Digital Press Social Sciences and Humanities

Hauntology of Trash in Environmental Education

Rangga Kala Mahaswa, Gloria Bayu Nusa Prayuda and Luthfi Baihaqi Riziq

The 11th International Conference on Nusantara Philosophy

Rangga Kala Mahaswa, Taufiqurrahman (eds)

https://doi.org/10.29037/digitalpress.411462

Hauntology of Trash in Environmental Education

Rangga Kala Mahaswa*, Gloria Bayu Nusa Prayuda, and Luthfi Baihaqi Riziq

Faculty of Philosophy, Universitas Gadjah Mada, Indonesia

*e-mail: mahaswa@ugm.ac.id

Abstract

Industrialisation in third-world countries has brought about developmentalism that persists in their societal dynamics. Third-world countries have been producers of raw natural resources, yet there are massive consumers of processed products from first-world countries. This exploitation of production and consumption affected how third-world countries, especially Indonesia, perceived environmental education (EE). Massive consumption has led to massive trash and waste; currently, environmental policy in Indonesia focuses solely on the massive trash problem, which is reflected in the country's education policies. The problem of trash and its management haunts every effort to commence EE. Trash management has become one of the variables used to measure a school's capability to manage the environment. The variable then becomes a ghost, a spectre of terror, that haunts school policies, including planning, managing, and resolving the trash problem to achieve the "Adiwiyata" title or the like. Admittedly, trash induces terror when it experiences a change in a domain from school to other institutions to the public. It is indubitable that trash management is not only a matter of education but also of public policy and facilities. However, as it stands, trash is implicitly only seen as a means to a prestigious identity: schools flocking to orient themselves towards SDGs, birthing environmental/ecological heroes, and equipping themselves with jargon like "green", "clean", and "eco". Ambiguity persists in commencing EE, either as an obligation or as a mere ceremonial event to celebrate the narratives of SDGs. Therefore, the implementation of SDGs is always haunted by trash, starting from when it is present at school until when it is absent. In the end, is the ideal trash management EE to teach possible amidst the hegemony of the SDGs narrative? In this paper, we argue that using hauntology to analyse the trash problem would reveal gaps in practising EE between the global North and the global South, where a history of developmentalism and consumerism places vast environmental issues, such as the planetary approach and conservation, seemingly too far to reach.

Keywords

spectrality, sustainable agenda, anthropogenic waste, epistemic fractal.

1 Introduction

In *Postscript on the Societies of Control* (1999), Gilles Deleuze argues that capitalism is geographically separated into first-world capitalism and third-world capitalism. First-world Capitalism is characterised by the absence of involvement in production, more about regulating the flow of surplus, signified by stocks, and offering services instead of products. The third world still maintains the old way of buying raw materials and selling finished products (Deleuze, 1999, p. 4). The levels of production, types of products capitalism offers, and geographical conditions, therefore, separate the first and third worlds. The term "Third World" itself has become bad connotative nowadays: it signified poor and developing countries starting in the Cold War period (Wolf-Phillips, 1987, p. 1313). The connotations "poor" and "developing" are a kind of stigma. Many countries have tried to overcome it to reach the ultimate stage: becoming a developed country using economic or educational policies. Indonesia is one of the many countries in the Global South that has attempted to become a developed country characterised by rapid economic growth.

For the past two decades, we have found policies related to developmentalism, such as Susilo Bambang Yudhoyono's mineral banning in 2014 and Jokowi's attempt to modernise Indonesia's physical infrastructure (Warburton, 2018, p. 358-359). Developmentalism often refers to mass industrialisation, and all social aspects should always be economically oriented. This developmental ambition also clouds up the education sector. Education is intended to prepare the next generation for the future. Children are

projected to fulfil someone else's concept of the future, roughly, someone else's dream. The narration of the Indonesian Future, often associated with the "messianic vision of 2045", marks the 100th year of the nation's Independence Day (Formen, 2017, p. 130; Mahaswa & Hardiyanti, 2023). The narration of "Golden Age 2045" refers to significant economic growth related to demographic bonuses (Wisnumurti, 2018, p. 25). To achieve this golden age, education aims to develop and transform human resources.

Developmentalism faces many challenges and consequences, such as environmental issues. Sustainability is needed to ensure that economic sectors keep growing, to ensure and keep resources available, to be more efficient, and to maintain human well-being (Hysa et al., 2020, p. 12). Environmental degradation or changes, such as carbon emissions, may affect economic growth (Fasikha & Yuliandi, 2018:37). Furthermore, environmental degradation prevents the process from reaching its golden age of 2045. To confirm the significant role of a sustainable environment, the Indonesian government embraces the international agenda of Sustainable Development Goals (SDGs) (Suparmoko, 2020, p. 40). The SDGs combine various aspects, such as social, economic, and environmental, to create a sustainable society, which means that a sustainable environment is not only prepared for the present generation but also the future generation (Setianingtias et al, 2019, p. 62).

One obstacle to creating a sustainable environment is the pollution or contamination of the environment by trash. Indonesian developmentalism is influenced by demographic bonuses. By 2045, there will be a surplus of human resources, leading to peak productivity in the nation. According to Sutikno (2020), Indonesia's population by 2045 will be dominated by those aged 30 years and below, accounting for 60% of the total population. Population density is often related to the production of trash (Rahmananda & Widjonarko, 2021, p. 202). The presence of trash, which could affect the environment, demands precise management. The responsibility of trash belongs to everyone, since everybody could, and possibly produce, trash within activities. Environmental awareness, therefore, becomes an obligation for everyone, and through education, future generations are expected to understand their environment, meaning that they not only perceive and recognise their surroundings but also bring something to their environment (Prayitno, 2013, p. 43). Thus, Environmental Education is necessary. Preparing for future generations makes education important. The centrality of the environmental aspect of sustainable development makes it important to include the environment in the curriculum. EE plays a role in students' personal development regarding how they perceive and treat the environment.

2 History of Environmental Education in Indonesia

One effort made by Indonesian schools to implement EE is to use the phrases *kerja bakti* and *gotong royong*. The phrases have a similar meaning, which is doing work together to lighten the weight of everyone involved. *Gotong royong* was used by the Javanese in pre-Indonesian times and was politically significant because of Soekarno's speech signifying the phrase as the most fundamental identity of Indonesians (Simarmata et al., 2020). *Kerja bakti* connotes communal reparation and has historically been used post-disaster (Mardiasmo and Barnes, 2015). They then persisted in the 1950s for post-war development in Indonesia, aiding social resilience. *Kerja bakti* and *gotong royong* are still used today to denote teamwork, but both are considered more prominent than their counterparts, *kerja sama*, presumably because of their traditional origins. In schools, *gotong royong* and *kerja bakti* are usually used in tandem with mandatory school cleaning activities. This included cleaning the classroom, planting new plants, and picking up trash.

Another effort was made in 2006 through the design of the *Adiwiyata* (Green School) program by the Ministry of the Environment (*KemenLH*) and the Ministry of National Education (*Kemendiknas*). It seeks to reward schools that manage to fulfil certain criteria for environmental preservation facilities and activities. Trash was one of the program's main considerations, as it concerns the making of waste banks, plastic and styrofoam food packages sold in canteens, and the sorting of trash into assigned categories (organic, inorganic, etc.) The program chose ten schools in Java as an example and was then slowly formalised over time. In 2009, *PermenLH* No. 2 was issued and served as a guideline for implementing the *Adiwiyata* Program. In 2019, the program indicator was changed to suit *PermenLHK* No. 52, formalising what was called the "environmental care and culture at school" (*Gerakan Peduli dan Berbudaya Lingkungan Hidup di Sekolah* or PBLHS) movement. The theme of trash persists here. The PBLHS movement indicators emphasised the following points: (1) cleanliness of sanitation and drainage, (2) throwing trash in trash cans, (3) sorting trash, and (4) managing trash with 3R (reduce, reuse, recycle) principles.

Fig.1. Poster showing the phrase *kerja bakti* alongside student activities (sources in the picture)

However, even with the efforts of the *Adiwiyata* program, the trash problem in schools has not been significantly solved. There are several reasons for this finding. First, many students still carelessly throw away the trash and not into the available trash cans. Second, trash is always produced in schools. The production of trash is equal to, if not more than, the management of trash. Third, trash management activities are often ineffective because of the lack of facilities and support from teachers and school administrators. Many teachers assume the role of mere observers when their students participate. Many more will concern themselves with photographs of the occasions, since the *Adiwiyata* program is evaluated through documentation. Fourth, there is a mismatch between school activities and what happens outside school. Many of the students we interviewed recalled the same occurrence where the trash they sorted was mixed back by the school janitor. Indeed, one notable success of an *Adiwiyata* school is its ability to push students to the edge with despair, such that some students went on several school strikes to protest the Ministry of the Environment and Forestry regarding deforestation in Kalimantan.[1]

3. Environmental Education and Trash

Throughout history, EE has often been associated with trash management in Indonesia. Trash management is a parameter related to the usefulness of EE. According to the guidebook published by the Ministry of Environment guiding the implementation of Environmental Education (2020), various variables related to trash should be fulfilled to achieve green school, such as integrating EE with current curricula, implementing 3R (reduce, reuse, recycle), reducing electric and weather usage, and adding infrastructure. Green school achievement or *Adiwiyata* could bring benefits to schools, such as financial gain and fame (Indahri, 2020, p. 130); (Putri, 2019, p. 42). Hence, many schools are competing to achieve the title, and many green schools are trying to defend their achievements. Again, because trash management is important, many schools are initiating actions for trash management, such as *Kerja Bakti*, or providing distinct types of trash cans to implement EE. Here, the success of EE is determined by trash, and sometimes its implementation becomes burdensome to students.

Trash acts as an Eerie being, and its existence haunts the school that wants to achieve *Adiwiyata* or the school that has already achieved *Adiwiyata*, terrorising both students and teachers. Moreover, the existence of trash could disrupt the fantasised concept of the future, the golden age of 2045. Trash management is not the only issue in schools, but also a national issue. According to the National Waste Management Information System (*Sistem Informasi Pengelolaan Sampah Nasional*, or SIPSN), from 2019-2022, Indonesia has exponentially grown in waste. By 2022, the total waste generated reached 29,005,278.37 tons, meaning

[1] Salsabila Khairunnisa, who said to have attended an Adiwiyata school (interview on June 7th, 2023), coordinated school strikes with classmates to protest on government decisions to fell several key forests in Indonesia, including Kalimantan.

that trash management on a national scale has become a big issue. Based on the data, the haunting aspect of trash not only affects the government or the Ministry of Environment, but also the environmental education implemented by *Adiwiyata* schools or schools that try to get *Adiwiyata*, as well as normal schools. The weight of creating a golden future should be carried out by schools through the management of trash, where trash is not only a present problem but also a generational problem.

4. Hauntology

We add hauntology to elaborate on and reveal the importance of the spectrality of trash in Indonesia's EE and its implications for the future. Hauntology was first coined by Derrida in *Specters of Marx* (1994). Derrida put "Hauntology," to challenge the concept of ontology. Hauntology is a "puncept", instead of "concept" the world play of hauntology, which refers to the spectrality of communism (Fisher, 2013, p. 50) Derrida argues that ontology is a discourse of things that exist or present, while hauntology is about the spectrality of things, beyond the presence and absence (Rahimi, 2021, p. 5,). In Derrida's view, things that are present, always haunted by things that are not there, are about the relation between text, concepts, meaning, and things that are absent. The meaning concept is not always fixed or steady, but always open to being deconstructed (Davis, 2005, p. 377-379). The meaning of a concept may be reduced or extended by its unfixed nature and openness. A concept is not a fixed reference of things but a possible and versatile way to represent and capture another meaning or text that is always possible to deconstruct in the future.

Derrida put Marxism as a spectre that always haunted modern (present) civilisation in the context of the late 90s as the end of the Cold War, marked by two important events: the collapse of the Berlin Wall and the dissolution of the Soviet Union, viewed as the winning condition for democracy and capitalism (Hughes, 2012). Democracy and capitalism became fixed and became the ultimate ideology, as Fukuyama said at The End of History. Meanwhile, since the beginning, communism has always been a spectre, as mentioned by Marx at the beginning of *The Communist Manifesto*, where communism haunts Europe (Benjamin & Chang, 2006, p. 152). In the late 90s, once again, communism (often associated with Marxism in the modern day) turned into a spectre and haunted the sustainability of modern man as fragments of Marxism still exist and are established in a few South America, Africa, and Asia, haunting the dominance of democracy and capitalism hegemony (Gordy and Lee, 2009, p. 235). However, in the modern world, the existence of fragments and spectrality in first-world countries has been overlooked, and the apparition remains.

Mark Fisher (1968-2017) brought Hauntology to the discourse of the lost future. Anxiety about disability in the future bringing something new through pop culture, such as music and films, is the main background of Fisher's hauntology. In *What is Hauntology?* (2012), Fisher argues that the present and the past are mixed and can no longer be separated. The Failure of the future is viewed in modern society, as the imagination of the future cannot bring new or different things to be actualised, and modern society is trapped in the lost future. Culture is always reproduced, and the disappearance of the future implies radical changes in the model of social imagination around the world. Fisher used electronic music as an example of hauntology. In the beginning, electronic music captured the optimism of the future, but in the late 90s and the early 2000s, electronic music no longer brought the spirit of the future; rather, it became nostalgic music that was oriented toward things in the past, which made the future electronic music try to capture and to be actualised is lost (Fisher, 2014). To be more contextual, we could find a lost future in popular culture: the imagination of the future with flying cars. The idea began around the '50s, and the concept developed and started to be associated with futuristic society (Chana, 1996, p. 1676-1685). The idea is still relevant nowadays, but flying cars have never been fully realised, at least through mass production. Instead, the idea of flying cars is trapped in popular media, such as movies like *Blade Runner 2049* (Flisfeder, 2020, p. 146), or video games such as *Cyberpunk 2077* (López and Cascado, 2023). Popular media captured the lost future, and society consumed the elements of nostalgia. Society lost the ability to imagine because dreams and fantasies were already captured and fabricated by late capitalism.

Fisher suggested two directions of hauntology: *no longer* and *not yet*. These two directions are always related in the context of discourse on how the future and past haunt the present (Fisher, 2012, p.19). The no longer direction is often associated with the past. The past contained events that no longer existed in the present, but the effects of these events could be observed and entangled with the present condition. For the not yet direction, related to the events not yet occurred but virtually could affect the present, such as the uncertainty of the future. Fisher no longer associated direction with the Freudian psychoanalysis concept of trauma, in which past events could affect the development of the self. The not-yet direction is identical to Marx's work Communist Manifesto, where, in the beginning, Marx wrote of European society that would be affected by communism that has not yet occurred (Rahimi, 2021, p. 39). The no longer and

not yet aspect plays a key role in revealing the hauntology dimension of trash: How does spectrality trash affect school territory in the context of EE implementation, and how does the spectrality of trash haunting images of Indonesians in the future?

5. Spectrality of trash

Trash could be a result of things that have lost value previously, such as utility or teleological aspects. Trash is produced in the social realm; therefore, it cannot escape social presumptions or stigma. Van Ruymbeke (2017) defined trash as the product of a cultural construct which marginalized or completely invincible Often people associate trash with disgusting objects and avoid many people because of its characteristics, but in school, trash got special treatment because it signified success of EE and could bring *Adiwiyata* or Green School achievement. Therefore, trash occurrence in schools is approached by students and teachers because of their specialties. We can say that even the definition of trash has already been deconstructed in today's society. As mentioned before, the goal of EE in Indonesia is not aimed at nature itself, but at understanding nature. Through trash management as an implementation of EE, students are expected to understand nature, or at least the environment surrounding the school. This benevolent idea turned out to be an uncanny moment when Parker and Prabawa-Sear (2020) began researching EE implementation in Indonesia. Their research revealed some laxity in the implementation of EE related to trash management in Indonesia.

The first problem is related to the school's intention to implement EE. Many schools are implementing EE only to obtain the Green School *Adiwiyata* title because it is a prestigious title that could bring funding from the government to the school and could also bring fame to the school. According to Parker's interviews, many schools want to be *Adiwiyata* because they can all be offered to parents and students. The implementation of EE in Indonesia is often associated with trash management. Many EE activities are conducted through the extracurricular curriculum instead of the main curriculum itself. One of Parker's findings is that most students are trapped in repetitive schemes in trash management practice, and the practice itself ends with irony. The students were ordered to sort the trash according to their type. After the students finished the task, the trash already sorted was mixed by the garbage man, so the students' efforts ended in vain (Parker & Prabawa-Sear, 2020, p. 70).

The intention of implementing EE by schools turned out to be separated from the main goal of EE, to prepare students to act towards nature and prepare future generations to understand environmental issues in the future. Schools only think that EE is important because of its benefits and less to say about the environment itself. The issues of nature are reduced to trash management, and their implementation is problematic. Trash is "not supposed to be" in school, but becomes "must be" in school because it is needed to achieve *Adiwiyata*. Based on the school's intention, trash turned into a spectre that haunted schools on their way to achieving *Adiwiyata*. *Adiwiyata* is achieved if the parameters related to the trash are obtained. Therefore, schools must organise things that could make them appear capable of solving trash problems. The importance is not how they could make students understand environmental issues through trash management, but how trash management could be effective so that they could achieve a prestigious title. The presence of trash as disturbing and should cease to exist is haunting every student in EE implementation, because they should keep involved in that activity because EE is student-centred education (Permanasari et al., 2021, p. 3)

Trash is always produced in connection with social metabolism. Social metabolism is characterised by the analysis of the flow and transformation of matter or energy as a result of social and environmental relations (de Munain et al., 2021, p. 843). In the context of EE implementation, trash management is related to all elements in schools, including biotic and abiotic factors. Trash management is needed to control trash in schools because it may affect one or many components of the school environment, especially human agents (teachers and students). Here, the existence of trash is determined not only by the people in the school, but also by non-human agencies. According to research by Ulfah and Arisanty (2016), Azmi and Elfayetti (2017), and Ratnasari et al (2019), there are many schools in Indonesia often sort trash according to its nature or where trash is produced into organic and inorganic trash.

Organic trash is often associated with things that are produced by the environment with less human intervention, such as dried leaves, papers, animal carcasses, and food waste, while inorganic is associated with "artificial" things such as plastics: bottles, plastic bags, and snack wraps. We could also say that the taxonomy of trash is based on how long the trash can be disposed of or decomposed; the more trash that needs to be disposed of, the more likely it is to be categorised as inorganic. Disposability could mean a complete physical separation of the essence of commodities from the time-wasting limits of the objectified

body (Kennedy, 2007, p. 142) which means that the essence of commodities' value) will always degrade with time. The hauntological aspect is that everything is affected by time, so everything could lose its value, making it no longer a valuable object and be considered trash, which means that the presence of trash is always inevitable. The depletion of value lingers and haunts every object, and sooner or later, objects are considered trash.

Trash is no longer a valuable object; it refers to the origin of trash, which was a valuable object. The potential for value degradation refers to the future, where value loss may occur as a result of the interaction between objects and the environment, and temporariness affects an object concerning time, which could also affect the elements of the object (Sfendoni-Mentzou, 2018). Every object could become trash or not yet trash with its relation to time and with the intensity of interaction with other elements in the environment. As Fisher suggests, these hauntology directions affect the paradigm of trash management in schools and EE implementation in Indonesia. The possibility that everything could be the trash is related to the human valuation of objects. Trash produced could be traced to "who" produced it: human and non-human, both related to embedding of value, which related to preference or knowledge of humans as meaning-giver agents. Papers, old books, and food wrappers could be considered trash because they are no longer needed or have lost their utility; therefore, the current value of these objects affects their relationship with space. The changing value of the objects displaces objects from the classroom and ends up in trash cans.

The problem of spatiality also applies to the trash produced by non-human agents. Grasses that grow tall, fall leaves, or produce food waste are categorised as trash, even though they are indirectly involved in learning activities but are also part of school metabolism. They can be disposed of naturally, but humans as active agents could accelerate their disposability. Their value is decided by human agency, which is not always related to aspects of use, but could also be related to human preference, such as the aesthetic needs of humans. For example, falling leaves or tall grass may not disturb learning activities, but aesthetically, they are not supposed to be there; therefore, they are considered trash. Food waste or animal carcasses may affect students' and teachers' health conditions; therefore, they are considered trash, even though the waste could be a natural fertiliser. The phenomena exemplified previously show the role of strong human agency, where humans could determine when objects were considered trash (not yet trash, no longer trash). This leads to the understanding that nature is still human-centred and implies that the nature taught through EE is not nature itself with its intrinsic values, but nature that fits the human condition that makes EE and trash management dominated by a strong anthropocentrism paradigm (Cocks & Simpson, 2015, p. 220).

Actions in waste management can occur repeatedly because of the certainty of all objects that can be trashed. Students finished collecting leaves, putting used paper in trash cans, and cutting tall grass, but for how long? Grass and leaves will grow again, and papers will be unused again; therefore, there is no stop to trash management in schools. Historically, EE in Indonesia has often been related to trash, and the implication is that environmental knowledge has reduced to the problem of the presence of trash in schools. Although trash management has evolved, we found that it was trapped in the same pattern. Many schools creatively invent various ways to manage trash, from providing trash cans according to trash type (Aini, 2014, p. 482), reusing objects, and recycling objects into various valuable products (Kristianto & Widya, 2020, p. 194). Those actions are haunted by the recurrence of the trash. Trash may have been moved to a landfill and is no longer present in trash cans, but along with school activities that continue to occur, it is about time for trash to come again, so the finished job of moving trash simply means that trash has not yet reoccurred. Moving trash from school to outside school is also haunted by the absence of trash, which is no longer present in schools. The trash is finally gone, but what will happen?

The case study of Parker shows that trash only matters when at school where trash is sorted and becomes the attention of both students and teachers; after it is moved to another place, it will become ordinary trash again. According to *Direktorat Jenderal* PSLB3 KLHK in Rahmawati et al. (2021), 69% of waste is disposed of in a landfill, and only 24% goes through 3R (Reduce, Reuse, Recycle) management, and the remaining 7% is disposed of without special treatment. These data show that current trash management is far from effective. The waste management of sorting and placing trash into trash cans and moving them outside the school is only a displacement and has nothing to do with nature. Other trash management practices implemented by schools, such as recycling, creatively transform trash into other products, such as craft from trash or organic fertiliser.

One example of crafting is ecobricks, Ecobricks are "bricks" made of plastics filled in plastic bottles and projected to be replacements of current bricks material in the future (Handoko et al., 2021, p. 170). Many schools have initiated plastic recycling for eco-bricks because they can stimulate the creativity of students. The ability to transform trash into other products simply means giving another chance for valueless objects to have value again. Ecobricks can be haunted in several ways. Because it is made of plastic, it may not be as sturdy as current bricks. Second, it is projected to overcome plastic problems; however, it is not as

efficient as current materials because it requires more time to produce. There is a chance that in time, it would lose value again; therefore, such actions only postponed the object to become a trash and ended in a trash can once again.

The implementation of EE in schools is also haunted by the presence of trash that is not produced inside or outside the school. Students put considerable effort into trash management as an implementation of EE. But, after finishing the school tasks and leaving the school, the treatment of trash would be different, or there is other "knowledge" about trash. Perhaps their home trash management is not as complicated as that in schools. People from the students' location may still manage trash by burning it or throwing it into the rivers. This would make EE fragmented and work only in schools. Students may not understand or be stimulated to think about nature. Bong (1996) highlighted that students may be motivated to follow orders because they only want to do so. This means that the motivation for learning is only because the model of education offers something such as grade or achievement titles; therefore, students are only oriented to those offers and overlook the purpose of the education itself. The intensity of the connection between students and their locations also affects the habits they are likely to choose. Rockett and Okhuysen (2002) showed that the more children have familiarity with a place, the more they will behave according to groups there. It challenges the way school promotes EE because the intensity of students in school is less than that outside school. The implementation of EE may not be fully effective after all or successfully transferred to students, reflecting the fragmentation of EE implementation and the challenges of place familiarity.

Through hauntology, we exposed the uncanny dimension of the relationship between trash, school, students, teachers, and the ability to imagine the future. Trash, both in its presence and absence, haunts the motions and habits of schools. Like a spectre, it could not be fully rid of, everyday the apparitions would come and come again, terrorising the school in a specific place. The discontinuation of EE means that there are different views of nature in different places, so what view should students embrace? The nature where trash has special treatment in school, or the view of nature in everyday life that maybe trash is not that special, and trash only becomes an issue when society faces catastrophe-like floods. The discontinuation of EE refers to the fragmentation of the understanding of trash management.

In the context of the future, Golden Generation 2045 tends to be a forced narration that kills the ability to imagine and dream of students through EE: the golden age of 2045 is simply not a collective future, but an institutional future. Fisher posited a hauntology to reveal how capitalism is already entering various aspects of human life, not only at the social level but also at the individual level. Arts that Fisher mentioned in his work, such as music and films, are no longer a kind of expression of creativity; the haunting aspect is that there is no longer creativity there, just a mourning for the future that never occurs, the lost future (Hiemenz, 2023). Hauntology shows that capitalism could capture the creativity of imagining, that people could never really produce something new, and that innovations in this era simply reproduced the past and elements of the lost future (Fisher, 2012, p. 19). Currently, the ability to think creatively has been castrated in educational institutions, making there's no escape from the economic-productive-technological future. Hauntology's direction towards trash management could stimulate speculative thinking about uncertainties, that there is no fixed future, and that uncertainty is full of openness and possibilities (Gatehouse, 2020, p. 119).

6. Conclusion

Similar to spectres or ghosts, some futures are overlooked because they may affect or kill the optimism of the golden age of 2045. Here, with the hauntology of trash and waste management, there are also possible futures besides the golden age. First, in the Sisyphean future, where environmental education is still oriented only toward waste management in a closed system, schools. There may be some innovations in the future regarding how students can handle trash, perhaps with technology or new methods, but trash is still produced because things will lose or change their current values; therefore, students such as Sisyphus will always push the boulder. They may be able to get rid of the trash, transforming the trash, but it is only about displacing and postponing, the trash will come again, and students will find repetitive ways to get rid of it. The second is the "plastiglomerate."

Finally, in the future, EE will involve not only trash, but institutions are giving up trash management because trash is always produced. Instead of evading spectrality, we embrace it. Recognize that trash is inseparable from our daily lives The trash loses its speciality in school and people no longer worry about macro and microplastics anymore, just like the plastiglomerate that is found in the world, the trash becomes sedimented and in the defeatist way we live with trash, just like hikikomori could live their life surrounded by trash with no issues, and trash embodied with "self." The two awful possibilities of the future

we posited may be too unscientific or irrational, but it does not mean to suggest that people are pessimistic; rather, haunting the optimistic future with dystopian possibilities may help to consider actions or policies in the present related to future-oriented EE, since the future remains a mystery and full of uncertainties. Finally, we encourage students to imagine the future through EE, as through education, the environmental future is full of openness and interpretation.

Acknowledgments. This work was supported by the Faculty of Philosophy and Universitas Gadjah Mada Grant for Young Lecturer (*Program Peningkatan Kapasitas Peneliti Dosen Muda Tahun 2023*) (Grant numbers [No. 5985/UN1.P.II/Dit-Lit/PT.01.03/2023]. This work is part of the main research project entitled "Analisis Kritis Geofilosofi dalam Kurikulum Pembelajaran Sekolah Menengah Atas Sebagai Modal Kesadaran Lingkungan Berkelanjutan". The authors declare that they have no conflicts of interest.

References

Aini, M. H. (2014). Penguasaan konsep lingkungan dan sikap peduli lingkungan siswa sma adiwiyata mandiri di kabupaten mojokerto. *Berkala Ilmiah Pendidikan Biologi (BioEdu)*, 3(3).

Azmi, F., & Elfayetti, E. (2017). Analisis Sikap Peduli Lingkungan Siswa Melalui Program Adiwiyata Di SMA Negeri 1 Medan. *Jurnal Geografi*, 9(2), 125-132.

Benjamin, R., & Chang, H. (2006). Jacques Derrida, the last European. *SubStance*, 35(2), 140-171.

Bong, M. (1996). Problems in academic motivation research and advantages and disadvantages of their solutions. *Contemporary Educational Psychology*, 21(2), 149-165.

Chana, W. F. (1996). *Flying Automobiles - Are They For Real? SAE Transactions*, 105, 1676–1687. http://www.jstor.org/stable/44725656

Cocks, S., & Simpson, S. (2015). Anthropocentric and ecocentric: An application of environmental philosophy to outdoor recreation and environmental education. *Journal of Experiential Education*, 38(3), 216-227.

Davis, C. (2005). Hauntology, spectres and phantoms. *French Studies*, 59(3), 373-379.

de Munain, D. L., Castelo, B., & Ruggerio, C. A. (2021). Social metabolism and material flow analysis applied to waste management: A study case of Autonomous City of Buenos Aires, Argentina. *Waste Management*, 126, 843-852.

Deleuze, G. (1992). *Postscript on the Societies of Control*. October, 59, 3–7. http://www.jstor.org/stable/778828

Fasikha, Y., & Yuliadi, I. (2018). Analisis Pengaruh Perubahan Lingkungan Terhadap Pendapatan Per Kapita di Negara-Negara ASEAN Periode 2005-2015. *Journal of Economics Research and Social Sciences*, 2(1), 34-43.

Fasikha, Y., & Yuliadi, I. (2018). Analisis Pengaruh Perubahan Lingkungan Terhadap Pendapatan Per Kapita di Negara-Negara ASEAN Periode 2005-2015. *Journal of Economics Research and Social Sciences*, 2(1), 34-43.

Fisher, M. (2012). What is hauntology?. *Film Quarterly*, 66(1), 16-24.

Fisher, M. (2013). The metaphysics of crackle: Afrofuturism and hauntology. Dancecult: *Journal of Electronic Dance Music Culture*, 5(2), 42-55.

Fisher, M. (2014). *Ghosts of my life: Writings on depression, hauntology and lost futures*. John Hunt Publishing.

Flisfeder, M. (2020). *Blade Runner 2049 (case study). The Routledge Companion to Cyberpunk Culture*. New York: Routledge.

Formen, A. (2017). In human-capital we trust, on developmentalism we act: The case of Indonesian early childhood education policy. *Contemporary issues and challenge in early childhood education in the Asia-Pacific region*, 125-142.

Gatehouse, C. (2020, June). A hauntology of participatory speculation. *In Proceedings of the 16th Participatory Design Conference 2020-Participation (s) Otherwise*-Volume 1 (pp. 116-125).

Gordy, K., & Lee, J. S. E. (2009). Rogue specters: Cuba and North Korea at the limits of US hegemony. *Alternatives*, 34(3), 229-248.

Handoko, A., Anggoro, B. S., Marzuki, M., & Nuragustin, P. (2021). Pengembangan Modul Pembuatan Ecobrick Sampah Plastik Sebagai Sarana Pengembangan Diri Berbasis Ecopreneurship Di SMA Kelas X. Diklabio: *Jurnal Pendidikan dan Pembelajaran Biologi*, 169-177.

Hiemenz, R. (2023). So It Goes: Hauntology, Lost Futures, and Mac Miller.

Hughes, C. (2012). Dialogue between Fukuyama's account of the end of history and Derrida's hauntology. *Journal of Philosophy: A Cross Disciplinary Inquiry*, 7(18), 13+. https://link.gale.com/apps/doc/A312402935/AONE?u=googlescholar&sid=googleScholar&xid=ae709892

Hysa, E., Kruja, A., Rehman, N. U., & Laurenti, R. (2020). Circular economy innovation and environmental sustainability impact on economic growth: An integrated model for sustainable development. *Sustainability*, 12(12), 4831.

Hysa, E., Kruja, A., Rehman, N. U., & Laurenti, R. (2020). Circular economy innovation and environmental sustainability impact on economic growth: An integrated model for sustainable development. *Sustainability*, 12(12), 4831.

Indahri, Y. (2020). Pengembangan pendidikan lingkungan hidup melalui program Adiwiyata (Studi di Kota Surabaya). *Aspirasi: Jurnal Masalah-Masalah Sosial*, 11(2), 121-134.

Kementrian Lingkungan Hidup.(2020). *Panduan Pembinaan Gerakan Lingkungan Hidup Berbudaya di Sekolah*

Kennedy, G. (2012). *An ontology of trash: The disposable and its problematic nature*. State University of New York Press.

Kristianto, A., & Widya, P. R. (2020). Pendampingan dan pelatihan pengelolaan limbah organik menjadi produk bernilai ekonomi di SMA Negeri 1 Bengkayang. *Jurnal Abdimas BSI: Jurnal Pengabdian Kepada Masyarakat*, 3(2), 190-197.

López, M. B., & Casado, C. Á. (2023). A Cyberpunk 2077 perspective on the prediction and understanding of future technology. *arXiv preprint arXiv*:2309.13970.

Mahaswa, R. K. & Hardiyanti (2023). Romanticizing the Past, Glorifying the Future: Working with Ecological Modernization and Developmentalism. *Dialogue and Universalism*, 33(2), 147-168.

Mardiasmo, D., & Barnes, P. (2015). Community response to disasters in Indonesia: Gotong royong; a double edged-sword. *Proceedings of the 9th Annual International Conference of the International Institute for Infrastructure Renewal and Reconstruction 2013*. https://eprints.qut.edu.au/61482/

Parker, L., & Prabawa-Sear, K. (2020). *Environmental education in Indonesia: creating responsible citizens in the global south?* (p. 280). Taylor & Francis.

Permanasari, G. H., Suherman, S., & Budiati, L. (2021). The implementation of environmental education to achieve sustainable development: literature review. *In E3S Web of Conferences* (Vol. 317). EDP Sciences.

Prayitno, Y., Djati, M. S., Soemarno, S., & Fanani, Z. (2013). Pendidikan berperspektif lingkungan menuju pembangunan berkelanjutan. *Wacana Journal of Social and Humanity Studies*, 16(1), 41-51.

Putri, A. (2019). Implementasi Program Adiwiyata Dalam Rangka Menciptakan Sekolah Peduli Dan Berbudaya Lingkungan. *Jurnal Tunas Bangsa*, 6(1), 37-47.

Rahimi, S. (2021). *A Hauntology for Everyday Life* (pp. 1-8). Springer International Publishing.

Rahmananda, T., & Widjonarko, W. (2021). Faktor-Faktor yang Mempengaruhi Partisipasi Masyarakat dalam Kegiatan Bank Sampah Sempulur Asri di RW 05 Kelurahan Gedawang. *Teknik PWK (Perencanaan Wilayah Kota)*, 10(3), 201-209.

Rahmawati, A. F., & Syamsu, F. D. (2021). Analisis pengelolaan sampah berkelanjutan pada wilayah perkotaan di indonesia. *Jurnal Binagogik*, 8(1), 1-12.

Ratnasari, A., Asharhani, I. S., Sari, M. G., Hale, S. R., & Pratiwi, H. (2019). Edukasi pemilahan sampah sebagai upaya preventif mengatasi masalah sampah di lingkungan sekolah. *Prosiding Konferensi Nasional Pengabdian Kepada Masyarakat dDan Corporate Social Responsibility (PKM-CSR)*, 2, 652-659.

Rockett, T. L., & Okhuysen, G. A. (2002). Familiarity in groups: Exploring the relationship between inter-member familiarity and group behavior. *Toward phenomenology of groups and group membership*, 173-201.

Setianingtias, R., Baiquni, M., & Kurniawan, A. (2019). Pemodelan indikator tujuan pembangunan berkelanjutan di Indonesia. *Jurnal Ekonomi Dan Pembangunan*, 27(2), 61-74.

Sfendoni-Mentzou, D. (2018). Aristotle's Dynamic Vision of Nature. A Neo-Aristotelian Perspective on Contemporary Science. *Aristotle–Contemporary Perspectives on his Thought: On the 2400th Anniversary of Aristotle's Birth*, 27-56.

Simarmata, N., Yuniarti, K. W., Riyono, B., & Patria, B. (2020). Gotong royong in Indonesian history. *Proceeding of The 10th International Conference of Indigenous and Cultural Psychology 2019*. https://doi.org/10.29037/digitalpress.45341

SIPSN (2023). *Sistem Informasi Pengelolaan Sampah Nasional*. Retrieved August 15, 2023, from menlhk website: https://sipsn.menlhk.go.id/sipsn/

Suparmoko, M. (2020). Konsep pembangunan berkelanjutan dalam perencanaan pembangunan nasional dan regional. *Jurnal Ekonomika dan Manajemen*, 9(1), 39-50.

Sutikno, A. N. (2020). Bonus demografi di indonesia. VISIONER: *Jurnal Pemerintahan Daerah Di Indonesia*, 12(2), 421-439.

Ulfah, N. A., Normelani, E., & Arisanty, D. (2016). Studi efektifitas bank sampah sebagai salah satu pendekatan dalam pengelolaan sampah tingkat Sekolah Menengah Atas (SMA) di Banjarmasin. *JPG (Jurnal Pendidikan Geografi)*, 3(5).

Van Ruymbeke, S. G. (2017). The Poetics of Trash (*Doctoral dissertation*, OCAD University).

Warburton, E. (2018). A new developmentalism in Indonesia?. *Journal of Southeast Asian Economies*, 35(3), 355-368.

Wisnumurti, A. A. G. O., Darma, I. K., & Suasih, N. N. R. (2018). Government policy of Indonesia to managing demographic bonus and creating Indonesia gold in 2045. *Journal Of Humanities And Social Science (IOSR-JHSS)*, 23(1), 23-34.

Wolf-Phillips, L. (1987). Why Third World'?: origin, definition and usage. *Third World Quarterly*, 9(4), 1311-1327