



Semiocide and Wasteocene in the Making: The Case of Adana Landfill

Eylül Tuğçe Alnıaçık Özyer¹ · Rumeysa Çavuş Peksöz²

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Abstract

In this article, in an attempt to analyze the crisis caused by the images of imported plastic waste, we consider the relationship between waste and its meaning in the case of geographical dislocation and de- and re-contextualization processes. Our analysis is guided by two recent concepts: The *Wasteocene* and *semiocide*. While the *Wasteocene* clarifies the signifying mechanisms of this period, *semiocide* allows us to understand which signs, under what conditions, are rendered invisible or disregardable. In coining the concept of *semiocide*, Ivar Puura emphasized two key features of the phenomenon. Following this distinction, which is based on (un) intentionality, *semiocide* refers either to a fully conscious, perhaps even hostile, attempt to destroy a semiotic configuration, or to a completely nonconscious, unaware process in which the unawareness itself is the source of the destruction. Although a more cultural approach dominates in Puura's assertion of the concept, the concept is applicable to human classification, interpretation and transformation of nature (Maran, 2013; Tønnessen et al., 2015). Focusing on the case of Adana as a recent example of a global waste crisis, our aim is to provide a (bio)semiotic framework for assessing how and under what conditions plastic materials become arbiters of environmental and political crises. With heaps of plastic garbage with foreign names on them, the discourse of recycling, restricted media coverage, public indignation, the struggles of environmentalist organizations, and the encounter of different spatio-temporalities, our study aims to convey an impoverished narrative of a city in the south of Türkiye.

Keywords Semiocide · Wasteocene · Environment

✉ Eylül Tuğçe Alnıaçık Özyer
eylulalniciak@gmail.com

¹ Department of Sociology, Turkish-German University, Istanbul, Türkiye

² Independent Researcher, Istanbul, Türkiye

Introduction

In this article, we look at the relationship between waste and its meaning in the case of geographical dislocation and de- and recontextualization processes to analyze the crisis caused by the images of imported plastic waste. What happens to waste when it travels from its homeland to another country? How does this dislocation affect the meaning of waste? What are the differences between *our* waste and *their* waste? How can we make sense of the survival of waste as microplastics in air, water, and living bodies as a new form of life and as a further dislocation? Focusing on the Adana case as a recent example of a global waste crisis, we aim to provide an eco/biosemiotic¹ framework for assessing how and under what conditions plastic packaging materials turn into arbiters of environmental and political crises. We argue that with the spatial shift from London to Adana, an ordinary plastic packaging material first loses its daily meaning as the sign either of a beloved vegetable, a personal memory of the last Christmas dinner, or further and in general, the ready-made culture of the contemporary world. When it is time to travel, it leaves the country under the guise of raw materials. From its relocation to Adana, until being recorded as an image, it is a meaningless scrap in a mountain of plastic garbage. Lastly, when it is photographed and made public by the media, it acquires a new set of meanings: it is now a sign of misgoverned waste management, global inequality, and capitalism as neocolonialism. And although Türkiye fails to recycle the imported plastic waste properly, the waste ‘recycles’ (or at least degrades) itself into microplastics, which penetrate all living and non-living beings, extending the semiotic crisis over *bios*.

Two recent concepts guide our case analysis: Wasteocene and semicide. Wasteocene, according to Marco Armiero, differs from the Anthropocene in that this concept implies “the ecologies of humans in their entanglements with the environment” and the “imposition of wasting relationships on subaltern human and more-than-human communities” (Armiero, 2021b). We shall analyze Adana’s plight as a recent example of Wasteocene in terms of the intermingling of the human body and waste (as nano- and microplastics) and of the power relations which transform Adana’s countryside into a *wasteland*. *Semicide*, according to Ivar Puura, is “[a] situation in which signs and stories that are significant for someone are destroyed because of someone else’s malevolence or carelessness, thereby stealing a part of the former’s identity” (Puura, 2013: 152). Our reception of this concept is multilayered. Firstly, the fact that plastics have very widespread use and gradually eliminate their alternatives. Second, remember the packaging material mentioned above, which loses its meaning when it is severed from its immediate surroundings. Individual plastic objects which make up the waste in Adana all undergo the process of semicide. Additionally, for the people living in the new wasteland, the ecology in which they live loses its meaning as it gets gradually covered in ‘foreign’ waste.² Finally, it causes disturbances in numer-

¹ For the definitions of the concepts ecosemiotics and biosemiotics, please see: Kull (1998). Semiotic ecology: different natures in the semiosphere. *Sign Systems Studies*, 26(1), 344–371.

² See: Shennum (2022). “It’s as if they’re poisoning us”: The Health Impacts of Plastic Recycling in Turkey. Human Rights Watch. Please refer especially to pages 48–54 where the report mentions the testimonies of the people living close to recycling centers.

ous distinctive semiotic cycles in the ecosystem. With heaps of plastic garbage with foreign names on them, the discourse of recycling, restricted media coverage, public indignation, and struggles of an environmentalist organization, our study aims to tell the story of an impoverished community in a southern city of Türkiye.

Foray into the New Wastelands

Photographs of plastic waste dumped on the roadside in the Turkish city of Adana caused public indignation in 2020. Earlier, China had prohibited all plastic waste import, and Türkiye replaced China as the importer of England and Europe's plastic waste. But because Türkiye lacked the recycling infrastructure to deal with the influx, most plastic was dumped, burned or buried in the ground, just as its predecessor China treated 70.6% of its waste (Wen et al., 2021). Eurostat data (2020) shows that, already in 2019, Türkiye became the first destination for waste exported from Europe, with a volume of around 11.4 million tons of waste, and almost half of these exports came from the UK. The waste trade was made possible by the labeling of goods as raw materials. However, it was not possible to obtain first-hand information on the fate of the materials arriving in the country. Following the initiative of several international non-governmental organizations and visits to the regions concerned, it was revealed that the issue was not only the high volume of waste imports but also the lack of proper recycling operational practices (Gündoğdu, 2022b). Specific to the Adana case, some examples of inappropriate handling include illegal treatments such as incineration of waste, and dumping contaminated plastics in the soil, while these waste centers are located near fertile farmlands.

BBC Correspondent Angus Crawford, who covered this waste crisis first in 2020 and then again in 2021, exposed the truth behind Türkiye's import of plastic waste from England in a video in which he shows how the plastic garbage which was meant to be recycled in Türkiye ended up in plastic mountains in Türkiye's south.

Our investigation in March 2020 in the southern Turkish city of Adana found that although plastic that had been carefully sorted and separated by households in the UK was being sent to Turkey for recycling, it was, instead being fly tipped and burned (Crawford 2021).

Crawford reports that the UK sent "more than 200,000 tonnes" of plastic to Türkiye in 2020. In other words, the UK sent 30 shipping containers of plastic to Türkiye every day throughout the year. Crawford tells us that as of 2 July 2021, Türkiye was planning to stop nearly all plastic waste imports.³

³ Public outrage that was caused by the photographs of foreign waste seems to have been effective on the decision of the Turkish government. However, the new regulation, initially introduced as a ban on polythene, was withdrawn before it could be implemented. As a next step, the Ministry of Environment and Urbanization circular dated 16 July 2021 introduced new obligations to keep waste under control, stipulating 99% purity of waste, namely not contaminated, and stressing that controls will be very strict. Nevertheless, the credibility of this step is undermined by the fact that the crisis does not derive from a lack of regulation, but from encounters that occur in the seams and blurred spaces of the regulations.

The plastic waste crisis in Adana received further attention when Bloomberg's Kit Chellel and Wojciecha Moskwa covered the issue in a lengthy piece. In "A Plastic Bag's 2000-Mile Journey Shows the Messy Truth About Recycling", the authors report the adventures of Tesco plastic bags to which they attached GPS trackers. Starting their journey in London and stopping by Poland briefly, Tesco plastic bags end up in Adana as they arrive at their destination. A GPS tracker on one of the bags pointed a local Bloomberg reporter to an "unmarked warehouse" outside of which "bales of mixed plastic were stacked haphazardly." The manager of the recycling company that owns the warehouse complained about the low quality of the latest shipment, but "he would recycle what he could," – his guess being 90% of the plastics, "an ambitious estimate," according to the Bloomberg article. The authors report that when they reached the same manager by phone, he "denied accepting the exports and said his company only dealt with Turkish domestic waste." "Whatever the outcome," the authors conclude, "it seemed unlikely the Tesco bag would make its way back into the closed recycling loop advertised in bold letters on the product itself: 'Reuse, Repeat'" (Chellel & Moskwa, 2022).

Adana is not a solitary case, nor is the crisis a chance failure. It is strictly a part of the global waste crisis. Here is how the story goes on the macro level: high-income countries produce too much plastic waste—which also contains many harmful toxic materials – that needs to be managed. In fact, the transfer of waste from the global north to the global south will not surprise anyone, and even among northern countries there are examples of such environmental injustice (Reno, 2011). While there are also examples of domestic intervention in plastic waste management, the export option has been a rising tendency, especially since the late 1990s (Wen et al., 2021). But the same countries need more infrastructure to recycle their plastic scrap. So, they export their waste to mostly low-income countries in the hope that their waste gets appropriately recycled. The more fundamental motivation, however, is the impulse to hide from view what has now become waste (Gregson & Crang, 2010). In line with neoliberal governmentality that penetrates down to the molecular level, it is assumed that appropriate technologies will be developed to manage what needs to be hidden and eliminated. Underlining that waste has become a management issue, Reno adds: "The role that waste management infrastructure plays is typically absent: waste management makes things disappear by moving them elsewhere and, like most infrastructures of liberal governance, waste management is considered most successful to the extent that its workings and flows remain invisible" (2015: 561). In most cases, the receiving country's capacity for recycling trash needs to be increased to deal with the influx of the UK's waste. In the Adana case, the coverage of international and local media did not surprise those familiar with the crisis, as the insufficiency of Türkiye's (and other waste-importing countries) recycling industry is an open secret. Critics of the practice argue that "international trade in toxic waste provides poorer countries needed economic resources" and "it results in richer people displacing environmental costs onto poorer people" (Kubal, 2012: 927). A 2023 report by International Pollutants Elimination Network (IPEN) warns that the official numbers do not honestly reflect the actual magnitude due to the risks involved in waste trade. But the report clarifies that the problem is far from being under control, and the plastics of high-income countries pose environmental and health threats to poor people

worldwide (Karlsson et al., 2023: 11). The heaps of garbage in Adana are part of this global story of a new kind of colonialism.

In addition to this chaotic scene, what is significant from a eco/biosemiotic point of view, is the destruction to the semiotic web of the ecosystem as a result of the dislocation and improper storage of waste in certain locations. Although geographical dislocation may be a short-term solution when the accumulation of waste is very intense, in the long run it leads to a phenomenon that we currently call environmental pollution or ecological crisis. Waste accumulation that disrupts and manipulates the functioning of the vital semiotic cycles, i.e. functional cycles (Uexküll, 1934), as it smothers the soil, grass, and flowers, and disrupts the odorsphere of the affected area. Furthermore, as waste breaks down into micro- and nanoplastics; and dissolves into air, water, and earth, the corruption of semiotic cycles extends across the entire planet.

Waste as an Epochal Symptom

Rubbish, garbage, scrap, junk, and several other names. We have so far used some of these words to refer to the plastic material that has been coating the rural landscape in Adana for several years. If you call something with one of these words, you mean it is unwanted, in excess, extra, left over, useless, and worthless. Mary Douglas, however, teaches us in *Purity and Danger* (2001) that “dirtiness” is not an inherent quality of a thing but a temporary state of being acquired according to its position within or without a system. “Dirt” can be defined only as a “matter out of place” (Douglas, 2001: 36). What makes dirt what it is, is its failure to fit within a particular structure or system.⁴ According to Joshua Reno, this is a structural-symbolic account of waste, according to which “waste is a mirror of culture” (Reno, 2015: 3; Reno, 2014). While the ideas that this account has put forward “remain fundamental for approaches to waste in the human sciences,” Reno states that a new approach to waste called “discard studies” is gradually gaining ground. This approach focuses on “the productive afterlife of waste,” “which has effects in the world,” instead of taking waste as just “a symptom of culture.” The movement here is from a plastic packaging material thrown into a dustbin as useless junk to a thing with the power to affect “local and global political disputes” (Reno, 2015: 55). This dramatic shift of axis in waste studies resonates with the change in the meaning of plastic waste in its journey from London to Adana. According to the press releases covered in the previous subsection, Londoners were careful to see their plastic waste off to a peaceful afterlife as an ideally recycled and reincarnated material. But on their way to Türkiye, they first got stuck in limbo as they waited for two months in Poland, and then they failed to get

⁴ “If we can abstract pathogenicity and hygiene from our notion of dirt, we are left with the old definition of dirt as matter out of place. This is a very suggestive approach. It implies two conditions: a set of ordered relations and a contravention of that order. Dirt then, is never a unique, isolated event. Where there is dirt there is system. Dirt is the by-product of a systematic ordering and classification of matter, in so far as ordering involves rejecting inappropriate elements. This idea of dirt takes us straight into the field of symbolism and promises a link-up with more obviously symbolic systems of purity” (Douglas, 2001:36–37).

recycled. Instead, they created local and global political disputes and environmental and health risks as they dissolved into the earth, air, and water as microplastics.

At stake here are multiple afterlives of an ordinary piece of plastic garbage from London. And the diversity of afterlives, from being recycled to ending up in a mountain of plastic in a remote landscape, makes it necessary to account for the complex relations that today's waste management brings about. Waste, in this new account, is not merely an unwanted object but an active agent which influences the environment, humans, and more-than-human communities. It is not an end product of a waste process. Still, it plays a significant role in wasting relationships that bring together human and more-than-human communities, the environment, and waste. This is Marco Armiero's main argument concerning waste and the basis for his concept of "Wasteocene." Armiero is careful to emphasize in "The Case for the Wasteocene" (2021a) that the difference between, on one hand, his understanding of waste as "wasting relationships" and, on the other hand, the relationality between subject and "stuff" in Douglas's theory. For Armiero, "wasting implies a power relationship that not only transforms something into an unwanted residue of production but also, in doing so, produces wasted people and places" (2021a: 425). In Armiero's account of waste, that waste is "matter out of place" matters less than the fact that "places (including humans and nonhumans) are produced through the power of classifying who and what is disposable and who and what is not" (2021a: 425). Waste as wasting relationship, according to Armiero, is "the planetary mark of our new epoch" (2021b: 2). Hence "[W]asteocene is not about waste as an object" but as "socio-ecological relations creating wasted people and places" (Armiero, 2021b: 10). With this '-cene' concept *à la* 'Anthropocene,' Armiero spotlights waste as a wasting relationship to be the significant impact factor on our planet. On the micro scale, Adana is, without doubt, one of many manifestations of the Wasteocene with its wasted humans and landscapes. However, with its afterlife as microplastics, waste in Adana is of planetary importance, as it penetrates air, water, and living bodies.

"Matter out of place" is a fitting definition for our case, only not in the sense that Douglas intended. Waste, in our case of waste trade, is, among other things, a "matter out of [its] place," but it differs from what Douglas says because it remains within a system's boundaries. Our waste is outside of London due to the global economic-political reasons mentioned earlier. Although London's waste ending up in a remote part of a foreign country is not the ideal scenario in terms of waste management, a rather down-to-earth look at how things work (like in the Bloomberg story tracing the journey of Tesco plastic bag) reveals that this could not have worked out in another way for Türkiye. It also shows that waste trade is a way to move the problem elsewhere. Therefore, we retain the spatiality in Douglas's definition but, at the same time, sever its ties to the human subject to redefine it geographically within its relation to global capitalism. Our redefinition of Douglas's "matter out of place" resonates with David Harvey's well-known geographical critique of capitalism: "Capitalism never solves its problems, it simply moves them around geographically" (Harvey, 2010). Exporting waste to countries where regulations are not as strictly observed as in England is a way to move the plastic waste crisis around. Exported waste is a "matter out of place" not because it does not fit within a particular system

but because its geographical dislocation created a wasting relationship that wasted humans and landscapes of a faraway land.

Waste or Resource: A Failed Alchemical Treatment of Plastic

In addition to the undesirable and excluded aspects, the fact that there are examples of waste with positive meanings renders the analyses more multifaceted (Reno, 2014). That something turns into waste within a relational network indicates no fixed category of waste while revealing other usages and values of the materials. Moore (2012) stresses this multi-layeredness when she states that waste is to be considered a *parallax object*. By doing so, waste can reveal the creative materiality of life. Myra Hird emphasizes the epistemological aspect of waste, adding: “Waste is an inherently ambiguous linguistic signifier: anything and everything can become waste, and things can simultaneously be and not be waste, depending on the perceiver” (2012: 454). However, the connotation of “perceiver” here should not be considered as a self-evident, constitutive subject category, rather as a bundle of relations, and as such, the fluid, contingent, interconnected texture of waste that is prone to change is uncovered. These ambiguous intersections are amplified in a network of relationships in which the promise of global economic growth increases the number of disposable things, which can include a wide variety of “fleeting presences” (Kennedy, 2007: xi). Inevitably, assemblages emerge that manifest as crises within asymmetrical power relations when the corporeality of relations is ignored in an epoch that employs these disposable objects and builds the basis of the primary form of relationship on ephemerality. Plastic would appear to possess qualities that are compatible with this ephemerality in many layers.

Plastic is a substance formed by polymerizing monomers composed of organic and inorganic elements with the aid of a catalyst. The usage area and amount of plastic, which dates back to the production of Bakelite at the beginning of the 20th century, which is considered to be the ancestor of modern plastic, has increased tremendously, especially in the last 70 years (Gündoğdu, 2022b). Ease of use, cheapness, durability, and lightness have influenced many different industries to prefer plastics, so much so that in 2019, annual plastic consumption reached 390 million tons, and this amount is projected to triple by 2060 if no changes are made in lifestyles (OECD, 2022b). In this whole picture, despite the wide spectrum, the most extensive area of use is the packaging industry.

Following the realization that the use of plastic waste is increasing at an environmentally damaging rate, how to deal with it has become a global concern (EUR-Lex, 2019). In this context, recycling, which we have recently seen more frequently at the forefront of policy-making mechanisms, is also one of the promoted strategies for the necessary and urgent treatment of plastic waste. The reality is that the majority of plastics consumed are not biodegradable or easily recyclable, in contrast to the discourse on recycling that we increasingly encounter as a prominent component of sustainability debates and as one of the options to individually address the waste problems derived from consumption habits (Geyer et al., 2017). The fact that most of the monomers used in the production of plastics are fossil hydrocarbons, combined

with inadequate infrastructure, has meant that the proportion of recycled plastics has remained at 9%. The accumulation of plastics in nature has increased at varying rates over time (OECD, 2022a). The damage caused by the accumulation of plastic waste to the biosemiotic cycles of living organisms is increasingly becoming visible, particularly in marine and oceans. Many marine organisms code plastic wastes as food or prey. However, since their digestive systems cannot digest plastics, their plastic consumption results in death. In addition, entanglement in plastics and injuries pose serious dangers (IUCN, November 2021).

The recycling of materials evokes an ancient and mystical practice; a sort of alchemy where materials that have become redundant or harmful are expected to miraculously transform into raw materials for the (re)production process after appropriate, “alchemical” interventions. We now call this alchemy recycling. “The alchemical principle consists in transforming the worthless into the supposedly valuable according to exclusive standards” (Selke, 2020: 80). It is miraculous because even though there has been a considerable technological breakthrough in the field of recycling, there is still a cycle in which the waste of waste persists. The miracle itself does not arise from the inherent mighty power of recycling since there is still a very limited amount of recycling going on. So, what we are witnessing is a kind of vanishing illusion. In a representative “parliament of things” (Latour, 1993), the transformation of qualitative properties into quantitative denotations is not solely a process with economic outputs but an activity with implications for the entire semiotic arrangement. While the oldest examples of recycling can be traced back hundreds of years, the current form is characterized by a focus on the risks and concerns arising from the increasing accumulation of a given material. In the past, recycling activities were driven by material scarcity, emergency situations, or more political reasons, but with the green movement’s focus on waste, especially since the 1970s, a new mobilization has occurred, and the subsequent market has emerged.

Following the outrageous images from Adana, Greenpeace UK and Germany, in collaboration with Microplastic Research Group, collected samples from 5 different landfill sites in Adana to investigate the damage of this failure and found that the samples contained highly toxic pollutants. These pollutants included over 10 different types of polycyclic aromatic hydrocarbons (PAH), 12 different polychlorinated biphenyls (PCB), 6 different dioxin-like PCBs, 17 different PCDD/F (Dioxin/Furan) and high levels of heavy metals and metalloids (Gündoğdu, 2022a). PAHs are known carcinogens, mutagens, and teratogens and therefore need to be strictly regulated in the waste process (Yang et al., 2021). They are known to be retained in fatty tissue for long periods when ingested by mammals and are associated with high mortality. Although PCBs are considered comparatively less toxic, they accumulate in the system of living organisms due to their resilient structure and become more toxic in the long term, which is a major environmental problem. Exposure can also occur through the food chain, although it is mainly spread through contaminated water and air. Dioxin and furan, which are by-products of the incineration of plastics, also have high toxicity and are notorious for potentially damaging the regulatory systems of living organisms.

Beyond the accumulation of plastics, and more specifically micro- (<5 mm) and nano-plastics (< 1 µm), in the bodies of living organisms is one of the main concerns;

plastic waste, much like nuclear waste, is embedded in a continuum that is beyond human temporality. Plastics at these different scales directly interfere with the use of signs in the semiotic cycles of living organisms. However, precisely because of these scale differences, it is extremely challenging to trace and to catalogue them, yet, recent studies have shown that microplastics act as powerful “endocrine disrupting chemicals” (EDCs), and have drawn up a list of the majors types. In the guide issued by the Endocrine Society and IPEN, it is stressed that EDCs in plastics imitate or inhibit many vital, regulatory hormonal processes (Flaws et. al., 2020).

In the case of plastic waste, the emphasis on spatiality, which is a crucial but partial dimension of waste studies, needs to be supplemented by another layer. Temporality, which will also underpin the (bio)semiotic approach, is this new layer that needs to be added. The fact that the temporal and spatial characteristics of plastics are not appropriately taken into account, or are considered ignorable qualities, has a serious destructive power due to their ability to mutate the specific qualities of the organisms with which they interact. In this context, the contribution of the biosemiotic approach is that it requires thinking together with the temporality and spatiality of (in)organic entities. As von Uexküll (1934) renders the semiotic worlds of living organisms perceptible and effectible, he displays his commitment to Kantian philosophy by accentuating the subjective character of time and space. While the *umwelten* of living beings is underlined by emphasizing their dynamic and specific character with internal and external components, in Uexküll’s view, it is not time and space that render life and the subject possible, but rather it is life that permits us to speak of time and space (1934: 10). We refrain from attributing life or death to plastics when we refer to the different temporalities of plastics and living organisms. However, what we consider essential is that the degradation time of plastics in nature is much longer than the life expectancy of many living organisms. Thus, the use of plastics and the possibility of micro and nano versions of those substances interacting with organisms may span generations. In this regard, we consider this temporal scale change and the potential impact on generations of living organisms to be crucial in the plastic waste debate. Then among other things, when the subjective character of time is not restricted to living beings but is extended to the entire semiosphere, what kind of temporality pattern does one encounter?

In a Search of Lost Signs: Manifold Semiocidal Journey

When Ivar Puura coined the term *semiocide*, he stressed two main distinguishing criteria of the phenomenon. According to this distinction, based on (un)intentionality, semiocide is either a fully conscious, perhaps even hostile, attempt to destroy a semiotic configuration or a completely nonconscious, unawares process in which unawareness is itself the cause of destruction. Although a more cultural approach is dominant in Puura’s assertion of the concept, it can be applied to human classification, interpretation, and transformation of nature (Maran, 2013; Tønnessen et al., 2015).

Kalevi Kull, in parallel with this claim, which posits destruction as a process that may also occur entirely unwittingly, argues that a complete lack of understanding of

semiotic mechanisms is at the root of many ecological problems (1998: 346). Appreciating semiotic richness means acknowledging that all living organisms are part of communicative systems (ecosystems) and should be responsive to produce and carry meanings, even though the perception and interpretation of different types of semiosis are not always directly conceivable through language-based sign systems. Indeed, “the world begins to signify before anyone knows what it signifies; the signified is given without being known” (Lévi-Strauss quoted by Deleuze and Guattari, 2004: 124). In this context, our knowledge of nature is not objective but a process of interpretation and translation. In this way, Kull distinguishes between multiple natures regarding the involvement of human interpretive activity: Zero, First, Second, and Third (1998: 355). Zero nature is outside the *umwelt* and therefore objective. First nature refers to a filtering process by which humans identify nature as an entity, while Second nature implies this entities transformation as a result of a more material interpretation. Finally, Third Nature is the interpretation of interpretation and is purely theoretical. In this diagram the natures are neither completely isolated nor do they form a whole. Rather they are layered and fragmented.⁵

Recognition and action are parallel processes in the interdependence and coexistence of these multilayered natures (Kull, 1998: 352). Each perceptual process involves a partial act of control, as it proceeds through operations of exclusion and inclusion of particular things and requires a machinist in the Uexküllian sense (1934). Similarly, an act of perception is first necessary for control. The concurrence of perception and control extends to the process of decontextualization. What has been selected and extracted from a *chaotic* wholeness is distinguished and transformed into parts in order to form new syntheses and connections in the subsequent stages. This synthetic activity provides the basis for the remodeling in the following phases. One could claim that this process, in which Kull emphasizes that the relationship humans establish with nature also allows them to divide species into ‘useful’ and ‘dangerous’, extends to the entire relationship established with nature.

When it comes to influence and impact on nature, decontextualization is employed as a decisive tool (Maran & Kull, 2014: 45). Decontextualization leads to detaching a sign from the context (biocoenosis), upon its recognition. However, without any additional attention, the specialized interaction of the sign may disappear involuntarily in a new context. As can be seen, decontextualization is a long-standing key component of transformation and translation. In fact, the transformative impact of humans over nature is directly related to this cognitive manipulation. In the process of uncovering and transforming contexts, signs are subjected to an interpretation;

⁵ There is a parallelism between this diagram drawn by Kull and the *regime of signs* put forward by Deleuze and Guattari resulting in the circulation of signs. Deleuze and Guattari argue that a regime of signs has four components; generative, transformational, diagrammatic and machinic. “(1) the generative component: the study of concrete mixed semiotics; their mixtures and variations. (2) The transformational component: the study of pure semiotics; their transformations-translations and the creation of new semiotics. (3) The diagrammatic component: the study of abstract machines, from the standpoint of semiotically unformed matters in relation to physically unformed matters. (4) The machinic component: the study of the assemblages that effectuate abstract machines; simultaneously semiotizing matters of expression and physicalizing matters of content.” (2004: 162).

some are overlooked, some may serve as models for structuring the next context, and some are ignored altogether.

The power of decontextualization and remodeling processes in the extraction of fossil resources from the semiotic bond, is remarkable. In this goal-oriented, profit-maximizing model of relationship, fossil fuels, which are the basis of the production of plastics, resources that are first made “useful” are then open to reevaluation as “dangerous,” and vice versa. It is only through such a process that the pile of plastic, which has undeniably accumulated and became hazardous, can be treated as a resource. However, since the appropriate conditions for such a miraculous recycling operation have not been established, we encounter examples where the remaining plastics are left as a heap on agricultural land or simply burned. Here we encounter a semiocide, where the semiotic networks and the “consortial system of nature” (Kull, 2010) are ignored.

First of all, such an increase in the production and consumption of plastics, in other words, the discarding of various material uses, is reminiscent of a semiocidal intervention, although not in the full sense. It is obvious that the fact that it facilitates many areas of late-modern life and is economically affordable strengthens the level of uniform production and consumption. Indeed, thanks to this convenience, it has generated and extended numerous new markets that have been dependent on it since birth and have become the provider of new semiotic cycles. Decontextualization and recontextualization with the acknowledgment of an immanent world conception are among the fundamental components of semiotic cycles, transformations, and entanglement. However, when the human semiosphere is analyzed in terms of political economy, the prevalence of translation operations in which nature is coded as a resource, notably from the early capitalist period onwards, becomes evident (Moore, 2015). The codification of nature as a resource is melted into the qualitative order of resemblances (*representation*) and the quantitative order of equivalencies (*exchange*) (see Deleuze, 1995) of the semiotic qualities of inhumanity.⁶ When re/decoding that operates through these networks of representation, and exchange is reorganized in accordance with axiomatic modeling (Deleuze & Guattari, 2000), things are rendered fully substitutable.⁷

At this point, we are approaching similar cognitive components which are also included in the concept of semiocide, namely, malevolence and carelessness. Uslu (2020), in his work, which is an introduction to the concept of semiocide, emphasizes how memory works and uncovers that memory is not a surface on which the past is directly transferred and recorded. Rather, memory is a process of reinterpretation and reconstruction of the past in the present and has temporality due to its dynamic nature. Parallel to this scheme, he also emphasizes that forgetting is more than a simple inability to remember and reveals the volitional side of the issue. In this context, carelessness (or indifference, as Uslu [2020] emphasizes) is not interpreted as a slight oversight or lack of attention.

⁶ This conception of inhumanity implies also the characteristics of human beings that are considered inhuman (*unmensch*) in the Stirnerian sense (Stirner, 1986).

⁷ It is fertile to contemplate this process together with Peircean “intuitive” and “abstractive” awareness (Wheeler, 2019).

In this context, listening to Hird's emphasis on the relationship between landfills and forgetting will render the discussion more comprehensible (2013). Hird claims that landfills are "ubiquitous places of forgetting," yet she adds that this forgetting is only possible through "legislative decision, regulative decree, risk models, community accession, and engineering practice" (107). The oblivion in/through the landfills, and the shrines of the waste world, reveals the selective character of remembrance, as Uslu points out. Not all places are randomly turned into landfill sites (Rathje & Murphy, 1992), nor is every part of the semiosphere taken into account. Places that have been turned into landfill are treated as if they are utterly deserted, places where all life has long since died out (Reno, 2015). Signs of nature-cultural vitality are rendered illegible and thoroughly disposable in accordance with priorities.

Isolating Adana from the waste trade network it is involved in, i.e. from the neoliberal management agency, the first observation we have is that the region, in particular, has been inhabited by multiple civilizations for thousands of years. However, as basic corollaries of the aforementioned "management" procedures, the semiotic significations that make the city distinctive and have long since been disappearing have been thoroughly disregarded, and its differences have only been destined to be melted in the crucible of similarity. In a nutshell, the province of Adana is not an abandoned place where there is no life; on the contrary, it is one of the most populous cities in the country, located in the Çukurova region with fertile agricultural lands. In the journey of plastic thrown away on roadsides, agricultural soils, or burned nearby habitats after failed management (due to economic reasons), we witness that life in this region is discarded at every stratum. The signs of the historical, social and environmental semiotic cycles of this city on the Mediterranean coast have become unrecognizable for the sake of waste/resource trade, and it has turned into one of the preferential destinations due to its location and industrial infrastructure. The disregard for the inhabitants' well-being and their relationship with the soil and air is evident in the fact that these dumping activities have continued for a long time, despite the complaints of the local population⁸. When we listen to their complaints, one of the central concerns is that the waste is brought in from outside. The accent here on "outside" or "their" waste is noteworthy. In the interviews carried out, the fact that the waste is brought in from outside causes at least as much frustration as the piles themselves and is even interpreted as a betrayal⁹. While neoliberal practices in the transnational waste trade leave control to the free market, the emphasis on national borders indicates a crucial tension, which manifests itself in the propensity to redraw national borders. Residents in Adana are resisting the transformation of their backyards into landfills¹⁰.

⁸ See here for an example where following complaints, statements that the necessary clean-ups had been carried out were denied and complaints continued (Ünlü, 2022) : <https://yesilgazete.org/adanadaki-cop-aldatmacasi-bitmiyor-ne-temizlendi-ne-de-temizleme-yetiyor/>.

⁹ The television report that sparked the views of people living in the region. Please see: https://www.youtube.com/watch?v=hw6KR2vj_bc&t=0s.

¹⁰ For the objections and demonstrations of organizations including The Chamber of Veterinary Surgeons Adana, Adana Bar Association, The Medical Chamber Adana, The Chamber of Architects Adana, please see here: <https://adanabarasu.org.tr/tr/barodan-haberler/5-haziran-dunya-cevre-gunu-dolayisiyla-avrupadan-ithal-edilen-coplerin-adana-da-kontrolsuz-ve-kanunsuzca-etrafa-sacilmaya-devam-edilmesini-baromuzun-da-aralarinda-oldugu-sivil-toplum-kuruluslari-basin-aciklamasi-ve-eyleme-protesto-etti>.

This resistance may be fueled by indifference at the governmental level while environmental damage has increased enormously and individual initiatives to reduce it are being promoted (Reno, 2011: 26). But what is more striking for us is that, in the capitalist axiom, market-based mechanisms tend to facilitate this decontextualization wherever possible. The way in which and the conditions under which the new raw materials, the waste of the old, favored by state and bank subsidies, are finally disposed of, according to this axiom, depend fundamentally on spatial and temporal decompositions. Deleuze and Guattari write,

Everything in the system is insane: this is because the capitalist machine thrives on decoded and deterritorialized flows; it decodes and deterritorializes them still more, but while causing them to pass into an axiomatic apparatus that combines them, and at the points of combination produces pseudo codes and artificial reterritorializations.[...] The great mutant flow of capital is pure deterritorialization, but it performs an equivalent reterritorialization when converted into a reflux of means of payment (2000: 374).

This demolition in this anthropomorphic stratum is accompanied by a process in another stratum, which is exposed in the samples collected from the landfills. As the samples taken from the landfills of Adana indicate, material vitality persists on other scales and in other forms that cannot be immediately perceived by human cognitive endowments. Prostheses, such as new measuring instruments, are required for detection but are still insufficient (especially for nanoplastic measurements). The current situation is more than a simple transformation or interpretation. Here the interpretive activity taking place at each level is interrupted by “bad signaling,” and biological life is being threatened. Since misinterpretation in nature is far more elusive than in abstract awareness, Wheeler proposes death as a criterion (2019: 193). In this way, correct interpretation, namely the truth, undoubtedly has a crucial and vital role to fulfill, and since the layers (or Natures, as Kull [1998] puts it) are interwoven, they continue to interact with each other in a cybernetic feedback mechanism. Therefore, the capitalist axiomatic model of rendering everything substitutable, i.e. ignoring the singularities of semiotic relations, leads to semiocide on several levels. We see that plastics, which mix into water, air, and soil, destroying many semiotic cycles in living bodies, have not disappeared, but the signs that enable direct perception have been destroyed. Emphasizing the primordial significance of the difference in the relationship, Puura states,

The diversity of nature is overwhelming. Every living creature, being part of a greater whole, carries in itself memories of billions of years of evolution and embodies its own long and still largely unknown story of origin. By wholesale replacement of primeval nature with artificial environments, it is not only nature in the biological sense that is lost. At the hands of humans, millions of stories with billions of relations and variations perish. The rich signscape of nature is replaced by something much poorer. It is not an exaggeration to call this process semiocide. (2013: 152)

Conclusion

Going back to Puura's definition, he mentions the destruction of signs or stories that are significant to someone. But how should we evaluate the destruction of a sign or story that is not yet important to someone? In other words, how should we analyze the destruction of living organisms, lives, and relationships that are not adequately expressed in narratives? Likewise, Uslu points toward the visibility problem of a successful semiocide for two reasons. First, how is it possible to trace the signs and sign systems if they have been completely destroyed? Secondly, if signs can be tracked, can it be called a semiocide (Uslu, 2020: 233)? In the context of this article, "pollution," namely massive waste, takes on an explanatory aspect. Posner argues that "pollution does not become evident until it is almost too late to repair the damage" (2000: 292). That means that the wasting process has already started, and after accumulation, pollution occurs. It may be possible to formulate it as waste implies a difference of degree, while pollution is a difference of kind. This is, therefore, the irreversible disappearance of the contingent state of waste. In other words, the limits of recontextualization are reached, revealing the level at which control is in the hands of the matter. Reno refers to massive waste, i.e. pollution, as a "zombie model" (2014), an invasive phenomenon that penetrates, parasitizing and threatening every cycle similar to "bad signaling system" (Wheeler, 2019: 190). This kind of semiocide operates as the destruction of the difference and the "functional cycles" involved in the contrapuntal rhythm of life, and manifests itself through the ruptures it generates in *umwelten*.

In the "ecosystem" (Maran, 2021), i.e. in the multi-layered, interwoven nature-cultural systems, the impossibility of isolating relations calls for life and death simultaneously. However, "the sheer volume of commodities, and the hyperconsumptive necessity of junking them to make room for new ones, conceals the vitality of matter" (Bennett, 2010: 5). The fluid movement that we have tried to incarnate here through the province of Adana consists in following the *point de capiton* that allow us to understand cybernetic networks. These points divulge the patterns of capitalism, which is an ecological model as well as an economic one, since it is an instrument for interpreting and regulating nature. In this context, the concept of Wasteocene uncovers that the temporal-spatial fractures caused by the basic engine of this system are not regional, but also suggests that we keep in mind the historicity of this situation, thus illuminating the ethical-epistemological-ontological aspect of the phenomenon.

We would like to conclude by arguing that the practice of semiocide, which we are attempting to illustrate here through Adana, and which we would suggest is a far more global and socio-ecological issue, is an exemplary case of "slow violence", as Rob Nixon puts it (2011). He notes that "the insidious working of slow violence derive largely from the unequal attention given to spectacular and unspectacular time" (2011: 6). The temporality of plastic, one of the protagonists of this case in which the unique relationships that all the inhabitants of a region, human and non-human alike, have with the earth, air, matter, in short, with life, are ignored or discarded. The most striking, or to put it more bluntly, the most easily comprehensible feature of this malevolent case is the transfiguration of a living region into a wasteland within the transnational waste trade network. However, this macro-level semiocide is accompa-

nied by a micro-level semiocide that operates in the form of long-term damage caused by plastic waste to living organisms. The latter requires a completely different temporal configuration and is not simple enough to conceive intuitively. The hindrance that prevents us from labelling such situations, that is harder to comprehend, as disasters, calamity or catastrophe; and the factor that facilitates the actualization of destruction, is the intensive structure of the temporal horizon. We observe that the spatio-temporal properties of fossils, living organisms, or economic-ecological models, which one tries to translate into each other in prevailing narratives, do not coincide. However, interactions, communications and interpretations are constantly taking place in a semiosphere built on continuity. Therefore “bridging the gap between such deeply experienced biosemiotic systems and semiocidal erasures of other and different stories will require a very particular consciousness of semiotic commitments” (Wheeler, 2019: 197).¹¹ The prevailing narrative, on the contrary, ignores differences and imposes uniform temporal and spatial arrangements.

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Declarations

Competing Interests The authors have no financial or proprietary interests in any material discussed in this article.

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¹¹ In parallel with this formulation, we find the concept of *response-ability* (Haraway, 2016; Despret, 2004; Pali & Aertsen, 2021) insightful as a proposal to establish a different narrative. When talking about a vulnerable and wounded world (Haraway, 2016), the fact that the existence of the inhabitants of this world, the differences in their expressions, and their unique qualities are not adequately and appropriately made audible, visible and palpable constitutes one of the arteries of the concept of response-ability. The concept shares the ethical and epistemological concerns of biosemiotics.

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