

“Dirty Energy” and Ecological Performativity in Contemporary English Poems: Critiquing Petro Culture of the Anthropocene

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Abstract. Fossil fuels will always take command of human’s daily life. Despite being “dirty energy”, humans cannot jettison them since they are the mainstay for multipurpose energies. They are more dependable and accessible than renewable energy sources such as hydropower, solar panel, and wind power. Even more so, in this present globalization the increasing scale of consumerism via digital technology and social media consumes the fuels. This petro-overconsumption of the fuels and their derivative products such as plastic certainly has some detrimental impacts: the more emission of carbon dioxide and other toxic particles to the atmosphere. Contemporary English poems are some works that critique the petro-overconsumption. A Canadian poet, Stephen Collis in his poem “Take Oil & Hum”; a Hawaiian poet, Craig Santos Peres in his poem about plastic, “The Age of Plastic”; and two Indonesian poets, AfrizalMalna in “petrol cupboard” and F. Aziz Manna in “Estuary” are the epitome of ecopoems that share this concern. With their performative interiorizing of petro-materiality, their depiction of petro-transcorporeality from one form into another, they articulate the polemics and impacts of non-renewable energy on human and nonhuman creatures as the issue of ecological precarity in the era of anthropocene.

Keywords: “dirty energy”, ecopoetry, petro culture, transcorporeality, ecological precarity, anthropocene.

1 Introduction

Fossil fuels have been “classic stuff” from time to time. Since the New World till this digital technology era, humans have still relied on fossil fuels as the mainstay of socio-economic activities. America in the 1970s for instance experienced what it was called “energy crisis” due to the very considerable consumption of fossil fuels so that the government had to initiate other non-renewable energy sources such as nuclear plants [1]. Nowadays, as the worldwide number of population is growing rapidly, most people need more fossil fuels as the major energy source for their daily activities. Fuels have typified

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people's way of life that it is called 'petro culture' [2]. In fact, fossil fuels especially oil or petroleum can produce other products such as plastic as one popular material that people use to produce plastic-based products in their dailies. But, oil and plastic are not environmentally friendly materials. Instead, they contain toxic particles that are hazardous to any living creature and the natural environment itself. Air pollution in urban areas is one factual example as the result of carbon dioxide emission from vehicles that use fossil fuels as the energy. In marine habitat for example, there are often incidents of oil spills to the ocean that similarly cause water pollution and hazards to its marine living creatures. Since fossil fuels contain carbon dioxide and other toxins, this is way some people call these 'dirty energy' in contrast with clean and renewable energies such as those people get from the sun, wind, and water. Despite giving material benefits to human living in the form of energy, fossil fuels and their very inherent properties in fact contain toxic substances. Overconsumption of these fossil fuels such as oil, coal, and their derivative products such as plastic will certainly cause problems especially to the natural environment and the biotic life of living creatures. Being materials that have been stored for ages in an underground repository and came from fossilized decayed plants and dead corpses of animals, these fossil fuels and their properties pose a threat to environmental wholesomeness such as in climate change phenomena.

Sciences and the Humanities are synergical disciplines. In scientific discipline such as Mineralogy and Petrology, fossil fuels can be the object of study that exist merely as inanimate materials [3]. In comparison, in the Humanities studies especially through what is now known as ecocriticism and material ecocriticism, ecocritical scholars will view fossil fuels as materials that are animate just like human and nonhuman animals [4]; [5]. In fact, fossil fuels were also derived from living organisms that have been fossilized throughout the long ages. The slight difference between the sciences and the Humanities in perceiving fossil fuels and other earth materials in general will benefit everyone to recognize the natures of the material things and to behave wisely in consuming the things for their daily necessities. When Petrology might not warn people not to consume fossil fuels too much because of their hazardous impacts, environmental humanities will remind readers of the detrimental impacts when they overconsume fossil fuels and other earth material products. Ecopoetry as one branch of ecocriticism or environmental humanities is the field that addresses the issue of material culture and its impacts on the environmental such as the emergence of global warming and climate change. An American professor in English and an ecocritical scholar, John Felstiner argued that poetry can save the world. This means that poetry can serve as an active agent that addresses planetary cataclysms related to climate change and other environmental issues. Another American professor, ecocritical scholar and a poet, Robert Hass discusses world environmental issues in his long poem entitled "State of the Planet" [6]. One of the issues he raises is regarding human's overconsumption of fossil fuels. A San Francisco poet named Gary Snyder in his essay "Four Changes" discusses the need for human to do some changes, such as reducing overpopulation, pollution, and overconsumption of non-renewable energy sources such as fossil fuels [7]. Snyder further says that "balanced technology is possible when humans are willing to reduce the hazards of 'exploitation-heavy-industry-perpetual growth' from their overuse of the fossil fuels and heavy petro-based industries. He suggests 'growing cities with less energy' and refers to William Blake's notion that the real energy is not electricity but "eternal delight" [7].

Contemporary English poetry is an ecological agent in this present digital technology era. The rampantly surging electronic technology goes in tandem with robustly growing material consumerism. Many artists and poets who have environmental concern express this precarity through their arts as well as poetic works. Among these postmodern poets include American poets who call them language poets from their avant-garde group called

L=A=N=G=U=A=G=E that emerged in the US in the late 1960s and early 1970s with their figures such as Bruce Andrews, Charles Bernstein, Ron Silliman, Lyn Hejinian, Susan Howe [8]. Although these poets and their works seem to be experimental and innovative in the way they compose their poems, their works implicitly convey concern about ecological condition in this present time. Several recent contemporary young poets emerged during this millennial era and they tend to more lucidly polemicize environmental issues along with the crucial issue of global warming and climate change. This brief paper discusses some American and Indonesian contemporary poems: Stephen Collis's "Take Oil & Hum" [9], Craig Santos Perez's "The Age of Plastic" [10], Afrizal Malna's "petrol cupboard" [11] and F. Aziz Manna's "Estuary" [12]. These poems address the subject about oil and its derivative products and their impacts on the natural environment. These poems represent eco-poems since they deal with environmental subjects and typographically have experimental and new form. They do not depict the subject as being separate from themselves, but embrace it as being part of human's body and consciousness, which we call ecological performativity. There are two questions that this paper deals with: first, how the contemporary English poems depict fossil fuels as 'dirty energy sources' through their ecological performativity; second, how the petro-poetics of the poems serves as ecological agents in this present consumerism era. In discussing these questions, the paper refers to some books and articles about fossil fuels, climate change, and eco-poetics [2]; [10]; [13]; [14]; [15].

2 Literature Review

Eco-poetic research has been growing robustly among literary scholars in various countries throughout the world. It began with ecocritical research by British and American scholars through their articles and seminal books that discuss the study of literature and environment that is abbreviated into ecocriticism, environmental humanities or green studies [16]; [17]; [18]. Then the studies branches into further disciplines such as eco-poetry, eco-fiction, eco-feminism, eco-psychology, and eco-spirituality. In eco-poetic studies, two influential works are *Can Poetry Save the Earth?* by John Felstiner (2009) and *Imagining The Earth* by John Elder (1985). Then, another pivotal eco-poetic work is eco-poem anthology [6]. In Southeast Asian countries, environmental humanities and eco-poetics have been well-liked topics in literary studies by many scholars. Among them include an article entitled "Filipino Ecological Imagination: Typhoon Yolanda, Climate Change, and Imperialism in Philippine Poetry and Prose" by Jeffrey Santa Ana as a book chapter of *Southeast Asian Ecocriticism: Theories, Practises, Prospects* [21] and another work *Eco-poetics and the Global Landscape: Critical Essays* [22]. Many eco-poetic works in the online databases deal with the notion of eco-poetics as a theoretical concept rather than specifically discuss topics such as climate change and other related ecological problems. Some of these works include "Eco-poetics as Expanded Critical Practice: An Introduction" [23], "Images adequate to our predicament: Ecology, Environment and Eco-poetics" [24]. There are not many scholarly works about Stephen Collis and Craig Santos Perez's poems available in online sources while they are Canadian and American contemporary poets with their performative poetics. Even more so, there is no scholarly work in English about Afrizal Malna and F. Aziz Manna's poems available in online sources since they are Indonesian poets who are not yet known by international readers. Yet, there are some scholarly works that discuss Stephen Collis's poems and ecological issues about petroculture and plastics that are relevant to his poems, Perez, Malna, and Manna's poems. These scholarly works are "Eco-poetic Interventions: Poets Critiquing Canadian Petrocultures and Pipelines" [25] and "Widening Gyre: A Poetics of Ocean Plastics" by Mandy Bloomfield [26]. While addressing the issue

of petroculture and plastics, these two works do not particularize their discussion on the poet's eco-performativity and its impacts on raising one's eco awareness.

3 Ecopoetry

The term "ecopoetry" consists of two words 'ecology' and 'poetry'. This is a sub-branch of ecocriticism or environmental humanities. This term refers to a genre of poetry that certainly embodies ecological aspects or polemics environmental issues. Basically, any poem written from any literary period has certainly contained environmental aspects since they portray a natural life and its related topics. In the eighteenth century of British Romantic and American Transcendental era for instance, British poets such as William Wordsworth, William Blake, Samuel Taylor Coleridge and American poets such as Ralph Waldo Emerson and Henry David Thoreau had portrayed Nature and natural aspects in their poems [18]. Then in modern and contemporary eras when the Industrial Revolution in the United Kingdom and the Roaring Twenties in the United States had a great impact on the burgeoning industry-based countries throughout the world, these countries began to experience alarming environmental problems such as air pollution and biodiversity loss that further exacerbate global warming and climate change phenomena. This environmental cataclysm then refers to anthropocentrism or any activity that is centered on human's interest regardless of nonhuman animals and the natural environment [27]. Ecocritics argue that any poem is basically ecopoems that they originate from the natural world, and they foreground Nature that other literary genres such as drama and fiction do not. Yet, ecopoetry does not merely constitute any poem that depicts the wonder of Nature just as what nature poetry or environmental poetry depicts [6], but ecopoetry serves as a kind of paradigm shift. This ecopoetry expresses a poet's "apprehension of real biological selves (as opposed to fantasy selves) inhabiting this planet" [28]. Another ecocritic William Rueckert argues if poems are "a verbal equivalent of fossil fuel (stored energy) but they are a renewable source of energy, which originate from generative twin matrices, language and imagination" [29]. A contemporary American poet, Craig Santos Perez in his brief note argues that all cultures in the world "have a tradition of ecopoetry since one of humanity's primal experiences comes from our dynamic and changing relationship to the world around us and to ourselves as nature" [10]. The study of ecopoetry is called ecopoetics that nowadays becomes more prevalent during this climate change era with several anthropogenic activities including industrialization, urbanization, plantationism, militarism, and environmental imperialism [10]. Ecopoetry and ecopoetics then serve as agents of environmental humanities to counter the impacts caused by these human actions.

4 Methodology

This article uses qualitative method in which the research data were taken from words used in the contemporary poems. This discusses four poems: "Take Oil & Hum" by a Canadian poet, Stephen Collis; "The Age of Plastic" by an American poet, Craig Santos Perez; "petrol cupboard" by AfrizalMalna and "Estuary" by F. Aziz Manna, two contemporary Indonesian poets. The discussion on their petro poetics refers to some books about fossil fuels and ecopoetics. The term 'ecopoetics' itself is derived from two words 'ecology' and 'poetics', in which the former word 'ecology' came from Greek words *oikos* (household) and *logos* (word/knowledge). In short, the word *ecology* means knowledge about household. Furthermore, the term *poetics* suggests "writing about the nature and practice of poetry" [30]. The embodiment of ecological aspects in poetry was then called ecopoetics

and the work is called ecopoetry. While ecopoetics refers to the science of ecological poetry, the ecopoetry suggests the poetic works that embody those aspects. An ecocritic and poet, Jonathan Skinner defined 'ecopoetics' as "the pursuit of connections that reach beyond the human sphere of interest and beyond the frame of the artwork or poem." Ecopoetics also means a "disconnection—how one is connected to and disconnected from the environment" [30]. An American professor in English and ecocritic, John Felstiner in his introductory essay "Care in Such a World" argues that poems have indispensable roles in shaping one's consciousness of the world. He differentiates the term 'environmenta' from 'ecology' in which the former centers upon one's surroundings according to human perspective including 'conservation' and 'wise use' of natural resources for their benefits [31]. Furthermore, other ecocritics compare poems with fossil fuels since both can store energy. The difference is that poems contain 'a renewable source of energy' while fossil fuels can run out of because of long consumption, temporal and spatial influences [29].

5 Discussion

In his essay "Manifesto of the Biotariat", Collis uses the term 'biotariat' to address "a response to the phenomenon of Anthropocene and a reminder of its biopolitical foundations." The term itself might come from 'biology' or 'biotic' and 'proletariat' that in Marxist theory refers to 'working-class people' or a collective human group. This term then further suggests anthropogenic activities in environmental as well as social worlds that place humans in the same desperate condition in the earth planet. He further analogizes human's act in "taking of land" with his performance in "taking of bodies" not only of human's but also animal's bodies [32]. In his response to the Gaia hypothesis about the earth as a "single, self-regulating complex system," he argues that the earth itself is "a repressed, enclosed commons—lowly, levelled, and exploited," which suggests human's overexploitation of the earth and its resources. He then contends that the earth does not stand as a singularity but "the complex multitudes of life which is threatened by globalization and climate change." With this notion of biotariat, Collis entreats each individual to think about 'bio-solidarity' and to restore the "snatched body of the earth" to its former entity [32]. Furthermore, Craig Santos Perez in his brief writing "Poetics" argues about the values of ecopoetics as the study of poetry that discusses "the natural world, environmental justice, ecology, and climate change" [32]. In his view, ecopoetics has an urgent role in responding to the present ecological precarity such as "industrialization, urbanization, nuclearism, plantationism, militarism, and environmental imperialism" [32]. Collis and Perez's arguments exemplify an ecological performativity in their concern about the precarious state of the planet during the posthuman era that is still abounding with material engrossment. In a somewhat similar manner, Afrizal Malna in his letter to Andy Fuller, the translator of his anthology, explains the meaning of his fragmented poems. This fragmentation does not mean disconnectedness but instead connectedness in creating a "community of imagination" in human's alternative forms of humanity." Poetry then serves as an agent that articulates tolerance, differences and incommunicable feeling and thought. He explains that the first-person narrator *I* and *myself* in his poems means a collective entity or 'other people inside of oneself' [11]. Then in an introduction to F. Aziz Manna's poems, a senior poet Zen Hae explains that Manna's poems interweave oral and written aspects as well as the unification of written Indonesian and spoken Javanese. Hae regards Manna's poems as a kind of "subversive orality. He further appreciates Manna's poems in using cinematographic montage of an atmospheric painting and the idea of interconnectedness of any world phenomenon [12].

6 Fossil Fuels as “Dirty Energy” through Ecological Performativity

In terms of form, Stephen Collis’s poem “Take Oil & Hum” has eight stanzas. Each stanza has five lines, in which each stanza polemicizes materiality of human and oil. The close form and conventional typography of this poem do not obfuscate the content of this about the oil polemics. In the first stanza for instance, the poet describes the polemic about human and petroleum through a juxtaposition of prepositional phrases and images—

The body is liquid what I’d send back to
 Seas we swam out of or plied oars over
 Seeking fleece the thunder of islands lakes squalls
 A point beyond lighthouses species I pour down a
 Mere factor in hydrology which is the subject now[9].

The first line “the body is liquid” exemplifies the feature of oil as a liquid material. Then the second line “sea we swam out of or plied oars over” containing prepositions still refers to oil but also describe humans who engross themselves in the oil for their daily necessities. The phrase “seeking fleece” suggests human’s search for oil wells in the ocean as the poet elaborates in stanza 4—

Driven snow west fleece over ocean tanker
 Turned sound locked piracy over coal dock sulphur
 Spilt wrath not west not first last peoples animals
 Tuned ruined broken being you become all mouth all appetite
 Swallowing appetite go wolf go devourer the planet is your plate[9]

The image “fleece” suggests ambiguity since it can stand as a noun that means ‘woolly fur of a sheep’ or ‘a soft warm fabric’ or a verb that means “to swindle”. Both possible meanings clearly refer to anthropogenic activity in his effort to extract oil from the ocean. The fourth and fifth lines “you become all mouth all appetite” and “swallowing appetite go wolf go devourer” satirize human’s craving for oil in his oceaning exploration. The poet further illustrates this fossil fuels-based economic and social activities in stanza 5—

More and more sources of anxiety—oil and gas
 Absorbed social environment—kill floor & tailings pond
 More cunning container cuckold culture more Alberta
 More like Mordor—But that’s—retorted the lawyer—economics
 An ordinary war run short of thieves and the curious? Curiouser [9]

‘Oil and gas’ as the two kinds of fossil fuels besides coal becomes social polemics as these earth minerals cause human’s anxiety and craving. At the same time, this human’s drilling of the oil and gas despoils the ocean bedrock and leaves debris in the pond they have fracked as the poet says in the phrase “kill floor & tailings pond”. The third line “more cunning container cuckold culture” serves as a satire on Canadian government whose economic system still massively relies on fossil fuels. The image “Mordor” in general means “an area of peril, darkness, or evil” [33] and in J.R.R. Tolkien’s fiction suggests “Black Land” and “Land of Shadow”. In stanza 6, the poet further describes how the fracked oil would be a pollutant to the marine habitat that in turn endangers various species. This oil mineral also correlates with plastic as the derivative product of the oil, in which the plastic trash has been a detrimental environmental phenomenon in the global scale [34]. The sixth stanza then polemicizes this environmental cataclysm as follows—

Stand amidst pines beetle laden carpet smell

Of brown needles welcomed into nostrils try ignoring
 Pipelines try walking on berber as something insatiable
 Explodes ghost bottom of a ship passing overhead plume of oil
 Clouding the undersea diving birds and their nests in the plastic trees [9].

The images “carpet smell”, “brown needles”, “pipelines”, “berber”, “plume of oil”, “clouding the undersea” and “plastic trees” all point to oil as the “dirty minerals” and pollutes the ocean and endangers other species including marine organisms and birds. Plastic as the derivative product of the oil heaps up as trash contaminates trees and lands and thus harms birds and other mammals.

In a rather specific subject, Craig Santos Perez in his poem “The Age of Plastic” satirizes human’s petro culture especially through his use of fossil fuels derivatives such as plastic. This poem has 7 vignettes that each depicts various plastic resin as the major material of plastic products. The brief poetic lines after each of the resin type tend to be dramatic and performative in terms of their straightforward depiction of what the resin material does toward his wife and daughter. For instance in the following stanzas, the poet mentions one type of resin as a material used for plastic bags, food containers and other packaging—

1 polyethylene

The doctor presses the plastic probe
 onto my wife’s belly—ultrasound
 waves pulse between fluid, tissue, and
 bone, echoing into an embryo
 of hope—“*plastic makes*
this possible” [10]

In the lines above, the poet describes how plastic has become human’s daily material including in medical stuff such as ‘plastic probe’ as ‘a small device used for measuring information’. Despite its toxic particles, humans do not have another choice not to use plastic material in their devices.

4 lowdensitypolyethylene (ldpe)

in the oceans, there exists three tons
 of fish for every one ton of plastic—
leaches, estrogenic and toxic
chemicals, disrupts hormonal
and endocrine systems—eight million
 tons of discarded plastic swim [10]

Then in the lines above, the poet mentions another resin material made from ethylene that has a relatively low density and is used for packaging. Yet, the lines crucially satirize human’s overconsumption of plastic products while these contain toxic particles that endanger the marine habitat and mammals. Just like the oil as the material originator, plastic and its toxics constitute “dirty” materials despite its multipurpose uses for human’s necessities. Since plastics is a non-biodegradable material and cannot decompose into the ground, their toxic particles in microplastic particles certainly wreak havoc on the natural environment and any life form [35]. In the following stanzas, the poet depictst the use of plastic products and its lurking danger to the lives of human as well as nonhuman animals—

5 polypropylene

my daughter sucks a pacifier
 while sleeping in the crib
 my wife uses a breast pump,
 milk dripping into a bottle
 i pick up legos from the living
 room floor—“*every plastic ever made
 still exists, somewhere, today*”—[10]

In the lines above, the poet illustrates how plastics has been domesticated into products that his wife and children even make use of such as in pacifier, breast pump, drinking bottle, and toys (legos). Considering the toxic particles of plastics, these lines suggest a warning to be careful and wise in choosing plastic products since uncertified products might pose a threat to our health and to the natural environment. Nowadays, many manufacturers of home appliances might have produced plastic products from food containers, drinking bottles, and children’s toys that contain safe and non-toxic materials. Certainly, these products are relatively costlier than other general plastic products. They often use grades for the products, in which the safe and non-toxic ones belong to grade 4 and above.

6 Polystyrene

“*plastic: a toxic love story*”
 “*to reasons why a plastic free life is hard*”
 “*howi kicked the plastic habit and how you can too*”
 “*what would our lives look like without plastic*”
 “*track plastic microbeads with this new app*”
 “*life without plastic on pinterest*”
 “*live healthier without plastic*” [10]

The use of quotation marks in the lines above indicates ecological performativity since it takes a direct speech and a dramatic aspect that depicts the interconnection between humans and materiality of plastics as the derivative of oil. The poet’s realization of the toxic particles of plastics and his fancy not to use plastics too much in daily life affirms the “dirty” substances of plastics.

Furthermore, Afrizal Malna in his prose poem “petrol cupboard” depicts another ecological performativity through human’s attachment to petrol as the daily energy source. He uses a somewhat surrealistic juxtaposition of fragmented lines that all begin in lower case letters that suggest a deconstruction against hierarchical orders especially between humans and nonhuman things. This means that humans and nonhuman things and creatures co-exist in a kind of mutual symbiosis rather than in an anthropocentric relation—

i am submerged in petrol. my whole body is full of it. petrol reminds
 my mother of the gestures of government officials when they talk.
 petrol stains their fingers. if these officials wash their hands after eating
 i can still smell it. you may ask, how can i be swimming in fingers
 reeking of petrol? well, i’m a taxi driver. i have taken many people to
 their destinations, but i have never arrived at mine. everyday i swallow
 my pay. as if i am sniffing petrol. i work 12 hours a day. but i keep
 swallowing my pay. a wheel and sparkplug grow on my back. petrol
 follows me to bed. asking, where is the fire? i say it is following your
 journey from sorong to new york. they take the same taxi with the
 same driver, just like you. [11]

In this poem consisting of 11 lines, the poet does not explicitly express if the petrol is a “dirty” mineral but implicitly does so by mentioning the undesirable features of it through the words “petrol stains their fingers”, “reeking of petrol”, “sniffing petrol”. These words suggest the pungency of petrol as the mineral deriving from fossilized living organisms over millions of years [13]. Petroleum here becomes the major resource for fueling transportation vehicles including taxi. The poet here juxtaposes the physical pungency of petrol with the ironical fact that a taxi driver in Jakarta does not get unequal wage despite his long hours of working and much spending on petrol. This scene similarly depicts a social ecology of the lack of welfare of taxi drivers while they are engaged with petrol every day as the economically lucrative resource. This phenomenon then reveals an undistributed social justice between the owner of taxi service as the one who might reap more profit from the business and the taxi drivers as the laborers who still get less wage than what they should deserve getting. Ecologically, the poet’s illustration of the scene similarly unveils the fact that petrol contains several chemical particles including carbon, hydrogen, nitrogen, sulfur, and oxygen [13]. Meanwhile, one’s daily intensive exposure to petrol and other fossil fuels such as what taxi drivers experience might pose a threat to one’s physical health as well as to the natural environment. The more increasing number of vehicles are running on the road, the more amount of carbon dioxide and other toxic particles the vehicles will emit into the atmosphere [35]; [36].

Furthermore, F. Aziz Manna in his prose poem “Estuary” describes another ecological performativity through what petrol has done to humans despite its social benefits. Like Malna, Manna also use lower case letters for all words and fragmented lines in the poem—

more destructive than fire, oil swallows our home. ash
 thickens into black stains. enlarging and expanding.
 an estuary of silence in a vale of supreme darkness.
 above the black swamp, a wind dances with
 smoke. bushes grow wild on the dike. covering our
 tracks
 the chest heaves with stones. eyes sharp as
 knives. emptiness imprisons our hearts
 our home is submerged. the road is such a
 difficult one. we can walk no more. our legs are
 stumps. we are but waste. and surrender to the wave
 of waste.
 life provides an armored shell. makes us suckers
 and spewers. turns us into eternal crypts. immersing
 itself to find a new house
 in emptiness. we grow again. floating. twisting
 the light of swima worms
 we breathe in a long sleep. crustaceans create a
 path. guarding us with their light [12].

In general, the poem above has 19 lines. The first line has suggested the undesirable feature of oil as it can destroy human’s home “oil swallows our home”. This line might have a symbolic meaning, which refers to human’s overconsumption of oil for his daily necessities. The next line “ash thickens into black stains” can be a metaphor for carbon dioxide that is emitted into the atmosphere. The image ‘black stains’ then connotes a negative thing or a pollutant. The phrase “enlarging and expanding” describes how the emission of carbon dioxide has been widespread so that it becomes a global warming. The phrase “a vale of supreme darkness” is likewise a metaphor to describe a precarious ecological condition because of the global warming. The image “the black swamp” further suggests the depletion of ozone layers in the atmosphere because of the very dense

accumulation of carbon dioxide. The blackness and darkness caused by the oil corresponds with the trope “oil weather” that was coined by early twentieth-century oil workers for persistent fires that occurred to oil fields and became naturalized as if they were climate [2]. The line “a wind dances with smoke” implies the polluted air because of the smoke emission of petrol combustion. The next lines “the chest heaves with stones”, “eyes sharp as knives” and “emptiness imprisons our hearts” illustrate human’s craving for material things especially for petrol and other fossil fuels. The notion of ‘emptiness that imprisons our hearts’ exemplifies human’s unhappiness despite the fact that they have gained material things they pursue. The following lines further polemicize the impacts of material inundation on human’s life that “their home is submerged” and “the road is difficult” to tread to the extent they “cannot walk on”. In this circumstance, humans become as if they were “waste” as they would be “suckers and spewers” of material things they have pursued. The image “eternal crypts” or ‘an underground room’ here is metaphor to describe what Joseph Campbell calls with “the journey inward” or individual’s insight into a more genuine truth [37]. After finding this truth, one can build “a new house” or a new state of consciousness in perceiving the world and any material phenomenon more judiciously. The next line “in emptiness. we grow again. floating. twisting the light of swimaworms” has a spiritual vibration that might relate to eastern spiritual teachings such as those of Hinduism and Buddhism about the insubstantiality of material phenomena. Having this spiritual insight means that humans should no longer have any attachment to material things. This non-attachment behavior then would impact on human’s reduction in material consumption.

The image ‘crustaceans’ as the guarding creatures for humans is a metaphor of human’s insight into the true nature of material phenomena in their daily interaction and consumption.

7 Petro Poetics as Ecological Agents in the Millennium Era

Humans have lived with fossil fuels in their daily activities since the classic times [36];[38]. They make use of various fossil fuels including coal, petrol (oil), and natural gas to fulfill their necessities. They do not really care or realize that fossil fuels they consume in fact contain toxic particles since these fuels are the only dependable and reliable energy sources. But now as environmental issues have been emerging such as global warming and climate change in which one major cause of the phenomena is the burning of fossil fuels from various anthropogenic activities including industries and transportation [36], people begin to think of alternative energies to cope up with the problems. In fact, climate change has not just occurred during this millennium era, but had become climatic phenomena in the world since the classic until the postmodern eras [36]; [38]. In this present digital technology era, humans still consume fossil fuels as the major energy source for electricity, industries, and transportation. In 2013 for instance, worldwide consumption of petroleum reached 91 million barrels. There are various countries in the world from the Middle East, America, Latin America, Africa, to Asia that have oil reserves in their respective regions. The oil resource is usually in oil fields as well as in the bedrock of the oceans. There are some categories of the oil fields; the largest one is called supergiant that contains five billion or more barrels. There are about two-thirds of the supergiant fields that are located in the Arabian/Iranian fields [13]. Global warming and climate change as an anthropogenic factor or man-made phenomenon crucially exemplifies anthropocentrism or man-centered culture. Ecocritics call this petroleum *natureculture* that is abbreviated into petro culture [2]. Digital technology as the epitome of human civilization similarly represents an anthropocentric culture since any innovation and invention is for the sake of humans rather than of nonhuman animals or the natural environment. Simultaneously, industries of various products keep growing robustly along with the increasing number of population every

single day. When alternative renewable energy sources still tend to be unreliable for human's daily and immediate necessities, people will surely still depend on fossil fuels as the energy sources for their activities. Often times, people tend to overconsume the fuels while this overconsumption will cause several detrimental impacts especially green house effects as one major cause of global warming. For this reason, contemporary poets such as Stephen Collis, Craig Santos Perez, Afrizal Malna, and F. Aziz Manna among other poets in the world have discerned this phenomenon and polemicized it in their poems.

John Felstiner in an introduction "Care in Such a World" of his book *Can Poetry Save the Earth?* suggested the term ecological rather than environmental poetics because the former called ecopoetics views "a biosystem of interacting organisms" that need preservation for the sake of others, while the latter tends to be anthropocentric or the natural conservation for the sake of humans [19]. He further contends that poems (*ecopoems*—our emphasis) help individuals to see environmental issues in their planet including deforestation, biodiversity depletion, oil spills in the oceans, endangered animal poaching, and global warming. The poems help individuals to see the interconnection between themselves, nonhuman creators, and the natural environment (2009: 10-13). Furthermore, another American ecocritic and an environmentalist, John Elder in an introduction to his book *Imagining the Earth* expresses his concern about cultural dividedness that exists in anthropocentric culture. This hierarchical order includes "man against nature, past against present, intellect against senses," which he aims to deconstruct through his ecopoetic study on poems of several British and American poets [20]. The performative ecopoetics of Stephen Collis, Craig Santos Perez, Afrizal Malna, and F. Aziz Manna is the epitome of their views of the interconnectedness between humans and the natural environment. In stanza 8 in his poem, Stephen Collis aims to get rid of his anthropocentric view by describing any material phenomenon related to oil as having values in themselves rather than as objects to satiate human's desires—

Then dark rains come sheeting ashore new conquests black gold
Cause of all this and all those barricades made out of burning tires
In the streets of Bangkok black smoke billowing into
All our screens as whales beach or Tiananmen or Tahrir and the
Animal territories of nether light we've lit out for once again [9].

The image "dark rains" connotes "dirty" dust from the fossil burning and "black gold" refers to 'coal' as another fossil fuel mineral. Then, the image "black smoke billowing into" likewise depicts air pollution in Bangkok, which is caused by the traffic congestion of vehicles and their smoke emission into the air. The names "Tiananmen" and "Tahrir" are examples of physical landscape in China and Cairo, Egypt that represent materiality of fossil fuels that people in those places consume. The Tahrir Square in downtown Cairo, Egypt [39] and Tiananmen as the name of gate in the Forbidden City complex in Beijing, China [40] represent petroleum infrastructures since all things in the places including people's life and their activities will consume petroleum [2]. The fossil fuels-related images similarly serve as transcorporeal objects since they have transformed from the former beginning form to the latter changing form. Fossil fuels in their various forms including coal, oil, and natural gas are transcorporeal objects since they originated from living organisms that have different form and property from what they are then as fossil fuels. Another meaning of transcorporeal is that these fossil fuels in their new forms contain toxic particles that have certain and often hazardous impacts on humans and nonhuman animals' bodies [15]. Furthermore, Perez in the last stanza of his poem polemicizes the transcorporeality of plastics that on the one hand becomes the major ingredient of human's most products, but on the other hand this material contains toxic particles that harm human and nonhuman creature's life—

7 Other

imagine *being* plastic—
 how empty it must feel sur-
 rounded and used by us: imperfect, de-
 composing things—imagine its migration
 into the pacific gyre—finally arriving to
 a patch of paradise—belonging
 among its kin—

i press the plastic nipple of
 the warmed bottle to my daughter's
 small lips—for a moment,
 i wish she was made of plastic
 so that she, too, will survive
 our wasteful hands—so that she,
 too, will have a “great future”—[10]

The first line suggests the poet's humility to identify with plastic, which means to deconstruct his anthropocentric orientation to objectify plastics. His entreaty to observe the trajectory of plastics into “the pacific gyre” is meant to evoke one's awareness of the material and its hazards when it pollutes the land and marine habitats. Somewhat similar to Collis who privileges animals and their territories as the world that humans should not interfere with or despoil, Perez in this depiction aim to anthropomorphize plastics that humans will care about it in consuming less plastic products since they are not degradable. This is why in the line “so that she, too, will survive our wasteful hands” satirizes human's habit in easily consuming plastic products and throw away the trash. Plastics despite its toxic particles is relatively “inanimate” things. But it can be “alive” and wreaks havoc when humans consume it incorrectly or overconsume it for their necessities. The last line “so that she, too, will have a “great future”” is another satire that plastics cannot decompose into the ground and will stay as a contaminating debris for long. Their polemics of oil and plastics as petro products then serve as petro poetics that becomes ecological agents in this present millennium era. The meaning of ecological agent is that their poems and satire on petro culture aims to enhance the relationship between human, nonhuman animals, and the natural environment. Humans are not the center in this biosphere but they coexist and share the life with other living creatures in the physical environment.

8 Conclusion

In today's era when digital technology takes command of human's life while material consumption keeps increasing every single day, each individual needs to be aware that the earth where they live is just a small one; they cannot expand or enlarge the earth. Otherwise, they can only deplete its natural resources and despoil its body for satiating their desires. Fossil fuels have been a timeless material as a source of energy as well as catastrophe. Various disciplines especially science and engineering might view fossil fuels as the object that must undeniably cater human's necessities. Meanwhile, the Humanities such as literature and now environmental humanities view fossil fuels as actants and agents that have power in building but also despoiling life and any life form. This means that a study about the pros and cons of fossil fuels as energy sources should involve interdisciplinary studies. For instance, between science and literature, between mineralogy

and petralogy and literature. This is why there is a genre called environmental science writing that combines scientific facts and humanities facts and ideas to strive for one's better understanding about the energies. Stephen Collis, Craig Santos Perez, AfrizalMalna and F. Aziz Manna and their petro-poetic poems serve as works that can raise one's ecological awareness of what Timothy Morton calls by the mesh or the interconnectedness between human, nonhuman, material things, and the natural environment to reduce and even to resolve any environmental issue in this millennium [41].

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