Enchanting Materiality: What We Owe Our Waste

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Abstract:

This research and studio practice investigates the entanglement of humanity, nature, and materiality, and focuses on re-enchanting waste materials to challenge Western paradigms that view the natural world as separate and utilitarian.

By exploring themes of material kinship and agency, this study critiques the reductionist perspective that underlies both capitalist industry and environmental degradation. By centering plastic, a prevalent and often single-use material with deep-time implications, the research delves into the ethics of consumption, waste, and care, advocating for more thoughtful relationships with materials that persist beyond human lifespans.

The inquiry is supported by Indigenous perspectives on interconnectedness and critiques of Western ecological thought, with theorists such as Max Liboiron, Tyson Yunkaporta, and William Cronon providing context. Through artistic, craft, and exploratory engagement with discarded plastics and other waste, the studio practice seeks to animate these materials, and cultivate curiosity among viewers as well as instigate more community-specific waste stewardship.

This research also draws on artistic influences such as Mary Babcock's focus on mending and reclamation, Helen O'Shea's animated use of plastic waste, Elizabeth Bleynat's community-specific material practices, and Neri Oxman's exploration of bioplastics and nature as a design collaborator, all of which inspire a re-enchanted and kinship-based approach to materiality in the face of environmental degradation.

Lastly, this research acknowledges and looks to practices like craftivism and participatory workshops, which can transform perceptions of waste and inspire localized and regenerative material economies. The work calls for a collective rethinking of environmental responsibility and for experimental pathways that merge ecological and artistic thought, aiming to foster sustainability through community engagement and material re-enchantment.

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Body:

I have focused my attention on the theory, contemporary practices, and my own studio practice that surround/encapsulate the following themes: decentering humanity's positionality with Western concepts of nature and the natural world, and rethinking the potential, care, and agency of material and waste through their reenchantment within contexts like industry and design (Gablik, 1991). The impetus for my investigation into these themes originates from my awareness of the urgent need to reassess prevailing western societal paradigms that have led to environmental degradation and its subsequent social injustices. Mundane and necessary tasks, like grocery shopping, cooking, and bathing, each confront me with questions about the materials I am using: where did its packaging come from? What will happen to the waste I produce which I cannot compost? What does it mean to throw something 'away?' (Franklin, K. and Till, C., 2018, p. 15) I consider the materials I interact with as kin (Liboiron, 2021), and each worthy of appropriate respect, consideration and care. The reason for this kinship stems from the inextricable nature of material from living systems, which is a concept Indigenous theorist Max Liboiron speaks about when they refer to plastic as a material being kin. They go on to explain how, materially and systemically, 'there's not really an "us and them,"' (Liboiron, 2022) when it comes to plastic due to the ubiquity of the material in ecosystems, infrastructures, and even bodies. They go on to further state that 'the point of kin is that they claim you' (2022), which is to distinguish this relationship from the 'fetishization of kinship that is rampant and well-fed in academia right now' (2022) which seeks to possess an identified other. It is true that while humanity manufactured plastic into existence, that plastic as a material exists today as its own entity, and interacts with humanity regardless of its creation's intent. These interactions certainly constitute a relationship, and one that is worthy of careful consideration and reaction, as with kinship.

My research and practice centers on plastic, due its ubiquity and presence within the human body, due to factors like pollution, medicine and as it is a material that is often made with the intention of being thrown away after one use (Duchen, 2024). Made from crude oil, also known as fossil fuels, plastic is a re-synthesis of the settled organic material on the ocean floor which were once ancient marine organisms (Turgeon, 2019). Because fossil fuels and plastic are non-renewable resources made from amalgamated ancient beings, it should be stranger than it is to pick up a bunch of onions in plastic mesh, made to be disposed of. Most household groceries

have a shelf life of two weeks, and when these biodegradable goods are juxtaposed with the plastic mesh which encases them, it feels as though the gravity of the materials involved has been confused. The forty-or-so calories in the onion will be promptly consumed and processed into bodily energy, while the plastic mesh will last thousands of years in a landfill, and whose nanoparticles will make their way into waterways to settle in the bodies of new, unconsenting organisms (Ocean Protection Council, 2024). This disregard for the deep-time implications of plastic as a material has been normalized by years of concerted marketing (Liboiron, 2021, p.2) and plastic deserves to be considered more thoughtfully throughout its applications within and outside of modern industry because of its kinship with humanity. This assertion has been shaped by examining theory and other artistic practices which center ethics, the realities of the carbon cycle, and the concept of re-enchanting materiality. By engaging with each of these areas within my own practice, I hope to propose alternative pathways towards more considered relationships with waste, the environment, and humanity's collective future.

The concept of 'nature' has been the subject of intense debate among the artists and scholars whose work I have engaged with. In his 1996 essay *The Trouble with Wilderness: or, Getting Back to the Wrong Nature*, theorist William Cronon examines the complex relationship between humanity and nature from a Western perspective, arguing that humanity has always existed within a natural context—and always will. While his theory begins to position humanity within nature, the ingrained human/nature binary that Cronon adheres to throughout his writing doesn't quite situate the human as inherently natural. A similar view is also echoed by theorist Timothy Morton, who introduces the idea of 'radical openness' (p.8) and who points out the fallacy of the human/nature binary that Cronon references, in his 2012 book *The Ecological Thought*. It is crucial to also look beyond Western theorists like Morton and Cronon when considering humanity's place as part of nature. While their perspectives in this enquiry highlight critiques of Western culture's limited and idealized reverence for the natural world, the intention of this research is to emphasize the need to dismantle the perceived separation between humanity and 'nature.' These misconceptions make up a key contributor to today's climate crisis, and addressing them and their origins is a vital step toward acknowledging and accepting responsibility where it is due. Although these Western thinkers provide valuable insights into ecological thought and offer their communities new ways of engaging with the environment, their work is often entangled with the biases of their cultural contexts, which can be

acknowledged by Cronon's reference to Indigenous peoples in the U.S. as 'Indians' (1996, p. 10) and his assumption a Judeo-Christian framework throughout his discussions of nature and wilderness.

Similar theories on ecological thinking can be found from Indigenous thinkers and scholars, like author Tyson Yunkaporta and Zoe Todd. Most of Yunkaporta's theory from his 2019 novel, *Sand Talk; How Indigenous Thinking Can Save the World*, also includes the inseparability of humanity and the environmental world, but focuses more on the ways in which everything is connected by sharing stories from his own community and observations he has made regarding his Western neighbors. Yunkaporta critiques the Western ways of finding 'uses' for the parts of nature that suit them, while ignoring the broader context in which that nature exists, stating that 'you have to work at holistic reasoning. You have to grow it from a lived cultural framework embedded in the landscape and the patterns of creation you follow there' (p. 173). What I found particularly resonated with my own practice was his acknowledgement that the current globalized market depends on the 'cult of reductionism' (p. 170), which is firmly rooted in the general material disenchantment associated with Western capitalism. Theorist Linda Weintraub describes this disenchantment as stemming from the 'standardized and anonymous' (2012, p.45) modern sources which, without fail, provide water from a tap, eggs from a carton, and heat from a furnace. The unquestioned accessibility of these resources, as they are removed from their contexts, has left those who interact with them and consume them unaware of the curious and impactful relationships those resources have within their larger ecologies.

An example of this material disenchantment includes the aforementioned grocery store onions sold in plastic mesh. Plastics are synthetic materials made primarily from petrochemicals, which are derived from fossil fuels such as crude oil and natural gas. Fossil fuels are sourced through extraction processes like drilling and mining. Crude oil, for instance, is extracted by drilling into underground reservoirs where it has accumulated over millions of years from the decaying remains of ancient marine organisms. Natural gas is often found in similar locations and can be extracted using similar techniques, including hydraulic fracturing (or fracking), where high-pressure water and chemicals are injected into rock formations to release the gas (Willow and Wylie, 2014). Once extracted, those raw materials are refined and subjected to a chemical process called polymerization, which involves monomers, or simple molecules like ethylene or

propylene, being chemically bonded together to form long chains called polymers. This process is what affords plastic its flexibility, durability, and resistance to degradation. The most common types of plastic include polyethylene, polypropylene, and polyvinyl chloride (PVC); each are created using different types of monomers found in the fossil fuels. After polymerization, the resulting plastic is typically processed into pellets or powders, which are then molded or shaped through techniques like extrusion, injection molding, or blow molding, depending on the desired product (Hopewell, Dvorak, & Kosior, 2009). While plastics are prized for their versatility and cost-efficiency, their dependence on non-renewable fossil fuels and resistance to biodegradation pose significant environmental challenges, particularly in terms of waste and pollution (Andrady & Neal, 2009). The lack of material context and gravity, and the ubiquity of disposable plastic in today's Western capitalist communities is indicative of the lack of curiosity and understanding about what makes up the current material reality. If considered as the material once was: 'an artisan substance that showcased technological ingenuity and skill' like 'ivory and then other animal-based materials such as shellac and tortoiseshell' (Liboiron, 2021, p.2), plastic would be kept and revered, or at least consistently reused. This concept is also discussed later in this enquiry with regard to disenchantment's remedy, or re-enchantment.

Re-enchantment is defined by artist and theorist Suzi Gablik in her 1991 novel, *The Reenchantment of Art*, and involves embracing aesthetic models rooted in the social and the purposeful; transcending the 'disconnectedness and separation of the aesthetic and the social' (p. 5) that can be attributed to the cult of reductionism referenced earlier in this enquiry by Yunkaporta. Reenchantment can also refer to the curiosity and care involved in considering the materials which make up daily life. This line of enquiry has led me to be curious about materials, like the plastic casing used to distribute onions, and more specifically, about those materials' fascinating deep-time contexts. Knowing the origin of a material, in the context of plastic, recognizing its synthesis as an amalgamation of ancient marine organisms and acknowledging that it will persist in systems and bodies for generations after my own lifetime has ended, has led me to consider its creative applications. Its material past and future are fascinating contexts which inspire my artistic practice and theory. Gablik further clarifies that reenchantment should allow for the 'return of the soul' (p. 11) into modern traditions like materialism, scientism and more: a clarification which can also be applied to the utilization of alternative materials like plastic in artistic contexts, which will be explored in the following pages. Relatedly, Indigenous

author and artist Zoe Todd's 2015 article, *Indigenizing the Anthropocene*, touches on a similar idea to Gablik's reenchantment and Liboiron's kinship when she emphasizes the need, specifically within the art world, for more place-based practices that highlight the potential of materials to be enlivened with relationship, sentience, will, and knowing (p. 248-250). Utilizing non-standard materials like plastic to create art is an important step toward re-enchanting Western capitalist communities, and one of the prominent roles of artists throughout history has been to communicate ideas and encourage curiosity amongst their viewers. These two points are why I utilize materials like local waste plastic in my art practice: I hope to re-enchant the public as to the presence and merits of their local plastic material kin.

Fig 1. Oxman, N. 2019. *Mediated Matter.*
[bioplastic single-use bag]

Artist and designer Neri Oxman focuses on drawing attention to the Western tendency to overlook humanity's relationship with the natural world, particularly in industrial contexts. Her research advocates for nature to be seen as central to future innovations and for the environment to be considered a 'co-client' alongside concerns like clientele and commercial viability (Oxman, 2023). This aligns with ecological thought, as Oxman emphasizes that humanity is not separate

from nature but an integral part of it: “Humanity is a part of Nature, yet the world we have designed has created a rift between us. It is now our responsibility to heal it” (Oxman, 2023). Her call for humanity to address this divide resonates with my own studio practice, but while Oxman’s work operates at an institutional and industrial scale, mine engages with materiality on a more achievable individual level.

Figure 2. Oxman, N. 2019. *Mediated Matter*. [bioplastic pavilion shaped like a closed set of wings]

Oxman’s practice critiques the current state of industrial material applications and explores alternatives, particularly through her use of bioplastics derived from organic materials like gelatin and chitin. Gelatin, for instance, is a byproduct of the meat industry, extracted from livestock bones and viscera, while chitin is sourced from the shells of insects and shellfish. Oxman’s experiments with these materials, such as the development of chitin-based biodegradable plastic bags (Figure 1) or artistic installations like her bioplastic pavilion (Figure 2), envision a future where industry incorporates more sustainable materials. However, these innovations raise concerns about unintended environmental consequences. For example, gelatins’ use in bioplastics might reduce reliance on crude oil-based plastics, but it increases demand on the animal agriculture industry, which itself has a significant carbon footprint (Moja, 2023). While Oxman frames her research as part of a move toward sustainability, there is an

inherent irony in the fact that both crude oil and gelatin are derived from the bodies of living organisms, albeit from different time scales.

Figure 3. Foden-Vencil, N. 2024. [Found plastic feed bag abandoned on an agricultural road in County Clare, Ireland]

Oxman refers to her approach as “biological alchemy,” suggesting an innovative reimagining of materials and their industrial applications (Oxman, 2023). Yet, her reliance on materials like gelatin and chitin without fully addressing the broader ecological contexts they come from raises critical questions. As Tyson Yunkaporta argues, there is a tendency in industrialized societies to isolate and use parts of nature that suit specific purposes, often ignoring the complex relationships these materials have within their ecosystems (2019, p.173). By extracting gelatin and chitin from their ecological contexts to meet industrial demands, Oxman risks replicating the very systems of exploitation her work seeks to counter. Her research is framed within a Western, capitalist-driven industrial system, which, as theorist Lynch points out, contributes “to the corrosion of democracy and community, encourage environmentally destructive patterns of consumption, and fuel militarism and imperialism” (2021, p.1). Moreover,

Oxman's work is developed within the Massachusetts Institute of Technology, a Western institution funded by the U.S. Federal Reserve and other private entities. While this does not invalidate the potential value of her research, it does limit its perspectives, particularly from marginalized communities that lack similar resources. As a result, Oxman's solutions run the risk of being shaped by capitalist priorities, which might obscure or overlook more localized, community-based approaches to sustainability. In contrast, my own artistic practice seeks to respond to this call for reconnection with nature on a smaller, more localized scale. I work with found and foraged waste objects, including plastic feed bags (Figure 3) discarded in agricultural fields, and fishing nets (Figure 4) washed ashore in County Clare, Ireland, both of which I find on walks around my community. By repurposing these materials, I aim to create art that not only highlights environmental issues but also empowers individuals as agents of positive change. Through my use of these found materials, I demonstrate how intentional material choices and community-specific solutions can offer alternative responses to large-scale issues like climate change, engaging with nature as a collaborator rather than merely a resource.

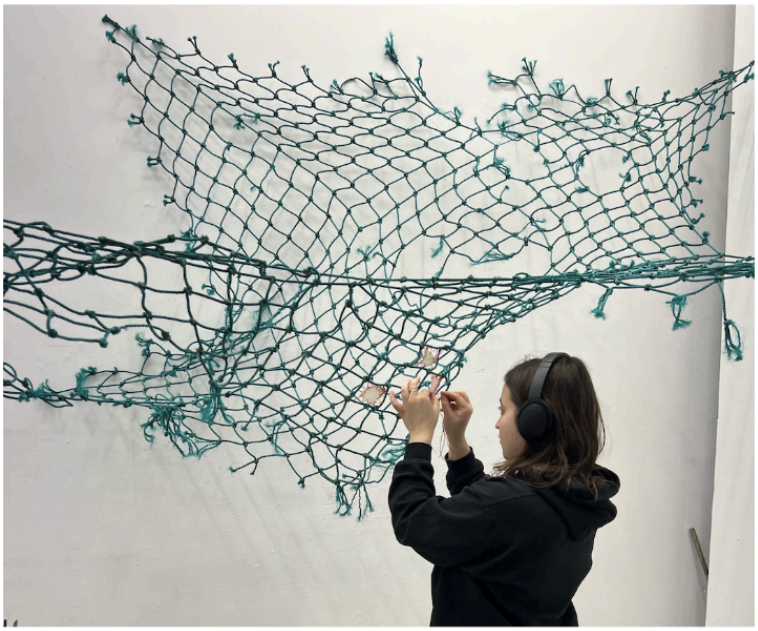

Figure 4. Foden-Vencil, N. 2024. [Found plastic netting from Fanore beach]

Not only does the limited Western reverence for 'nature,' described by Cronon, Morton, and arguably practiced by Oxman, serve to fracture humanity from its more-than-human parts and its identity as a part of nature, but it also creates a conceptual and ethical distance that allows harm to be committed against nature in the name of industry, progress, and the economy.

Theorist Patrick Curry points to the deliberate efforts of Western ‘dogmatic secularists,’ or those who dismiss ecological reasoning outside of secular and capitalist frameworks, and who delegitimize the concerns of those who remain enchanted by their connection to the natural world (Curry, 2011, p. 135). This systematic alienation is motivated by profit, as Anna Lowenhaupt-Tsing identifies, and is an act of ‘conquering an infinitely rich nature through alienation and scalability’ (Lowenhaupt-Tsing, 2015, p. 135). This practice can be understood as a symptom of a quiet, modern ‘crypto-religion’ (Curry, 2011, p. 136), which can be understood as a set of beliefs and practices that mirror religious fervor but are expressed within a secular and capitalist framework. In this framework, unwavering devotion to market principles and profit maximization often eclipses the ethical imperative to maintain a balanced existence as a part of the natural world.

Within this context of western secular capitalism, the reverence for objective global econometric tools, particularly the GDP (gross domestic product), is paramount. The GDP is elevated to a position of highest importance, and often overshadows the lived health and practical well-being of both human and non-human communities. Evidence from reputable sources such as the NIH, NASA, and the UN highlights the 'survival, flourishing, and distress' (Lowenhaupt-Tsing, 2015, p. 132) of populations, which often stand in stark contrast to reports of economic growth. Yet, due to the western emphasis on and enchantment with metrics like GDP, these contradictions are frequently ignored. The use of such objective tools by dogmatic secularist communities to mobilize or reassure populations mirrors the use of myth by religious leaders and Indigenous communities. Just as myth serves as a set of 'instructions or ethical prescriptions for respectful hunting, family life, ceremonies' (Kimmerer, 2013, p. 7), metrics like GDP have, perhaps unjustly and driven by ulterior motives, become mythologized in secular capitalist societies. This myth of the inflated importance of economic growth has shaped human behavior in Western communities and policy in the same way that traditional myths shape ethical conduct within Indigenous cultures. The globalized emphasis on GDP has co-opted humanity’s natural propensity for enchantment and redirected it toward a disenchanted and mechanistic understanding of progress and materiality, which has been touched on previously in this enquiry. This focus on economic metrics as the sole measure of success has justified continued exploitation of what is perceived as a separate and 'infinitely rich nature' (Lowenhaupt-Tsing, 2015, p. 135), reinforcing the same alienation and harm to the natural world that Curry and

Lowenhaupt-Tsing describe. In this sense, the mythologizing of the GDP as a tool for human flourishing reflects the same process of detachment and alienation from nature that has become endemic in Western capitalist societies.

The trouble with basing beliefs on facts like the GDP is the inherent non-objective nature of fact. Patrick Curry discusses the problematic nature of objective fact, as it stands to erase the observer: 'observation is always a kind of intervention. To pretend otherwise simply amounts to trying to avoid acknowledging and taking responsibility for one's own perspective' (2011, p. 13). A commitment to acknowledge the origin of an observation is imperative to operating ethically, which philosopher Maria de la Bellacasa also asserts; 'refusing self-erasure of attachments and inheritances is about acknowledging implication, about a way of thinking in interdependency that further problematizes the reverence to critical distance and the correlative value of 'healthy' skepticism' (2017, p. 80). Humanity's tendency to use myth and enchantment is authentic and appropriate, as it acknowledges the contexts and specific histories of those who exist within them. However metrics like GDP, cannot be used ethically as means of evaluating the health or state of a population, due to the fact that it dismisses the social, cultural, environmental, and individual dimensions which make up that population it seeks to evaluate. Similarly, much of western science also strips context from 'fact' due to its dogmatic objectivity; it denies the ecological context which surrounds and further helps define those concepts it seeks to understand (Kaishian, P. and Djoulakian, H., 2020). It is imperative to move away from the emphasis on globalized objective facts, as they deny communities of their specific culture and enchantment within their physical places. My own studio work seeks to engage with this shift, as I strive to utilize and enchant the waste and other materials which are not objectively useful or available in wider contexts. This shift from a global standard to community-specific celebrations of differences could have massive implications within industry, and in a broader context, could begin to mitigate some of the damage which causes further harm and change to the global climate.

In an effort to de-alienate communities from their place within nature, and to emphasize the importance and beauty of localized materials, I have been exploring the practice of material reenchantment by engaging with community-specific waste. By employing methods of care, including accessible and traditional craft practices like hand-sewing, weaving, and

detangling, it is possible to repurpose waste materials such as plastic. This practice aligns with the values of the craftivism movement, coined by artist Betsy Greer in 2003, which involves the 'combination of craft techniques with elements of social and/or digital engagement as part of a proactive effort to address issues of social, political, and environmental justice' (Fitzpatrick, 2018, p. 3). Artist Mary Babcock also employs these methods and materials (Figure 5) to examine ‘the spiritual, psychological, and socio-ecological issues surrounding climate change,’ and to explore ‘the possibility of reclamation through re-embracing “old” technologies and though systems considered to be useless and obsolete’ (Babcock, 2015.). She sees mending as an ‘actual reparative action’ and as a ‘metaphor for personal, social, and environmental change’ (2015), which is an idea also central to my own studio practice.

Figure 5. Babcock, M. 2015.
Hydrophilia I: The Salvaged Net Series,
[woven and detangled found fishing net]

One effective way to deepen this exploration is through the use of skills-based workshops, which could fill the gaps in community engagement by offering practical instruction on transforming waste materials into valuable items. These types of workshops were particularly popular in the 1990s, and are seeing a resurgence today as communities seek sustainable

solutions to waste. For example, 'plarning,' a clever portmanteau of plastic and yarn, workshops, like the one organized by a library that teaches participants to crochet plastic bags into sleeping mats for the homeless, provide not only environmental benefits but also opportunities for community building (Martin, 2019). Similarly, instructional blogs like *My Recycled Bags* offer accessible guides for creating plastic-trash rugs, showing that these crafting practices are adaptable and accessible to a wide audience (RecycleCindy, 2010). These workshops could be a powerful way to bridge the gap between individual artistic practices and broader community engagement, offering skills that are practical and actionable while fostering care for the environment.

An important element in my practice, as it relates to the waste plastic and its existence as kin, is the experimental nature of my process. With each new material I find and incorporate into my work, I have to discover what its boundaries are in my artistic context: how does it react to heat? Can it be sewn? Does it tolerate tension or bearing weight? Often, the final aesthetic of the piece I am creating is unknown to me until I have established a relationship and an understanding of the materials I am incorporating. This is not a unique phenomenon when considering the specialized techniques associated with traditional mediums. Clay tolerates being handled in a very specific way and will impact the final aesthetics of the works in which it is employed, as does acrylic or oil paint. However, there is generational knowledge and skill within these mediums that are taught and passed down in settings like art colleges and apprenticeships. The experimentation I employ when working with plastics feels like meeting and getting to know a new acquaintance, and hopefully friend. There’s an element of caution involved in developing these new relationships. For example, there is current research that suggests heating certain plastics can release DNA-mutagens (Mayrhofer *et al.*, 2023), respiratory irritants, and potential central nervous system depressors (Wang *et al.*, 2023); however most of these risks have been identified due to concerns around heating and eating food from plastic containers, which is practically unavoidable in today’s western world. Knowing these risks has led me to wear masks when using heat to experiment with plastics, and to approach each material with a respectful caution when engaging with them in a new way. Outside of getting to know waste plastics as collaborators in my own artistic practice, I hope to also contribute to a growing record of how other artists and makers might form relationships with waste plastics through my experimentations.

As illustrated by previous discussion which highlighted western humanity's reverence for and focus on the GDP as means of evaluating community quality of life, the human capacity and propensity to become enchanted is largely exploited by an effort to systematically displace humanity within its more-than-human context in order to justify the utilization of 'nature' towards an economic goal. However, the power of material and environmental enchantment, which Curry identifies as a threat to the goals of the current western, capitalist crypto-religion, is the key to engaging those who have been dis-enchanted by the 'standardized and anonymous' (Weintraub, 2012, p.45) materiality which pervades the daily life of modern globalized capitalism. Weintraub describes this dis-enchantment, which has served to separate humanity from its natural context, as an opportunity which artists might use to 'foster delight' regarding our material environment, to honor and refocus us on the 'statistical miracle known as 'life'' (2012, p. 45). This stance on the importance and use of enchantment as means of reminding humanity of its existence as the natural world is tantamount when addressing the environmental totality as it pertains to the issue of climate change and waste-streams It is something I believe can begin easily within community spaces, as it is something I have been exploring through engaging with and caring for waste in my own studio. The use of enchantment, and by definition, spiritual narrative, through materiality is a powerful and effective tool which can aid western humanity in dismissing their rigid definition of nature, and to re-immerse themselves into roles of active environmental stewardship and carbon-emission-mitigation.

An example of a contemporary artist whose' practice revolves around the exploration, enchantment, and utilization of waste material is Helen O'Shea. O'Shea's practice is a notable example of how it is possible to transform standard and anonymous material, like plastic waste, into sculpture. As a coastal Irish artist, O'Shea is an avid beachcomber and sea-swimmer who 'began gathering these materials and enjoys the challenges of responding to these used plastics' (O'Shea, 2023). Her use of plastic waste-material, especially that which she is able to collect within her own community, is a powerful and effective way of cultivating material enchantment and highlighting the potential of often-overlooked waste. Her use of repetition and light (Figure 6) add an animated, grotesque, and often delightful quality to the objects she creates, which imbue the plastic material with a sense of autonomy and agency. O'Shea's animated plastic sculptures embody the idea discussed previously in this enquiry regarding plastic's existence as humanity's kin, and the propensity for human enchantment by these waste materials is possible

by activating plastic within contexts like her sculptural bodies. While O'Shea's work is visually stunning and evokes viewer curiosity, the material alchemy which she creates through her work runs the risk of contributing to an ironic material disenchantment. To explain, one of the main resources O'Shea used to create *Ocean Dandelion* is repurposed milk jugs, which is an excellent use of plastic waste materials. However, the material reality of her work is somewhat lost through her transformative process. Of course it is possible to accompany her work with a written explanation of the materials she used to provide context, but there is an accessibility lost when the work needs to be explained, especially when materiality is central to the meaning behind the work. I am inspired by O'Shea's use of material, and by her ability to perform material alchemy, however I strive to maintain material identity in my own practice, as means of allowing viewers to be enchanted by the recognizable objects and materials which I use to create my work.

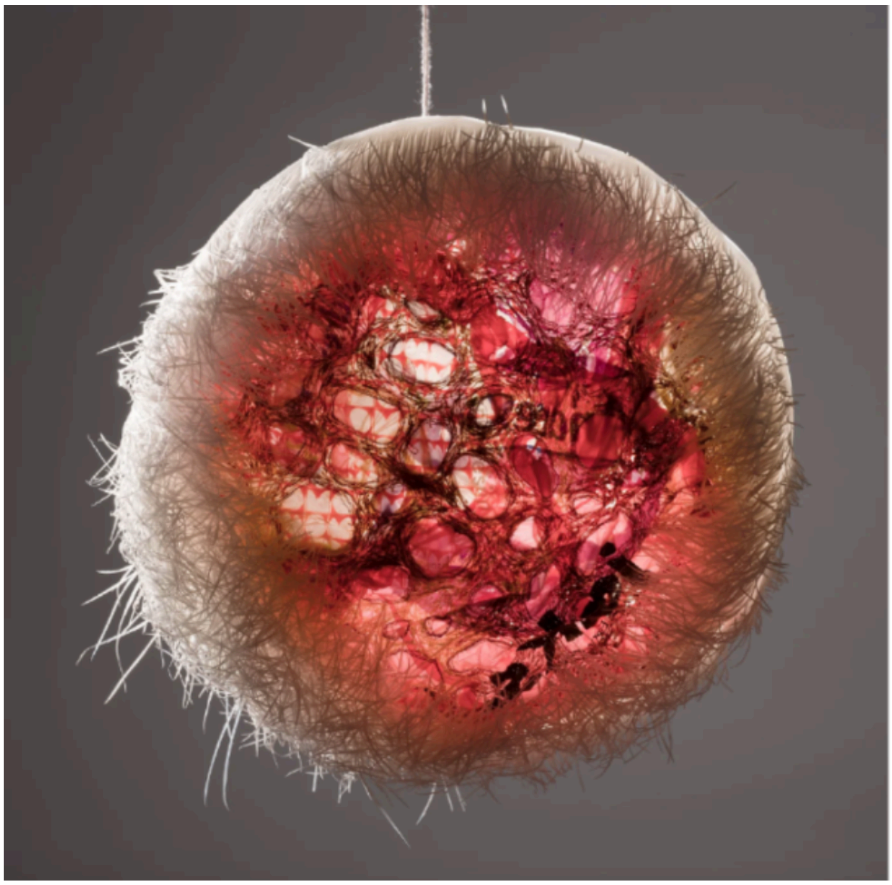

Figure 6. O'Shea, H. 2021. *Ocean Dandelion* [Reused HDPE, polythene shopping bags and pins]

Another artist whose practice reinforces the belief that plastic as a material is kin, would be Elizabeth Bleynat. Similar to O'Shea's, Bleynat's practice is driven by her relationship with the specific waste-resources available to her within her coastal community. She finds plastic objects, created by humanity for specific purposes, which have washed up onto the shore, and then activates them through concerted care and mending practices (Figure 7). Bleynat's method of concerted beach-walks is one I share in my own studio practice, and her concerns regarding 'mending and repurposing' (Bleynat, 2023) those materials which were made for specific human purposes is one I also engage with.

Figure 7. Bleynat, E. 2021. *Creature Studies*
[Repurposed fishing net sculpture]

In my practice, I engage with the local convenience store in Ballyvaughan, and have been garnering weekly the waste plastics which come directly from the palettes of unboxed and shelved community goods. I take these materials and create new objects, designs, sculptures, and beings from them through acts of craft, care, and experimentation. Through my practice, I combine these found objects with my own gelatin-based bioplastic tests and shapes, which often also feature organic elements of the places from which I have sourced the found plastic objects. These elements include different types of foraged seaweed, plant material, inks, and food waste

from my own groceries. I work with these foraged elements and bioplastics in an effort to showcase their value, and to reimagine the potential of resources which are specifically available within my community. By physically and intentionally re-purposing these specific materials using artistic and craft methods, I re-enchant the human community as to their unique uses and merits. As it stands, the current sentiment towards waste found outside traditional waste-management spaces, such as recology centers consisting of facilities focused on sorting and processing recyclables, compostables, and landfill waste, is often one of disgust, shame, and resignation. However, the reality of these materials as they persist in environments such as beaches and fields, is that their prolonged presence introduces microplastics and other harmful chemicals into local ecosystems. The transformation of these materials into new applications, reimagined within my work, alongside the potential benefits of the attention and care they might receive if they were re-evaluated and re-valued by the community, is central to my practice. In a manner similar to Oxman's reimagining of plastic on an industrial scale, I seek to highlight the potential of locally abundant, community-specific materials, like those found in Helen O'Shea's, Elizabeth Bleynat's, and Mary Babcock's practices that can be foraged and utilized to create

Figure 8. Foden-Vencil, N. 2023. *Ductwork.* [Repurposed aluminum ductwork, gelatin bioplastic, black paint, foraged nori]

meaningful, functional, and/or aesthetically valuable works. An early example of one of my experiments including these elements is Figure 8, which consists of a ductwork piping sourced from the local recology center, lit from the interior, and sealed by a locally-foraged nori-infused bioplastic plug. I created this object using experimental methods in an effort to enchant these materials by engaging with them through care, and to spark community engagement with the abundance of the surrounding waste materials available.

The re-enchantment of materials like plastic, through their recognition as more-than-human kin because they exist as a part of nature, can prove a powerful tool when confronting climate change. Currently, there are many approaches to adapt to the currently changing climate, but as Howard Herzog identifies in his book, *Carbon Capture*, the most effective tool humanity can employ is mitigation, which is defined by 'the reduction of greenhouse gas emissions that go into the atmosphere from human activity' (2018, p. 8). Mitigation requires a shift in the status quo, which is almost always a tough sell for those in power with the largest capacity to enact change due to the monetary pressures within industry to maintain the almighty GDP. Both Linda Weintraub and Patrick Curry acknowledge the harmful effect of globalization on industry and ethical consideration, as they remove people and materials from their contexts. Due to this contextual removal, consumers take for granted what they consume, and only know the 'objective facts' of their manufactured and intended function. Much like the previously discussed a-contextual nature of globalized capitalism and its perceived objectivity, the life of the material in question (in this case, plastic) is narrowly understood and failed by its consumers. Post-use, it is discarded, its life cut short, and ends up landfilled. Plastic materials represent the most problematic group to recycle, due to the many different, often layered, elements of modern packaging which require sorting before they can be treated. This sorting is almost impossible for most recycling facilities to process, and so many plastic packaging items end up landfilled (Coltelli, M., et al., 2021, p.367). This particular waste-stream is an untapped resource, and should be utilized in its both community-specific and global contexts. By re-enchanting plastic material through contextual understanding of its lifespan and kinship with humanity through artistic activation, repurposing, and mending, it would be possible for humanity to foster a sense of ownership, accountability, and care towards the material. This would allow for communities to work with the beauty and utility of the specific materials available to them, and create their own circular-waste-economies.

The upsetting reality of material waste in many globalized production contexts is unethical; ‘less than half of leather production is considered good enough for use as primary material; the remainder is discarded’ (Franklin, K. and Till, C., 2018, p.14), and this is just one example of a traditional industry standard. There is an undeniable need for rapid systemic change, as humanity currently relates to waste and material consumption. However, the assertion that there is no viable path forward unless we find ‘solutions that don’t change the way that we live and can be integrated into our current lifestyles’ (Lendager, 2018, p. 18), is uninspired and dismisses the fact that creating systemic change requires thinking outside of current experience and accepted norms. This view is asserted by industry professional and pioneer of utilizing post-industry waste in architecture, Anders Lendager, as means of adapting to and mitigating the effects of climate change. The work Lendager is doing to promote the benefits and the allure of what a more circular-economy might entail is promising and hopeful. However, he cites the preservation of a healthy GDP as top priority in making those changes, and I believe this faithfulness, and arguably reverence, to what’s meant to be a tool, rather than a genuine striving to understand the state of the communities that it is meant to help evaluate, hinders a shared ecological thoughtfulness among innovators. Even more broadly, this unquestioned traditionalism and defense of the status quo prevents people in positions of power who are capable of making policy changes from protecting the environment, and from adopting more ecological thought-based-processes.

Engaging with post-industry material waste, and considering it as a medium with which to make art, is an effective way of encouraging material enchantment by eliciting delight that is unrelated to its consumption and possession (Weintraub, 2012, p.45). Stirring enchantment by creating and highlighting the existing beauty and value of post-industry material waste is an inspiring way to encourage engagement and interest in localized circular economies. For plastic waste, which will persist in space and time for generations, the best environmental option is to reuse those materials, as opposed to recycling, energy recovering, or landfilling (Coltelli, M., et al., 2021, p.367). This is why I integrate locally foraged plastic waste into my own work and experiment with combining it with its potential, more ephemeral and ecologically-considered bioplastic descendent. Figure 9 is an example of a piece I created that centers the reuse and enchantment of community-specific waste. By suspending a discarded plastic fishing net I found on Fanore beach in my studio and through acts of care like mending, adorning, and sewing, I

reimagined the function and life of the material. Upon its completion, I invited community members to walk within and among it, hoping that the methods I used to care for this material would be accessible and clear, encouraging them to reconnect with it and form new associations with their own plastic kin. This participatory element is a nod to the educational and community-based focus of workshops I am interested in incorporating into my practice; like 'plarning,' wherein participants not only learn a craft but also reconsider their relationship to plastic waste.

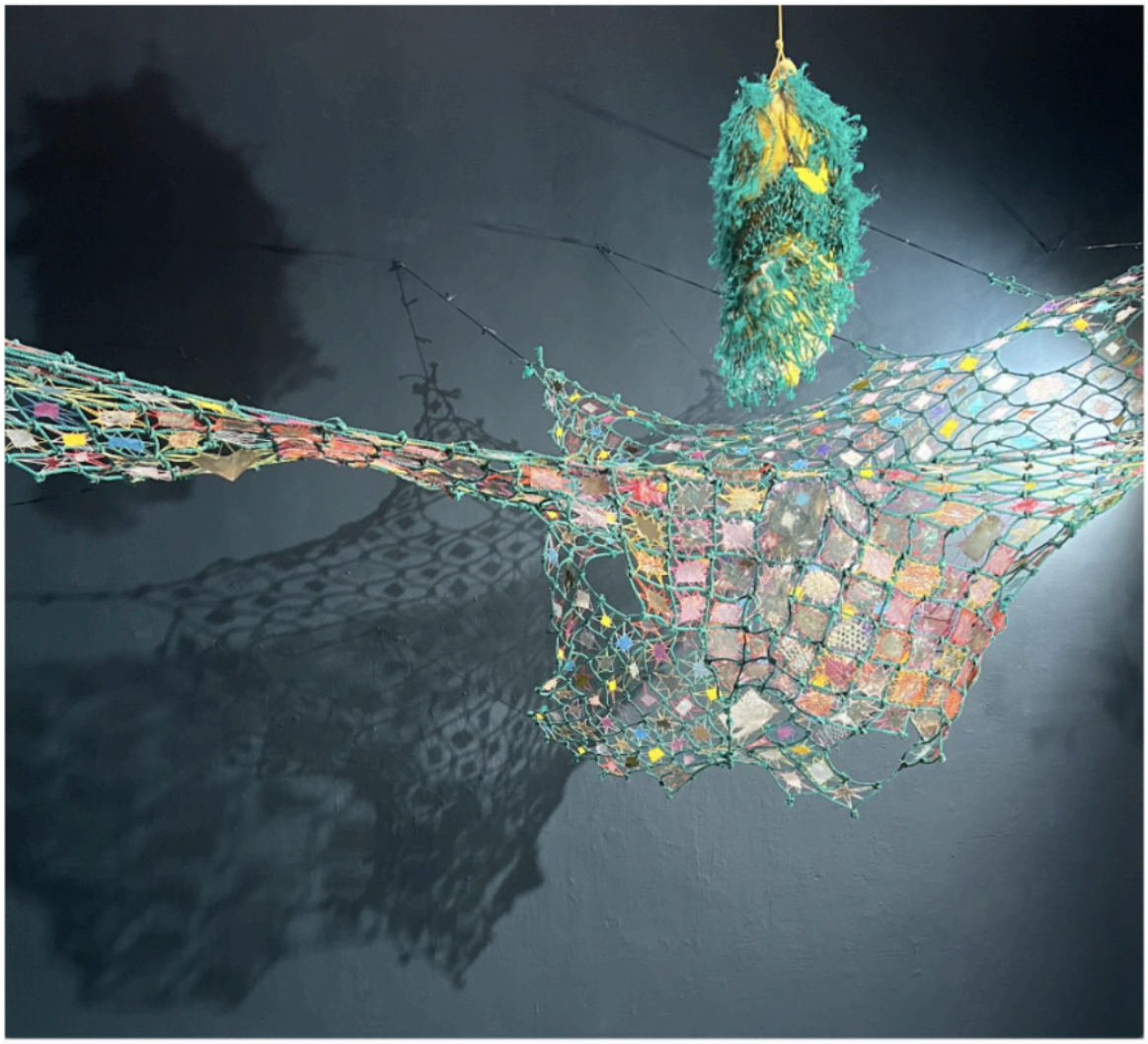

Figure 9. Foden-Vencil, N. 2024. *Enchanted Bones,* [found plastic net, found buoy, gelatin bioplastic, blue paint, foraged nori, found beach plastic, embroidery thread, eggshells, shaggy ink-cap mushroom ink, red onion skin dye, plastic mesh from onion packaging]

Pragmatically, this net in Figure 9 would have otherwise disintegrated into microplastic particles in the ocean near Fanore, potentially entering the local food chain via ingestion by fish

and, in turn, by humans. The deliberate engagement and care I show to waste materials like the net, and the creation of a space where the community can interact with their transformed waste, will hopefully inspire more individuals to explore uses for these materials. Engaging communities through workshops or public art interventions could help prevent plastic waste from entering local ecosystems, where microplastics have been linked to serious health issues such as endocrine disruption, insulin resistance, and cancer (Shabani Isenaj, 2023). These implications of human exposure to microplastics are concerning, but equally so are the unknown effects on non-human species within these ecosystems. With materials like plastic, there is an urgent need to acknowledge and act upon their removal from community waste streams due to the physical harm they pose if left to degrade unchecked. Skills-based workshops, like the examples mentioned previously, provide hands-on approaches to reusing plastic waste and offer a proactive solution by teaching communities how to engage with and animate the materials already present in their environments. I hope to move my practice towards offering these types of workshops in the future, and in an effort to establish such a practice, I will continue to utilize these waste materials to re-enchant their local communities.

The juxtaposition of the two plastic bodies in my work acknowledges the bodies which are directly involved in the synthesis of each material (ancient marine organisms in fossil fuels, and modern livestock in the gelatin), and draws a connection between them as kin. Currently, bioplastics, which would decompose simply, only make up ‘1% of the total market of 359 million tons of plastic produced annually,’ (2021, p.367) which leaves a massive opportunity for many fields to step in and innovate some ecocentric solutions. This opportunity is not being ignored; the previously discussed practice of artist and designer Neri Oxman’s *Mediated Matter* initiative is one example of an emerging and scalable plastic-alternative with the potential for industry application. The material dialogue between these two types of plastic offers historical context of their material journey, introduces more material kin, and provides a hopeful glimpse into what a circular economy could look like outside of the assumed globalized system. While I have explored the implications of design in my own practice, as with the lamp I created using bioplastic in Figure 10, I have found, due to the experimental nature of my practice, that the work I enjoy creating and which I find is most impactful falls within art, design, and craft spheres. Within my studio practice, I aim to continue to link my research to existing knowledge, theory, and artistic practices, and to contribute to the ongoing dialogue surrounding humanity's

ongoing relationship with plastic and waste. I hope to explore the transformative potential of enchantment and myth in confronting environmental challenges by engaging with local waste-streams, and employing methods of care to animate those waste materials to create opportunities for enchantment within my specific community.

Figure 10. Foden-Vencil, N. 2024. *Bioplastic Lamp.* [gelatin bioplastic, sawdust, aluminum eyelets, cotton thread, clay, underglaze, bulb]

Conclusion:

In conclusion, this research and studio practice propose a re-enchantment of waste materials, which would encourage a shift from Western capitalist perceptions of materiality toward relationships based on kinship, care, and ecological responsibility. By drawing on Indigenous perspectives and engaging with the works of contemporary artists like Mary Babcock, Helen O'Shea, and Neri Oxman, this practice underscores the importance of localized approaches to waste and emphasizes plastic's deep-time and ecological implications. Through

future community workshops and participatory art interventions, this practice seeks not only to encourage individual and communal action but also to plant seeds of interest and empowerment for a regenerative, circular economy where materials are valued as more than resources. Ultimately, this research and work offers one pathway for art to act as a medium of ecological thought, which hopes to empower communities to see themselves as active participants in moving towards a more environmentally considered future.

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monks restaurant, and from the packaged glass and plastic packaging involved in the creation of the sculpture

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Figure 1C. Horenstein, L. (2024) *Mesh or Sunset?* Burren College of Art, viewed 1 December 2024, oil pastel on recycled paper

Figure 1D. Loughery, A. (2024) *Reflections in a Waste-stream,* viewed 7 December 2024, photograph of oil pastel drawings on paper, made in a community workshop, and encased in plastic packaging waste from the local centra by Noelle Foden-Vencil

Figure 1E. Foden-Vencil, N. (2024) *Photo of workshop participants and artists viewing Reflections in a Waste-stream on opening night of the Close Enough 2024 interim exhibition*, viewed 7 December 2024

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Appendix:

During the time I wrote this thesis, I introduced a new technique into my practice which involves using an iron to flatten many different layers of single-use plastic packaging into one tarp-like material. This technique was adapted from scientist and artist JD Whitman's practice, and allowed me to construct my refrigerator-like installation piece, pictured in figure 1A.,

Figure 1A. Foden-Vencil, N. 2024. *Macro-before-Micro: a Refrigerated Meditation on Community Waste Streams*, [plastic packaging waste from the centra, monks restaurant in Ballyvaughan, and from individual members of the community. automobile plastic waste from bracken bros scrap yard in Ballycumber, and waste plastic piping from wasteland salvage yard in Scariff. marine plastic waste, foraged from Finavarra. Sounds are sourced from Noelle Foden-Vencil, her refrigerator, the refrigerator at monks restaurant, and from the packaged glass and plastic packaging involved in the creation of the sculpture]

entirely out of waste plastics found within my community in county Clare, Ireland. As is explored in the zine attached at the end of the thesis (see page 4, '*Future Considerations*') from research I pursued as a visiting scholar at the University of California, Berkeley over the summer of 2024, I identified some environmental and ethical issues that pertain to my own use of gelatin-based bioplastics in my practice. While utilizing gelatin to create the bioplastic elements in Figures 8-10 is materially interesting, and contributes to a reimagining of plastic as a material, the industry which produces the commercially available gelatin I used does not represent an industry which I believe contributes to an ecologically considered future. These findings pushed me to explore the potential of solely utilizing recycling waste plastics as artistic materials. The new technique I incorporated into my practice of plastic welding, allowed me to make the intentional material choices in my practice with community-specific materials which offer alternative responses to large-scale issues like climate change, and engage with nature as a collaborator rather than merely a resource.

Figure 1B. Horenstein, L. 2024. *Mesh or Sunset?* [photo collage of plastic Grocery mesh]

In addition to utilizing plastic welding to create an immersive installation entirely out of waste plastics, I ran a community workshop in Ballyvaughan with the Art Group I meet with and teach once a week, and with students at the Burren College of Art. The participants all agreed to make photo collages (figure 1B.) of their own personal plastic waste, and then utilize formal art techniques we had been learning over the course of the previous three months to recreate their collages in oil pastel drawings on recycled paper (figure 1C). The collages made from garbage

Figure 1C. Horenstein, L. 2024. *Mesh or Sunset?* [oil pastel on recycled paper]

were inspired by artist Candy Jernigan's practice (2006). During the workshop we discussed plastic as a group, and recycling, as well as the environmental origins and implications of the material as it exists in the current environment. After the participants finished their drawings, I offered them each the opportunity to show their drawings alongside the fridge-installation pictured in figure 1A. I then used discarded plastic packaging from the Centra in Ballyvaughan to create candy wrapper-like packages with serrated edges, which I then hung on the wall around the fridge sculpture (figure 1D). Most workshop participants came to the 2024 interim show,

Figure 1D. Loughery, A. 2024. *Reflections in a Waste-stream*, [oil pastel drawings on paper made by community members at an art workshop and encased in plastic packaging waste from the local centra]

Close Enough, at the Burren College of Art's gallery, and discussed similar topics about plastic and waste again with their friends and family (figure 1E).

Figure 1E. Community of Ballyvaughan (including members of the Ballyvaughan Art Club, and students of the Burren College of Art), 2024. [photo of workshop participants and artists viewing *Reflections in a Waste-stream* on opening night of *Close Enough* 2024 interim exhibition]

Leading these community workshops has allowed me to encourage community material enchantment in my own practice. It took three months to establish trust with the community members who participated in my workshops by engaging them in unrelated artistic pursuits and conversation. By the time I developed a workshop I wanted to lead, I had established the trust necessary with my community members for them to enthusiastically use alternative materials in their artworks. Not only did they come away with work they were proud of, they also engaged in conversations with their peers about plastic and waste, and they showed their art publicly alongside my immersive installation, which utilized the same materials but with different techniques. I hope to continue offering community workshops in my practice, and hopefully inspire different ways communities might engage with their waste resources.