environment as well as to others» (2016: 243). Therefore, annihilating inter-species frontiers, we would be able to see the interconnections and interdependences of our ecosystem and thus develop more sustainable attitudes.

In «The Hospitable Parasite: Parasitic Networks in Jeff VanderMeer’s Southern Reach Trilogy» (2021), Franziska Westhäuser and Hanneke Stuit highlight the porosity of Area X and how anyone within its limits is subjected to mutation, thus erasing any barrier between species. In their article they interpret «the shimmer» as a kind of parasite, but in this porous ecosystem also the expedition members are seen as parasites «who leech off Area X which is, in turn, parasitizing the landscape and the expedition members» which re-

sults in an «intensified entanglement that ultimately diffuses the distinction between hosts and parasites» (Westhäuser and Stuit, 2021: 10). Just as host and parasite are mixed, so are human and non-human creatures, animals and plants, showing that for an ecosystem to work in an appropriate way it is necessary to acknowledge how interconnected and interdependent its elements are. In this sense, we may wonder if by accepting «the shimmer» the biologist is also vindicating an ecocentric turn, or as Sladja Blazan questions: «So is the biologist's responsiveness and acceptance toward the idea of merging with her environment an evolutionary step forward?» (2021: 78).

6. CONCLUSION

The film illustrates to what extent human beings are embedded in the world that surrounds them. In the film we can see how some type of alien organism enters the scientists' bodies and mutates their genes to become something more-than-human. Through the transformations that the protagonists suffer, the audience can understand how our bodies are subjected to whatever that surrounds us, a concept that Stacy Alaimo in *Bodily Natures* refers to as trans-corporeality: «Imagining human corporeality as trans-corporeality, in which the human is always intermeshed with the more-than-human world, underlines the extent to which the substance of the human is ultimately inseparable from «the environment»» (Alaimo, 2010: 2). This embeddedness is patent throughout the film when we see how the characters are affected in different ways by the presence of «the shimmer», in some cases becoming a hybrid between human and non-human animal, or a human-shaped bush, and this way we can visually appreciate to what extent we are affected by what surrounds us.

The feeling of helplessness that is perceived in the protagonists' fears towards the unknown and towards how this unknown is mutating their bodies in unpredictable (and maybe unwanted) ways illustrates how vulnerable human life is. At the beginning of this article, it was mentioned how some recent science fiction, fantastic and horror productions focused on the idea of Nature taking revenge on humans because of their continuous exploitative practices. Although in *Annihilation* the mutations in Area X seem to be produced by some kind of alien organism, their effects cannot be explained as they defy the rules of our world and are usually described by the characters as «impossible», reinforcing the fantastic elements in the film. Some critics

have interpreted that what happens within «the shimmer» is a kind of cautionary tale regarding our anti-ecological behavior: «In a sense, Area X thus represents the ultimate revenge of Gaia (or humanity's unloved monsters), striking back and colonizing the human world in the same way that humans have possessed and exploited nature for centuries» (Ulstein, 2017: 86). In any case, the fantastic essence of this film highlights how despite our efforts to control and understand Nature, we are still oblivious to much of its processes and that is why we sometimes approach it with fear.

Personally, I prefer to think that the reading of this film should be made on more positive terms, acknowledging the need to move from anthropocentrism to ecocentrism in order to put an end to our historical detachment from the vegetal world and from Nature in general. In the film this shift in perspective comes in a traumatic way when the protagonists realize how fragile our exceptionalism is once we understand that we are part of a system that we are deteriorating ourselves. *Annihilation* shows in a very illustrative way how all the living forms on Earth are connected and interdependent and that may result as scary as the mutations in Area X because it is an open threat to our exceptionalism. The film proves that there is beauty in change if we are willing to accept it, but that change may result frightening, and even terrifying, because it implies that we are still evolving as species.

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