The Power of Rejected Things

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THE POWER OF REJECTED THINGS

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The following thesis explored the waste generated by a small family of three, during 6 months, and its incorporation into the artist's work. Blending art and personal life, the artist used qualitative and quantitative documentation of her own household trash to expose the struggles associated with waste accumulation. Diving into the family consumer habits, Adriana faced the challenges related to overconsumption and its entanglement of the many layers of hidden economic empowerment related to waste. Using references from the history of waste, the artist highlights the inevitable impact of the rejected objects associated with the fast reproduction of non-biodegradable objects as a result of the cradle-to-grave designs, which implies waste being a social and environmental issue of our current time. Through a combination of studio practice and autoethnographic research methodology, waste is discussed from a wide to a personal perspective, while presenting the critical thinking and interdisciplinary practices that led the artist to self-awareness and introduced the circular economy as a more feasible, sustainable option. The artist considered this project a peaceful protest and a needed force to release the guilt of her own wrongful habits, powered by the responsibility of raising a human being.
DEDICATION

To my family, friends and all future generations.
ACKNOWLEDGEMENTS

I’d like to thank my family for letting me take over the basement for my artistic practice and waste accumulation. I also thank my parents for believing in me and for being present, even though physically distant. I thank my friends for understanding me, even when I couldn't use the right words to express it. I thank my advisors for taking the time to listen, and for sharing this interest with me. Again, thanks to all of you, friends, advisors and family, for giving me the psychological strength to move on and get this research done in a time when, in the midst of a pandemic, combined with an environmental crisis and the spark of a new war, the world around us seems to be falling apart.
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CHAPTER 1
WASTE - FROM ISSUE TO ART MATERIAL

Garbage, trash, waste, rubbish, refuse, junk, litter, dirt, filth, discarded materials, detritus…many are the words to refer to the rejected remains of society, whose existence is no longer needed. The act of rejecting an object has many ramifications, and has become a controversial point in contemporary culture. Waste has gained attention as an object of study in various fields. Its importance has been recognized by the current policies that considers waste services “a human right, an economic opportunity and an ecological imperative” (Reno 2015). While waste remains as one of the largest issues in the capitalist world, it also generates industrial, political, economic and social developments (O’Brien 2007).

Waste has gained exponential interest in the arts since the early twentieth century, mainly after the Dada movement which emerged during and immediately after World War I when many questioned whether the price for modernity’s material benefits was too high (Atkins, 1997). In response, unconventional, provocative, and highly conceptual works emerged through assemblages, performances, actions, large installations and interventions, taking place indoors and outdoors, going beyond the traditional art structures of galleries and museums (Manco 2012). Along with those movements, new material explorations emerged in the art scene, being an important part of the discourse of contemporary art, with critical messages, acting as science translators and calling for change (Yaeger 2003, Bell 2019).

The trash exploration in art has implied an important aesthetic change (Whiteley 2011). This has allowed wasted materials as art forms to increasingly find their place in galleries, museums, and in the urban space of cities. Gradually replacing the waste message of the ugly, the harmful, and the rejected, for the political, the critical thinking on consumer habits, the philosophy of the neglected and the
contemplation for the ordinary (Jassam 2019). Following this tendency, and influenced by this contemporary aesthetic phenomenon, I find inspiration in waste to expose the often unperceived signs of life that convey the critical message of ephemerality, and address issues of climate change, social resilience and sustainability. In this research, I critically analyze every step of my consumer habits, from the origin of the product, to the post-consume and its incorporation as art material. As I watch the accumulation of trash and explore the potential afterlife of its elements, I become aware of my role, as consumer and artist, in front of a climate crisis, while acknowledging some previously neglected aspects behind the simple act of ‘throwing away’.

How did the issue start?

Waste enters into our lives as an essential element of the commodity chain, and its management carries complex meanings that go beyond social and cultural values (Reno, 2015). Every purchase represents waste of some sort. Everywhere around the globe, trash is produced by the millions of tons on an absurd scale, generating an impact that extends into the future beyond us (Knechel 1997).

Once created, an object only has two alternatives, to be used, or refused. An object that is out of use, can still be considered valuable enough to become part of a collection (Reno, 2014. Once part of a collection, the object is seen as an artifact, as memorabilia, an object with intrinsic historical information. On the other hand, an object that is no longer considered usable, or valuable, becomes an obsolete artifact, a burden. The calculation underlying someone's decision on the value of an object is influenced by many variables, such as quality, culture, history, taste, economy, fashion, etc…These variables being in flux, sooner or later, everything is likely to lose value to active economies and function (O’Brien 1999).
Inevitably, once the object is classified as trash we throw it away, as we want the object to disappear from our sight. But the life of the rejected object does not end there. The act of throwing away, in reality, means taking them away from our senses; in particular, from our sight and from our sense of smell.

The reason that something is classified as rubbish, and therefore disposable, stands for a distinctly human need for order (Douglas 2002). Ordinarily, *filth* is a term of negative judgment, which is instantly seen as a threatening thing, person or idea (Cohen & Johnson, 2005). Therefore, when something is labeled as filthy, as dirty, it should intrinsically mean the act of excluding it.

Every country uses different techniques at different percentages for waste disposal, but very often the municipal waste collectors will simply transport it away. At times, ‘away’ being far from the city limits within bordering states where people are poorly educated and rights on land are weak and lacking in regulations (Gutberlet J 2008, Sundberg 2008). Next, it can either be ‘buried’ in landfill sites; melted down in incinerators; abandoned in external landfills; dumped into ocean waters, or it is simply exported to Third World countries (Dalzero 2016). In that sense, it becomes clear the antithetical aspect of waste distribution, where waste sanitation is an issue of social classes, geographically segregating and unevenly distributing environmental risks (Sundberg 2008, Moore 2009 and Moore 2012).

If the waste we were referring to was mostly organic matter that would eventually decompose as part of the natural food chain, it would become a manageable resource, and therefore would not represent a problem. However, under the industrial line of cradle-to-grave designs, objects come with the imposition of contamination and environmental degradation from the moment of origin to its discard (McDonough & Braungart, 2002).

Amongst the worst waste is plastic, a material that does not decompose. Instead, it breaks down into many tiny pieces that are often imperceptible to the human eye, and can travel far distances contaminating all life on the planet. Plastics have only significantly made their way into the world since
the 1950s, but have already drastically altered our society and environment. At this very moment, there is more plastic than plankton swirling in the North Pacific Ocean (Moore et al 2001).

From the environmental and social perspective, plastic is a problem from the moment of its creation to the moment of its disposal. Plastic has been associated with several synthetic harmful chemicals, such as pesticides, phthalates, flame retardants, bisphenol (BPA) and PFAS (Zanolli and Oliver 2019). Plastic history is tied up with the oil industry. It is created from oil, this precious non-renewable resource that leads economies and is the cause of conflicts in many countries. Ironically, plastic is a material with no intrinsic value from the moment of creation to the moment of discard, it does not reflect the real cost of its production or its impact. But because it is a material that has been used everywhere it is highly profitable.

Recently, scientists and activists started calling attention to the PFAS (per- and polyfluoroalkyl substances). This large group, or class, of toxic fluorinated chemicals are widely used in consumer products and industrial processes. PFAS are extremely resistant to breakdown and can build up in humans and animals causing serious health risks, including cancer, liver disease, decreased fertility, hormone disruption, developmental harm, and effects on the immune system, even at extremely low doses (Kwiatkowski et al. 2020). The only reason these toxic chemicals are still on the market is rooted in the same reasons why pesticides are still in use even after Rachel Carlson’s publication on the theme sixty years ago. It is because industries were, and still are, prioritizing profit over health (Carson 1962).

**Capitalism, Consumerism, Accelerationism**

Industries grew fast as they transformed resources into products. As industrialization boomed, other institutions emerged that assisted its rise: commercial banks, stock exchanges, and a commercial press all opened further employment opportunities for the new middle class and tightened the social network around economical growth (McDonough & Braungart 2002). The industrial revolution brought
many positive social changes, which reflected higher standards of living and increased life expectancy. Along with cheaper products, waste collection, sanitation and other conveniences, people, both rich and poor, witnessed what appeared to be a more equitable standard of living.

However, the Industrial revolution took shape gradually but quickly, solving problems as they appeared and taking immediate opportunities to grow infinitely without paying much attention to the consequences beyond economics. That made sense in a time when the resources seemed immeasurably vast, when nature itself was perceived as perpetually regenerative. Contemporary society is aware of the link between production consumption and depletion of resources. We are in the midst of an environmental crisis and much is being said about the urgent need to reduce CO₂ emissions to stabilize the climate. Carbon dioxide is the villain in greenhouse emission, produced at every stage of commerce, including production, transportation and disposal. Rich countries, including the United States are major sources of these emissions (Leonard 2010).

From an economic perspective, consumerism is an essential behavior to the positive functioning of capitalism. Capitalism is a financial framework established on the private possession of the profitable resources inside an economic system. These incorporate land, labor (including you as individual), and all other substantial property (e.g., cars, houses, industrial facilities, etc.) as well as intangible property (e.g., radio waves, mental property, etc.). In this economic system, people are free to create choices with respect to the utilization of their property, with the sole imperative that they don't encroach upon the property rights of others (mspolicy.org 2018).

While consumer buying is seen as a sign of national economic health, it can be a source of disease when out of control. Overconsumption can be a psychopathology, and is often associated with improperly stored or improperly discarded goods, representing serious life threats. Hoarding, or disposophobia, is a disorder known for its persistent difficulty discarding possessions, as consequence, the accumulation gets easily out of control, blocking doors, becoming a fire hazard and spreading...
diseases. This disorder is becoming surprisingly common, with somewhere between 3-6 million Americans thought to be compulsive junk hoarders (Humes 2012).

During the Cold War, consumerism was emblematic of an American way of life, promoted in advertisements as the country of ‘freedom’ and boosted by industrial developments. More recently, after the traumatic event of 9/11 in the United States, President George W. Bush strategically urged American citizens to consume (Shiller 2012). The political drive for acceleration did strengthen the American economy, but it also led to depletion of resources and generated a massive waste problem.

Surely this massive push for consumerism does not reflect only on environmental issues. It also has serious social impacts, such as increased psychopathologies, favored unfair trade markets and exploitative work relationships. In economic terms, many critics see the ideas of accelerationism as a production that is turning capitalism against itself, pushing its system to an absurd extreme until its collapse (Alex Williams and Nick Srnicek 2014).

The economic value of waste has been used in relation to production since the beginning of the 20th century. Ironically, if the value of something is determined by the action invested into doing it, then the act of discard would represent the characterization of ‘negative value’, things that are unworthy and do not deserve our time and effort (Graeber, 2001). The ‘political economy of rubbish’, as O’Brien (2007) calls it, goes beyond economic control and is certainly not limited to private corporations. Today, in many parts of the world, waste management is part of a complex network, including social initiatives and institutions that support health and energy regulations, and technological advancements on transformation of wastes. Of course, an intrinsic part of this material transformation is the capital development and the circulation of the economy. Unfortunately, governments are looking at the benefits of waste management facilities as technological advancement, not as a moral solution, but as a geographically exploitable capital.
Freedom Of Choice Or Psychological Manipulation?

Under the current neoliberal model of consumer capitalism, choice is a compulsion tied not to questions of use or even pleasure, at least not on a long term. Choice within the consumer capitalism system is directly connected with the production of never-ending desire, fetishitically achieved in the act of consumption, and ‘secretly’ fueled by the business environment of ever-increasing sales, in a myth of infinite growth (Haladyn, 2020).

In a philosophical sense, consumerism traces imaginings of the relationships between persons and things. Our strong compulsion to own and keep things is a basic impulse, potentially driven by evolutionary forces. Collecting belongings might be a way of signaling our status, our stuff essentially being proof of our genetic fitness (BBC, deeply human podcast, 2002). In society, our possessions are one way to signal status, dominance, and power (Haladyn 2020). It may be hard to accept that the objects we surround ourselves with play a role in accelerating consumer tendencies, but their undisguised replaceability is undeniable. Consumer choices are dictated not only by need, the chosen objects (often understood as goods) in many ways, serve within capitalist systems of valuation through visual language, reflecting social status, and inferring social segregation. Take technological consumption as an example, where usability is undervalued, but progress and advancement are overrated (Schlossberg 2019). We change computers and phones, often not because they do not work, but because we desire something new, with no conscious intention to produce waste. Strategically, industries are constantly branding new products as better and faster, making the issue of use irrelevant in front of technological acceleration.

The same happens when shopping for groceries; branding and advertisements have a strong sensorial influence in our brains when making decisions. The importance of marketing on directing potential customers has spiked since the advent of the internet. Being the market empowered by the
combination of approaches for maximum exposure (internet, visual, audio and printed ads), and the use of keywords that play out the right message.

In 1970, Earth day marked the largest environmental protest that took place on the streets in large centers of the US. The protests were focused on a wide critique of the new throw-away lifestyle that generates pollution. In 1971, environmental advertising campaigns sprouted in the media, the crying indian was an iconic one. Where a misrepresented Native American says, ‘People start pollution, People can stop it.’ This put the responsibility of controlling litter on individuals, instead of the industries. In the 1980s, the industry started to feel the impact of the environmental pressure and increased public concern on plastic pollution. It is estimated the plastic approval amongst consumers was around an average of 30%, which is pretty low. As a consequence, in the early 90s, a huge marketing campaign changed plastic favorability to around 60%. Since then, we improved the ways we collect our trash, taking it out of sight, cleaning up streets, expanding collection in rural areas, and giving people a sense of problem solving. As a way to take the plastic out of our sight, the US started to export waste to China. That happened for almost twenty years, until 2018 (Christopher, J. 2019).

Since the 1990s, there has been a growing trend of environmental concern which has spiked the use of green advertising and consumers willing to spend more for those green products (Roberts 1996). Under that trend, certain consumer choices became a sign of a privileged class. Using that same marketing manipulation approach, “sustainability” has become the ecological panacea term, used as a corporate apparatus with political roots that subtly alters the problem to a placebo discourse in order to maintain an economy founded on the depletion of resources. Our daily consumer habits have all been generating toxic waste that will, even when displaced far from our vision, generate enormous impact on other living beings. Entire ecosystems are being disrupted by diseases caused by pollution generated by human actions.
Trash, as a term, is not always condemned as hazardous. It has a wide array of concepts, from commodity, resource, object of management, archive, to fetish (Moore 2012). However, the flexibility of the trash concept allows for anything or anyone to be categorized as garbage. Trash easily becomes a signal of class and segregation, with a powerful impact on people’s lives. Constant manipulation is part of the power dynamic between leaders and the average population. These same leaders are often supported by industries in a mutual relation of advantages for both politics and industry. Social inequality can be advantageous to industries and politics, as it represents more workforce availability and less environmental pressure. Social and environmental concerns are part of the ethical forces that dictate the present economy and our future ecology. Nevertheless, we are spinning quickly in this vicious cycle, without even realizing how much we are controlled and how powerful our daily actions are.

**Waste as art material**

Accelerationism was not exclusive in industry, it was also visible in art. The mass reproduction of art entered the mainstream with cheap prices followed by the new living standard or economic growth of the new industrial system. When art becomes an industrial object, massively reproduced, it may risk the authority of that object, the visual is replaced by the ephemeral, ubiquitous, insubstantial, available, valueless, cheap. It becomes a souvenir, purchased as found in many museum shops and airports. For many artists, art has been threatened by the easy accessibility, the lack of originality and the superficiality of branding assuring a new kind of fictitious power to every single product, even though they are reproductions, as seen with Van’Gogh’s art on Figure 1.
In that sense, industrialism left a permanent impression on the art aesthetics. From the early twentieth century many artists started to criticize the specific speeding up of the logic underlying modern aesthetics. Marcel Duchamp initiated a mode of artistic production that challenged the institutional power of acceptance of an object as art. He proposed an alternative vision of the notion of accelerating culture in front of the mass production of a globalized world and the lack of uniqueness, with a critical approach to capitalism, mainly enacted in and through the concept of the ready-made. The readymades (Figure 2) as a mode of artistic production initiated in the early 20th century, mimics what we as consumers constantly do within consumerist society, choosing from the mass produced objects, items that are expressions of our ‘self’ (Haladyn 2020).
In 1962, the publication of *Silent Spring* by Rachel Carlson, prompted the new eco-consciousness actions on an unprecedented scale that ultimately led to the establishment of the US Environmental Protection Agency (EPA) (Brown 2014). In 1968, the art environment manifested itself with ‘Earth Works’ opening the field to new engagements with the outdoor spaces in the United States. With the creation of iconic works, such as Spiral Jetty from Robert Smithson and Double Negative from Michael Heizer, this controversial art form, represented by an intentional environmental impact, reflected the growing interest in the natural elements. Around the same time, Arte Povera emerged in Italy, with a solid grounding in the material choice. Where artists like Joseph Beuys, Hans Haacke, Eva Hesse, and Robert Morris have used unconventional materials and forms to make metaphorical statements about nature or culture. Along with the use of unconventional materials, waste, organic and found objects started to appear in the art scene. Beuys, for instance, besides the use of found objects with symbolic meanings,
would often go on to use natural materials like felt, fat and wax in his sculptural work (Figure 3), due to its universal relevance in the human struggle for survival.

Figure 3: Joseph Beuys, Hasengrab [Hare’s Grave], 1964–79. Wood, plaster, metal, paper, felt, plastic, glass, paint, fabric, glue, gauze, tobacco, sponge, wax.

In the early seventies, Dieter Roth also started his work explorations on junk materials as he described, “the work took on a life of its own, and by a slow process of accumulation became a multi-layered agglomeration…” (Figure 4). Roth’s work may provoke resistance and repuge, but it also initiates an inquiry into the fundamental nature of materiality and the fragility of human existence.
In the eighties, artists also turned the focus to waste, empowered by the social force of the new art scene found the space to the creation of environmental activist art. Mierle Laderman Ukeles, for eleven months in 1979-80, worked on the Touch Sanitation project where she offered a critique on the use of natural resources and waste management. Later in New York, Agnes Denes planted and harvested Wheatfield - A Confrontation (Figure 5), a two acre field of wheat on the Battery Park landfill, near financial corporations in Manhattan, in a property appraised at over four billion dollars, although abandoned. In this piece, Agnes Implemented a restoration in the sense that it changed an otherwise purposeless landfill into profitable and generative soil. Paradoxically, the restoration was subsequently irrelevant to the land’s financial value, or at least on the esteem as real estate. Conceptually, Wheatfield
symbolized food, energy, commerce, economics, and social history (Nemitz 2000). It makes a commentary on the inconsistency between the financial assessment of land and the biological value of land within the context of world starvation, exposing wastescapes as contradictory to financial gain and instead an expenditure of time and resources (Boetzkes, 2019).

The redefinition of restoration through a speculative ecological method is also present in the conceptual work of Mel Chin. On Revival Field (Figure 6), also located in a landfill site and close to the city center, Chin worked in collaboration with a scientist, Dr. Rufus Chaney, to use plants to detoxify the soil which was heavily contaminated by Zinc, Cadmium, and lead. This artwork was not only restoring the land, but it was connecting creative approaches to infrastructures of scientific knowledge production, the economy and technologies of waste management (Boetzkes, 2019). Hence, it expands the potential of public art to explore problem solving with active community involvement and through multidisciplinary collaborations (Nemitz 2000).
For centuries, artists have been inspired by the beauty and mystery of nature, using elements of the natural world in creative ways. In recent times, however, there has been a growing tendency in contemporary art to consider the natural world as more than a source of inspiration or a subject to represent. Since the rise of the environmental movements, artists have been teaming up with specialists from other disciplines, as well as community members and governmental institutions to work on complex projects. Through the union of art and science, a new way to communicate about ecological and social issues has emerged (Brown 2014).

Although the long history of trash use as art material, the increased environmental awareness of the past decade has prompted a series of recent events where art making turns into social and political activism (Priesnitz, 2007). Today, waste as art material has been explored by many well-known artists like Vik Muniz, Mark Dion, Robert Smithson, Chris Jordan, Diana Cohen, Tomás Sarraceno, Mel Chin, Michael Blazy, Mary Mattingly, Newton and Helen Mayer Harrison, Ridley Scott, and even Steven Spielberg, just
to name a few. This kind of art material plays an intrinsic social message through a diversity of approaches, but often, in one way or the other, is being used to scrutinize global capital (Boetzkes 2019).

Vik Muniz is the creator of probably the most famous waste art, in which originated the award winning documentary, Waste Land (Figure 7). The unusual choice of material on Muniz’ art work was, according to him (Muniz 2015) a way to expand the accessibility of art. Although socially engaged art was not part of Muniz practise, empathy with the public is one of the impressive aspects of his work (Lago, in Muniz 2015).

Figure 7 : Vik Muniz, Waste Land documentary film, 2010.
From the concept explorations, derived from the Duchampian fundamental ideas, Muniz found in photography a method to perpetuate the message from non-durable materials. Through his choice of material as concept exploration, Muniz is interested in the very idea of making the invisible visible, to a broader audience. From food, to plastic toys and various sorts of detritus, Muniz is not just presenting a social critique, he is also engaging with the public.

Chris Jordan also used photography as a tool for exposing the waste issue. In *Intolerable Beauty*, Jordan displays a series of photographs with dead animals and their open guts filled with plastic garbage. Through a sense of attraction and repugnance, Jordan shows evidence that human greed and excess it’s not a victimless crime (Brown 2014). He has also created a series of impressively large format photographs depicting the magnitude of America’s waste and consumption. In *Running Numbers*, Chris Jordan exposed mountains of cell phones, cars, and other post-consumed products, offering the shocking scale of our accumulated waste. Jordan himself describes the mass consumption and the process of accumulation as “a slow-motion apocalypse in progress” (Jordan, 2009).

Jordan, as Vik Muniz and other waste artists, offers an opportunity to have a conversation about important subject matter that cuts through art-world boundaries into the environmental and social sciences. As an artist, with a science background, I am intrigued by this new approach. Through the blending of disciplines, Chris has sourced information that led inspiration of the subject exploration. The *Running the number* (Figure 8 and 9) series, is an excellent example of how he used a set of data from scientific or governmental resources to bring to light the absurdity of the real statistics behind consumption and waste accumulation.
Figure 8: Chris Jordan, Gyre, 2009. Depicts 2.4 million pieces of plastic, equal to the estimated number of pounds of plastic pollution that enter the world's oceans every hour. All of the plastic in this image was collected from the Pacific Ocean.

Figure 9: Chris Jordan, Gyre, 2009 (close up).
Introduction

You are born with no possessions, naked, little, with no idea of the meaning of ownership or even things. Soon enough you are lucky if the first thing that touches your skin is your mom’s skin, most likely a latex glove and a plastic bracelet that goes on your wrist with information about you. From that moment on, with every action, you will be generating trash (John Knechtel 2007). As you grow you are constantly throwing things away. Amongst the rejected items are lots of food, and other nature sourced elements that could probably have been used more consciously. But also plastic - lots of plastics.

The diary of a hypocrite

Since I was a child I have memories related to trash. I remember playing with an old plastic container, my dad fixing a broken radio, and the joy of receiving a bag full of hand me downs. I grew up learning that what is trash for some is treasure for others. Probably from seeing the waste pickers on the streets of my hometown, carefully selecting the recycling material of their interest to sell back at redemption centers. Or maybe from the proximity with the favelas, where often entire families live in huts made out of trash (Figure 10).

Later in life, while studying science, I have become aware of our environmental issues and the impact of waste. It has been more than 20 years since I have acknowledged the massive problem generated by poor waste management. Being raised in a third world country, I have witnessed the issue with my own eyes (Figure 11). Where you see trash on that image, was where a river used to run. All of that trash is not simply dirty matter out of place as described by Douglas (1984). It violates our rights, it messes with our sense of order, it invades boundaries, it changes ecosystems, intoxicates animals,
spreads diseases and leaves a long-lasting impact. Sadly, as said by Knechtel (2007), ‘this is a mirror of humanity’. A mirror that exposes the human disregard with our own species, and our failure to take over and control of the physical world.

Figure 10: Bairro do Fundão, Rio de Janeiro, 2022.

Figure 11: Landfill Neighborhood (Bairro do lixão), Rio de Janeiro, 2012.
Even after studying and working with environmental conservation, I only became aware of the extent of toxicity on consumer goods a few years ago while I was pregnant. I was shocked to learn from scientific research (sixclasses.org), that many of the items I have in my house did and will continue to leach toxic components to the environment and to ourselves. From the paint covering my walls, the siding surrounding my house, the treated wood on my porch, the oil that heats my home in the winter, my mattress cushioning, the PFAs release in my food packaging, the ink that polluted rivers and coloring my clothes...Everything that surrounded me and touched me was all of a sudden terrifying.

From that moment on, I have been trying to make better consumer choices for my daughter, buying less and prioritizing products that are safe. Nevertheless, I feel tied to an inevitable toxic chain of consumption. While I teach my child to reduce waste by showing her the life cycles while gardening, recycling and composting, I am still “throwing away” the plastic bags of trash we generate every day. It couldn't be more hypocritical. Like many people, I find it easy to ignore a normalized action such as the act of “throwing away” when you are not living with the overall volume of your own waste production. There is still a lot to learn before addressing the problem. For that reason, I have decided to take a closer look at my waste aiming to find out how much I was in fact contributing to the staggering amount of toxic waste. Below are some pre-assumptions from our consumer habits:

**Food:**

My family and I appreciate a healthy life and good eating habits; prioritizing vegetables over meat, organic and natural over processed food. Our consumer habits are somewhat minimal to avoid waste. During warmer months of the growing season we have a garden that generates fresh veggies that can supply our green needs for a few months. Therefore our food waste should be near zero.

**Cleaning:**
We don't use a lot of cleaning supplies. We limit ourselves to mostly water and soap, and one cleaning product. We use wrap-free dishwasher soap, castile soap for general cleaning and one antibacterial product for cleaning the bathroom. The waste on cleaning products and cosmetics will probably be very close to zero.

**Cosmetics and personal care:**

I don't use makeup and whenever I buy lotions and hair products I look for brands that are naturally based and make environmentally conscious promises. The waste on cosmetics will probably be very close to zero.

**Clothing:**

Once a year, at least, I go through my wardrobe and get out every unused item. I usually get at least two bags full of clothing that is surplus for me. I gather my friends and offer what I have, or bring them to a consignment shop for sale. Therefore, no waste here.

**Toys:**

We avoid buying plastic toys and enjoy offering my daughter an organized environment with minimal options and more natural elements. Our waste generation here should be zero.

**Furniture:**

Thanks to our minimalist style we don’t have a lot of furniture. But the items we have were mostly either second hand, or built by us, or purchased from Ikea. No waste here.

**Material and methods:**

**The Resource Inventory**

Since September of 2021, I have been collecting data of my family’s waste generation. For six months, I have been using a pocket notebook with a sleek black faux leather hard cover, to register qualitative and quantitative information about our trash. This inventory, with a numerical and physical
presence was critically analyzed and exposed through the creation of conceptual art pieces (in Chapter 3). This research was focused on trash production; therefore, not all sources of waste were considered in the data collection. To be included in the research, the object must involve the act of “throwing away”. An object that was no longer considered useful, or valuable was then categorized before discard.

First, the subject of rejection is classified as sanitary and unsanitary. Four trash bins were used on the first sorting stage. One bin was used for bathroom waste, and three for kitchen waste. Being one large bin for material that can be sanitized, including recycling material, one other bin for composting waste, and another one for outside discard. The last one, with the unsanitary Bathroom waste, was weighed before discarding. The weighted material represents the only waste that I will keep “Thrown out”, and to be collected by the town. All the materials were stored dry and clean and organized by material type (Figure 12). All paper material, such as food packaging, cardboard boxes, newspaper and mail were compacted in piles together. The glass materials, bottles and containers, were stored in large plastic bins (Figure 13 and 14). The same was done with the metal, including items such as wires, soda cans and canned products. Plastic bags were stored in a large vacuum bag separate from other plastics. Initially, a large wooden box was used to store all the plastic containers, but it later expanded to large plastic construction bags.

While the waste accumulated in the basement I continued to take notes of every new item added to the pile and every trash bag was weighed before leaving the house. In parallel to this process, I have also photographed some of the waste material. Once the materials were organized I started the experimentations of each material composition individually which is described in the third chapter.
Results:

During the six months, I have accumulated 356 plastic containers, 129 plastic bags, 16 feet of air pillows, 6 square feet of styrofoam, 103 metal cans, 35 cardboard boxes, 63 glass bottles, over 146 paper food packages. The volume of the waste, even after being efficiently organized, occupied an area of 10x4x5 feet. Most of the waste volume was composed of plastic materials, followed by paper.
The plastic waste was mostly from what I considered non essential items, like juice bottles (graph 1).

The waste that was collected by the town ranges from two to eight pounds a week, with an average of four pounds a week (graph 2). Variations were noted to occur with social gatherings and sickness, due to the volume of tissue or food production increase.

No data was collected with the intent of comparison from the before and after this research. However, from the personal perspective, there was no evidence of correlations between the beginning of this research and difference on the waste production, since no changes on the consumer habits were effective during this time.

**Daily trash:**

![Count of material diagram]

Graphic 1: percentage of average daily waste produced based on material.
**What was going out:**

![Graph showing waste weight (in pounds) on collection date.]

**What I was keeping:**

**Plastic kind:**

![Pie chart showing percentage of waste accumulated based on function.]

**Graphic 3:** percentage of the waste accumulated based on function.
Discussion:

The first presumption of my family’s waste leaves the impression that we are Zero Waste, where there is infimal, or no trash, to enter the waste stream. However, one look at my trash can and it would prove it wrong (Figure 15). The quantitative data of the waste on graph 2 evidentiated that my waste was not zero.

Figure 15: Inside my family’s trash can on the Municipal Waste collection date.
However, when looking around my neighborhood, the volume of the waste disposal was apparently less than the average in terms of volume (Figure 16 and 17). Note that our waste production rarely surpassed half the volume of the trash can (Figure 15). While I often witnessed overflowing trash cans on my neighbors' side (Figure 17).

Figure 16: Municipal Waste collection date, my own trash can, 2021.

Figure 17: Municipal Waste collection date, my neighbors trash can, 2021.
The Environmental Protection Agency (EPA) has, for over 35 years, collected and reported data on the generation and disposition of waste in the United States. According to the EPA data of 2018, the total generation of municipal solid waste (MSW) was 292.4 million tons, which represents an average of 4.9 pounds per person per day. When summing up the average weight of waste I was keeping (mostly recycled waste) with the largest amount of waste that I was sent to collection (on the week of March 19, see graph 1) and dividing it by the 7 days of the week, and then divided by three (the amount of people in my household), I get close to 0.68 pounds per person a day. This is a lot less than the American average presented by the EPA. From the 4.9 pounds per person, from the EPA data, it is estimated that 32% of the MSW were recycled and composted, and 68% is probably going to the landfill. In my case it was 34% recycled and composted and 66% was going to the landfill, which is very close to the average, even though in my case I was still trying to divert waste from the landfill.

Paper and paperboard products made up the largest percentage of all the materials in MSW, at 23.1 percent of total generation (EPA data). Which can probably be justified by the increase in online shopping, and paper packaging (Villanueva & Wenzel, 2007), since the increased digitization has declined the use of office-type papers and newspapers. In my case, plastic was the largest volume. However when considering the weight, plastic being lighter than paper, paper accounts the highest percentage of waste. Paper however is decomposable while plastic is not.

Food waste comprised the second largest material category, estimated at 63.1 million tons or 21.6 percent of total generation in 2018. Historically, according to the EPA data, the generation of waste since 1960, has increased from 2.68 pounds per person per day to 4.9 pounds per person per day in 2018. In my case, food waste was not calculated separately; however, considering that we compost, our food waste was mostly composed of vegetable peelings and organic matter that will easily decompose. Instead of generating impact, it will be resourced as nutrients for our garden.

The amount of food being wasted by the average American is worrying. Amongst the issues is
the ethical aspect of wasting food while hunger is growing in the world. Globally, one in nine people in the world today (815 million) are under-nourished, over 30 million children under the age of five years are dangerously underweight (FAO, UNICEF, WFP, WHO, 2017).

Another problem regarding food waste is related to contamination of household waste containing organic (biodegradable) materials. These materials attract animals and are the source of many diseases, such as tuberculosis, giardiasis, histoplasmosis, salmonellosis, leptospirosis, some of which can be fatal (Gutberlet and Uddin, 2017). These risks can be reduced by proper waste sorting that should be done in the household at an individual level. In rural areas, such as where I live, household waste also attracts wildlife (Figure 18), disrupting natural food chains and putting these species at risk of diseases and other related accidents.

Figure 18: My neighbor’s trash being visited by a raccoon, 2022.
In third world countries, like Brazil, the municipal waste collection is combined with informal sectors of waste pickers who collect and recycle household waste driven mostly by the need for jobs. These waste pickers are organized in cooperatives and community-based initiatives, establishing door-to-door selective waste collection. This contributes to maximizing recycling rates and minimizing environmental hazards by avoiding improper waste disposal (Reno, 2009, 2014). Ultimately, waste pickers are working towards resource recovery and towards an ethics of salvaging, recovering, and circularity (Gutberlet and Uddin, 2017).

While visiting Brazil in December 2021, I witnessed the building concierge sorting through the recycling waste from residents to ensure proper selection before the waste pickers (Figure 19). That relationship amongst the waste pickers and concierge, to me, is proof of an ethical and respectful collaboration. That kind of attitude should be replicated in our homes. The correct sorting of materials is key for the recycling to work, therefore, it's our job as individuals to properly dispose of recycling material.

Figure 19: The concierge bringing the sorted recyclables outside for collection.

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However, recycling industries are often struggling with material contamination. It is important to point out that it is our job as consumers to facilitate the recycling process by sorting materials, however if the industries responsible for the production and disposal of material do not offer clear information about the correct way to dispose of materials to start with. Labeling is an important tool to communicate the characteristics of the products to consumers, including disposal (Banterle et al., 2013). However, the amount of information that can be placed on the label is limited and it does not always have a positive influence on the effectiveness of communication (Wansink et al., 2004). The lack of standardization and regulation of the industry, producers are enticed to create misleading green marketing, undermining consumer trust and generating confusion (Banterle et al., 2013). That is the case of recycling logos, even products labeled as 100% recyclable aren’t actually recycled. Mostly because it is not economically viable, being a material that will lose its properties during the recycling process or because its energetic use for recycling surpasses its benefits. Lack of clarification on behalf of industries and waste management industries is a common issue and a problem that is being forced by the creators of such plastics, with intentions to sell more.

Following the pressure of states and environmentalists to better indicate the types of plastics to facilitate recycling, industries created the code number system that appears inside the well known symbol for recycling, the chasing arrows. However, the coding number is not self explanatory and leaves the impression that all of them were actually being recycled. The fact that recycling plastics are actually mixed with plastics that are not recycled, is causing a huge problem to the recycling industry. Take the example of Orono, the home of University of Maine. Here the only plastic that is recycled are types 1 and 2, however, on Casella website (https://www.casella.com), they do not specify that. Looking back at each item on my plastic waste production (Figure 20), 2/3 of it is plastic number 1 or 2, like juice bottles, milk jugs and some food containers, that means that ⅓ of the materials I have sent to the facility are in reality
not being recycled, things like yogurt containers, packaging and cosmetics. When that happens the entire sorting process gets contaminated and therefore can not be recycled. Like me, most people do not pay attention to the recycling instructions on the plastic containers, sometimes the lid or the label are not made of the same material as the container and should not be mixed with the recycling stuff. Another example of unintentional impact, at the consumer end due to the lack of information, is the compostable plastic. Many places, like the University of Maine are substituting their plastic food containers for compostable plastic. However these plastics can only be compostable at a specialized facility, they will not decompose in a regular compost and should not be mixed with recyclables.

Increased awareness of environmental issues has influenced consumer choices and that is generating effects on the product system (Peano et al 2015) including use, management and waste (Tascione & Raggi, 2012). A close look at my own waste and I can see the influences on my consumer choices. A preference for eco-brands is evident, including repetitions of terms like whole, natural and organic. However, the misleading labeling, with eco-branding advertising, is a tool for industries to continue to sell products that are toxic to the environment and for us. Plastic, for instance, is currently found in many shapes and forms, from packaging, clothes, furniture, but only a small part is recyclable. As a consequence, we have today a planetary crisis, plastic loads in oceans have been building up for decades. The industry that makes plastic is expanding, the US being the world’s largest plastic producer. The EPA reports that the plastics generation has grown from 8.2 percent in 1990 to 12.2 percent in 2018.
Figure 20: Examples of my family’s plastic product consumption.
The common sense should be if the product is not recyclable and its disposal results in toxic release in the environment, it should not be produced. It's important to point out that one problem is tied to another. One example is with shipping produce. Today fresh produce travels long distances to get to our tables quickly and in good condition. Plastic performs a good job on avoiding waste of fresh produce and safely transport it. Once fragile produce, a sturdy plastic shell keeps the produce isolated in a safe controlled environment for transportation and display. Therefore, when we buy salad today, which originated from far away, then it is cleaned and wrapped in plastic. When I purchase it, it looks pristine and appealing. That plastic however is not recyclable. Industries instead of investing so much in eco-branding, they should invest in educating consumers how to use their products, and that includes correct disposal as it is a health issue (environmentally and physiologically).

Many are the influences on our consumer choices, such as convenience, habit, value for money, personal health concerns, hedonism, and individual responses to social and institutional norms (Vermeir & Verbeke, 2006). According to Reisch (2010), sustainable food consumption can be understood as: ‘safe and healthy in amount and quality; and it has to be realized through means that are economically, socially, culturally and environmentally sustainable – minimizing waste and pollution and not jeopardizing the needs of others’. During the last few decades, ethical concern and its influences on consumer choices has grown both in terms of scale and scope (Hasanzade et al., 2018, Ryan & Casidy, 2018). Ethical goods, however, are usually more expensive than conventional choices, hence customers must be able and willing to pay a higher price in order to engage in ethical consumption. Therefore, there is an inherent understanding of how consumer choices are tied to social class and education. Looking at my household waste selection, my privileged position becomes clear. I am able to make the choices based on ethical and health concerns over product value.
CHAPTER 3
THE CREATION OF MEMORABILIA

Introduction

Waste is undeniably a complex issue. As discussed in the previous chapters, it requires economic investments, governmental regulations, environmental management and social engagement. It affects society on different levels, increasing social disparities, causing cultural tension and it’s loaded with psychological manipulation. Environmentally speaking, waste causes impacts that are irreversible and threaten many ecosystems in the planet and even our own survival. Nevertheless, waste is an easily avoidable subject. There is something incredibly wonderful about the apparent sense of disappearance of an object after the waste collectors take them away. It makes it easy to realize the impact that you are generating, or to even think about it, once it’s out of sight.

However, behind the apparent unworthiness of the objects we throw away there is an invisible economic value. A value that we consumers have already paid for. A value that costs our natural resources and our biodiversity. Unless that product circles back into the economy, through reuse or recycling, that is a value that is likely to be lost in a money pit called landfill. I wouldn’t be surprised if not far from now our landfills turn into mining sites. Where all the once rejected matters are valuable again, due to the lack of resources. As a matter of fact, landfills are like archeological sites, where artifacts of the present are hidden from society to one day be discovered by another time or culture. The history of waste is linked to our social history, in ways that goes beyond the future to come. However, unlike any historical artifact, or memorabilia, we do not want to keep these objects.

The recognition of humanity as a geological force, evidenced not only by climate change but also by other kinds of anthropogenic transformations of ecosystems, drove Paul Crutzen (2002) to propose ‘the Anthropocene’ as a new geological epoch. The Antropocene, became a time where remembrance of
knowledge historically dissociated, but with cultural, biological, physical, chemical and socioeconomic influences (Malm & Hornborg 2014, Crownshaw 2017). During this geological period, the Industrial Revolution marked the initial knowledge of its environmental consequences, with the initial prognosis as to what an industrially driven environmental future might look like. This knowledge is subsumed by the ascendency and prevalence of ideas of security, prosperity, liberty and the instrumentalization of nature and freedom from its determinants, which are the fossil-fueled economy. Plastic entered the Anthropocene as a cheap and viable solution, to fill consumer’s increasing demand for items that were becoming more difficult to get, such as silk and ivory, facilitating mass production and consumerism (Davis & Turpin, 2015).

The understanding of the Anthropocene, in all its economic, social and political forces, and its actions toward waste, led me to develop a conceptual installation called the Speculative Future and Evidences of the Current Time. Divided in two independent sets of pieces, one being a wall component (Capsules) and the other one being a space for social interaction (Waiting Room), in which I have created entirely with my household trash. Through the creation of these functional pieces, I wanted to add new value to my waste. A value that indicated aspects of our current time and its associations with memorable events.

**Material and methods**

The qualitative and quantitative analysis, presented in the previous chapter have originated the definition of the concept and after several material experimentations (as seen on appendix 2) the final art pieces were created. The wall pieces were composed of ten organically shaped units, while the waiting room installation depicted two chairs, one side table and a lamp created as described below.
**Capsules**

The structure of the capsules were essentially built from chicken wire scraps, left over from the garden, wrapped in strips of local newspaper that involuntarily appeared in my mailbox (Figure 22). The newspaper was purposely placed to expose meaningful words of the present moment, the paper strips are then glued together by a mix of water and school glue. The dried paper forms a shell which is later covered by a polyester sheer fabric, that originated from old curtains, and creates a sense of clean surface while still leaving the underneath layer somewhat visible. The inside of the capsules is composed of one (or two) plastic containers, usually cut in half and stacked, with a piece of cotton rope inside the containers, connecting the top and bottom part. After that set up, the surrounding of the containers are filled with plastic bags, which stabilizes the containers inside the structure. The top container is filled with soil and a plant is placed inside. After watering the plant, the excess water will drain from the top to the bottom part, the water retained will then be absorbed back again through the cotton rope, keeping the soil moist and preventing water waste. The plants used were all edible. A total of 12 plastic containers and over 300 plastic bags were used in these structures.
Figure 21: Material composition of the Capsules.
Figure 22: Details of the construction process of the Capsules.
Waiting room

The waiting room depicts two chairs, a side table and a lamp. The chairs followed a similar methodology as the capsules (Figure 23), where first the chicken wire was cut, molded and attached by hand to create a structure that was later filled with plastic, in this case only closed plastic containers were used. Most of the plastic containers were milk jugs and juice bottles. After that, the seating surface was created from packaging materials. Paper boxes were shredded, using a paper shred, and blended with water to form a paper pulp. The pulp is then mixed with wildflower seeds, school glue, baking soda, baby oil and vinegar. When the mixture looks homogene it is gently pressed over a Eames chair, to replicate its shape. After several days, the structure is dried and sturdy, therefore it can be attached to the bottom structure. First holes are drilled on throughout the edge of the structure, then using a thin and malleable wire string the seating is tightly connected to chicken wire structure similarly to fabric stitching. Small patches of the paper pulp mixture are then used to cover up the ‘stitches’, creating a seamless connection between the seating and the rest of the structure. When that is all ready, a platform is created to lift the structure from the ground and mid-century feet are placed to the bottom of the chairs to give a reference to the past. The platform was created from scrap wood provenient from an old cabinet, and the mid century feet were the only new items used from this art piece.

The side table followed the same initial idea of the chairs. However, in this case, there was a selection of clear plastic, mostly from fruit trays, contained by the chicken wire structure. The legs of an old broken stool embraced the trash structure, and supported the thick round wooden surface, which was salvaged from the IMRC dock for discard.

The lamp was found on the side of the road, fixed and given a new life with the shade created from scraps of white wrapping paper over a found piece of hardware cloth.
Figure 23: Material processing for chair construction. Top left to bottom right, cut off pieces of paper packaging, to paper pulp and shaping the chicken wire structure.
**Results:**

The result was a conceptual installation called ‘Speculative Future and Evidences of The Current Time’, which is composed by organically shaped forms placed in ascendant position on the wall called Capsules, and a set of chairs and the side table and lamp called Waiting Room, in which creates an inviting space inside the formal gallery setting.

Figure 24: Exhibition set up at the Lord Hall gallery, 2022. Entitled: Speculative Future and Evidences of the Current Time.
Figure 25: Capsules displayed in the Lord Hall gallery, 2022.

Figure 26: Waiting room set up at the Lord Hall gallery, 2022.
Figure 27: Detail of a Capsule unit and the plastic volume of the chair in the background.

Figure 28: Waiting room viewed from the top.
Figure 29: Capsule unit with a pea plant.

Figure 30: Close up of some of the subtle messages found in the capsules.
Discussion

Many artists have experimented with making furniture before, including Pablo Picasso and Constantin Brancusi, dating back from a time when furniture was not usually seen as art pieces. The furniture movement was later stimulated by the Art Deco style (around the 1930s) and the increasing market for interior design pieces. Castle, considered the forefather of the artist's furniture movement. He had experimented with various materials, such as plastics, styrofoam, and fiberglass, following the industrial realm of pop art.

In the 1950s, the studio furniture grew as a movement centered in material experimentations. However, only in the 1970's with the acceptance of artists' furniture as a hybrid form, between craft and art, did artists find the space for creative furniture as art pieces (Atkins 1997). During that time, Wendell Castle, inspired by craftsmen, such as George Nakashima and Wharton Esherick, created furniture that was presented as artwork and exhibited at the Memorial Art Gallery in Rochester (McBrien 2018). Following the historical atmosphere of material explorations, industrial advancements, economic growth and social interest in arts and design, artists found inspiration to create experimental furniture. Amongst them were Scott Burton, Stephen De Staebler, R.M. Fischer, Frank Gehry, David Ireland, Daniel Spoerri, Yayoi Kusama, Judy McKie, Edward Kienholz’s, Howard Meinster, Memphis, Isamu Noguchi, Peter Shire, Robert Wilhite and Robert Wilson, with one-of-a-kind furniture, that today are iconic pieces found in galleries, private homes and public spaces. Many of them were chairs and some have also incorporated found objects and debris on their designs.

The interest of furniture making was strongly associated with the interest in blending art and life. Where the relation object/person goes beyond the function of the piece. The object in this case is an art creation, that considers idea over function and comfort. It's important to note that around the same time, was the birth of conceptual art. The term conceptual art was first used to reference a distinct movement in an article written by Sol LeWitt in 1967. As he described, “in conceptual art the idea or
concept is the most important aspect of the work” (LeWitt 1967). However, popularity is given to Marcel Duchamp, as an important precursor of conceptual art, and his readymade Fountain of 1917, cited as the first conceptual artwork.

As mentioned in the first chapter of this thesis, the oppository art movement of the sixties, where artists, like Duchamp, were intentionally reacting against the increasingly commercialized art world, resulted in works that barely resemble traditional art objects. These kinds of art works are still present today and have allowed people to raise their voices through art and present their critical view to society. From the conceptual perspective, the early nature-related-art has shifted the focus of the art pieces to thought processes and methods of production as the value of the work (Brown 2014). In that mindset, a spectrum of artistic engagement with the audience was growing, developing a relationship where the observer also acted as an interventionist. Therefore, the art furniture in this new scenario is not just a functional object nor a conceptual one, but also an interactive piece. A Piece that was built in parts, following my family’s acts of consume and discard. The art pieces created for this research explored these aspects, the accumulation and construction process, the interaction with the audience, the functionality and ultimately, the conceptual framework.

With references to waste history, with symbolic representations from past, present, and future, the chairs and capsules expose the waste accumulation, the privileged consumerism, and the hidden layers of economic powers that direct our consumer habits. Every detail of this installation has a meaning. From the chairs that can serve as a floatation device, the capsules used to grow food vertically, and the paper pulp seat that has seeds embedded in it. Philosophically, the Capsules reinforce the symbiotic relationships between persons and things, while the Waiting room acts as a space for interaction, inviting the viewer to sit and reflect upon the waste subject.

The chair, with seating molded from a popular Eames Shell chair design, in addition to the conical feet, adds to the piece a mid century feature which works both conceptually and aesthetically for
the seating. The Charles and Ray Eames chair design appeared on the market in 1950. It was intentionally designed with focus on product affordability and comfort. However, the inspiration behind the Eames designs was not just affordability, or even the technological advancements and the industrial mass production, but rather, the injury and wounded bodies of World War Two (Weems 2012). Designed for standardizing (and idealized) bodies and spaces, the Eames chairs held an ethos of empathy, becoming a model of effective design precisely because of its deep adaptability to needs of the weary body. The first models were made out of fiberglass and discontinued due to environmental reasons. Ironically, today, reproductions of the same models are widely available in polypropylene (plastic). The Eames chair is, until this day, one of the most popular and mass produced chair designs in the market. In the specific case of the chairs created for this project, the adaptability, comfort and survival played equal roles, conceptually and physically speaking. To achieve that, content and function were balanced out as important aspects. Food packaging and plastic bottles being the largest volume of my household waste (as seen in Chapter 2), became evident in the chair.

As a set, the Speculative Future and Evidences of the Current Time, is a representation of the Anthropocene, presenting a critical view to the various consequences of our exploitive actions towards nature including climate change, loss of species and depletion of resources. All of that will be forcing migrations, provoking tension, increasing hunger, generating fear and homelessness. Although these are all already happening in front of our eyes, we seem to believe that we are at the brink of an apocalyptic event that will test the survival of human species on the face of the Earth. Thinking about that, I have designed a chair that is waiting to be activated, a chair that represents your lack of action, our passiveness in front of such an urgent matter. A survival chair that can be used as a floating device, a chair that will sprout to generate food and decompose and if disassembled might generate enough material for a construction of a hut. But to our own species survival, it could not be just one chair, it had to be a pair.
The capsules are like the living components of the set, the self watering system offers these plants a better chance of survival. Being a vertical component, it allows better use of space. Each capsule works as a single individual, similar to a cell. It has a function and a body. A body that is composed by a multi layered protective membrane like a skin (the white fabric covering and the newspaper underneath), a hard structure like bones (chicken-wire), a muscle to support its weight (plastic bags filling) and the organs and circulatory system (containers and self watering system). The living plants, in this case, play a symbiotic role, just like we need food in our bodies in order to survive. Conceptually, the introduction of the plant gives the sense of hope and represents the force of nature that will eventually overcome the human threat.

Circulating the economy with creativity

As said by Leonard (2010) ‘waste is defined by where something is, not what it is. It’s about context, not content’. Waste being used as a verb, not a noun, expends the idea of waste beyond things. Waste is the act embedded in it, like waste of energy, waste of materials, and so on. Waste is also a commodity, known as ‘Municipal Waste Management’, in which it divides waste into several different categories based on the source of the waste, what it’s made of, and how it needs to be handled. There are five main categories, which are as follows: Industrial waste, municipal waste, construction and demolition waste, medical waste and electronic waste. Amongst these waste classifications, Municipal Solid Waste (MSW) corresponds to only 2.5% of the gross national trash, while industrial waste is 76% (Makower, 2009). Industrial waste is mostly landfilled, while the recycling occurs only at a level of Municipal Solid Waste. Therefore, the actual weight of the waste issue is on industries, not on individuals. Nevertheless, we, as consumer individuals, are the actors that will push industries to change their system. According to a literature review from Tukker 2015, since the 1990s Product Service
Systems (PSS), driven by consumer needs, have been proclaimed as one of the foremost successful instruments for moving society towards a resource-efficient, circular economy and making a much needed ‘resource revolution’. However, as previously discussed, consumer needs are not the only economic drive on the use of resources. Industries are actually looking at profits. Efficient use of resources and a circular economy are keys to avoid waste in the production system, but are also a way to make it more profitable.

What does circular economy (CE) mean? CE is an alternative economic system that is cyclical in contrast to the traditional linear approach, where things are extracted-produced-used-dumped without any consideration of energy flow (Korhonen et al. 2018.). As said by O’Brien (2007), “it makes no sense to theorize a ‘product’ outside of its productive framework, or a ‘commodity’ outside of its consumption framework, it makes no sense to theorize a waste outside of its wasting framework.” CE considers all of it, material life cycles and product value chain, throughout reuse, remanufacturing, refurbishment, repair, and energetic re-source. This is a concept that is in line with sustainable environmental and economic growth, allowing industries to efficiently use energy and rethink every step, from resource to discard.

Consequently, the industries are slowly looking at waste of resources under the economic bias. This change of perspective can also happen at the individual level. In this present research I have explored creative and simple ways to offer the public a chance to circulate the economy independently from the industrial or political interest. That was the birth of the ArtCycle project. Where I have used my own household waste to produce art and functional objects that will be sold with the purpose of adding value to the waste, divert waste from the landfills, and offer a financial resource. The ArtCycle project also offered free recycling workshops in order to expand its outreach as an opportunity to the public to engage and increase awareness about the waste issue. ArtCycle brings creative solutions to the community level, and aims to propagate the knowledge that will direct the correct decision making at a
local level. This kind of community engaged project highlights the role of the individual in the community and empowers them as agents of change.

Figure 31: ArtCycle table at the Hirundo fall fair, 2021.

Figure 32: Details of materials made from waste for sale at the Hirundo fall fair, 2021.
CONCLUSION

In this thesis, waste is not envisioned as an excess substance that can be eliminated from the human world, but rather is understood in relation to systemic operations of global economies. Waste is seen as a by-product of systematic inefficiency and capitalist power dynamic, which praises profits and neglects the social and environmental consequences. Here, production and consumption are intertwined behaviors of a social dynamic between institutional agency with use of psychological manipulation. These distorted relations are directly connected with ethical issues around conspicuous or excessive consumption, that affects us as species and the global ecosystem. Hence, understanding waste as part of an ecological crisis such as global warming, is to stretch the imagination beyond its visible or dramatic scientific claims. It is to speculate its effects in micro and macro scales, beyond our species, beyond our time and the territorialization of the environment as an isolated component.

This research didn’t just inform the waste generated by a family, but it recognizes the artist in this scenario as an igniting force, empowered by knowledge to act for change. Through an interdisciplinary approach, mainly with blending of science and the arts, artists of today are not only providing a critique of social and economic institutions, but are producing alternative economies that consider knowledge, aesthetics, social relations and ecological systems. In this present research, I have used my own waste data to support the speculations of the future and showcase the dimensions of our current waste issue. I have understood my own consumer habits, acknowledged the influences behind my consumer choices and have ultimately developed profitable alternatives for my waste. By sharing my personal experience and techniques, shifting the focus from ‘excess’ to ‘resource’, I have leveraged the tools of individual change in the face of the waste crisis.
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My piece of private land

2021
Old wheelbarrow, household plastic waste and a piece of the artist property’s lawn.

Owning a property is a privilege. So is the power of consumer choice. But what are the responsibilities involved in this ownership? The rusted wheelbarrow with a flat tire, filled with the artist's waste and covered by lawn, is a metaphor of our relationship to the land. The lack of care, the inability to change and our false sense of control.
Timer

2021
Glass funnel with 400 ml of water, 400ml volume tin can, wood and cotton string.

Time is a constant that can be measured in the tick of a clock. As the clock is ticking, less time is left in our lives. The fact that the volume of water inside the glass container is equivalent to the volume of the tin can, means that the water that drips inside the tin can will never overflow. However, because the glass piece is hanging from a string that can move if disturbed, water can fall outside and be wasted. That is the metaphor of life. The dripping sound in the tin can make the ticking of the clock. Our bodys (made of 60% water) are represented by the glass that holds the water. The tin represents the usage of time, and the volume that it holds relates to the rational limitation, and of sustainability.
Capsules

2021

Chicken wire, cardboard from food packaging, discarded plastic containers, soil and live plants.

What is the afterlife of trash? After the contents of a package have been used, the containers are wasted and pile up somewhere, hopefully away from our sight. But its impact lasts longer than what our lives can tell. Capsules are meant to extend the life of these wasted materials. The organic design of these pieces, inspired by nature, blend well with the living element composed by plants. However, in contrast to that aesthetic appeal, a close look will expose the dirty look of its surface that makes reference to the landfills and the messages from the marketing industries that influences our consumer habits.
Still life of metal

2021
Tin cans and fresh flowers.

The still life is a photograph series that as most traditional still lifes depicts inanimate subject matter, and everyday objects. But here the typically commonplace objects, flowers and post consumed objects are symbols of relationships between nature vs. humans, organic matter vs. trash. These industrialized materials contrast with the natural elements in many details, the life cycle being one of them. The material separation refers to the sorting process, which is a required step for proper recycling, and means an intrinsic human effort for its life continuation. The fresh cut flower, on the other hand, has an ephemeral life cycle which is unperceived in the still life series, being equally permanent as long as the photograph exists.
Still life of glass

2021
Glass waste and fresh flowers.
Still life of plastic

2021
Plastic waste and fresh flowers.
Still life of paper

2021
Paper waste and fresh flowers.
Bricks to flowers

2021
Paper pulp, newspaper cuttings and wildflower seeds.

Bricks are known for their sturdiness and are composed essentially by a natural element derived from soil. Paper is a light material, but derived by a sturdy natural element, trees. When building a brick that has the weight of a paper but embedded by flower seeds and text collages. It becomes tridimensional poetry, a sculpture with hidden messages. This was part of a collaboration project, where multiple bricks were placed in line representing a path in memory of Covid-19 losses.
Sprout

2019
Clay, found object and wildflower seeds.

A living sculpture, designed for contemplation of time. An ephemeral object that resonates the fragility of life while manifesting the force of nature.
Homage

2020

Fabric scraps, found objects, latex gloves and wall paint on a wooden panel.

A tridimensional picture, inspired by the art of Harmony Hammond. It brings the dialogue of gender to the surface in the time of a pandemic. The woman’s struggle is partially covered by the layers formed by the system. The white pristine aesthetic hides the colored pieces of textiles that once were evidence of cultures and past experiences.
Mother Nature

2019
Paper pulp mix, chicken wire, pvc pipe and plaster.

Collaboration piece with Rochelle Lawrence, using reclaimed paper to create the rock like structures. The stacked figure refers to the fragile balance of nature. Its head looks down as a sign of respect, as if requesting the same reverence from the viewer standing in front of it. This piece was part of an initial research with material and has driven me to explore further with my thesis project (see Capsules, 2021).
APPENDIX B: ArtCycle Workshop materials

PAPER - FROM TRASH TO SCULPTURE
GLASS - CUT AND REUSE
FOOD - YEAR ROUND WORM COMPOSTING
METAL-EMBOSSED SODA CAN
BIOGRAPHY OF THE AUTHOR

Adriana Cavalcanti was born and raised in Brazil, where in 2010 she received a Bachelor's Degree in Biology, followed by a Botany MSc at the Rio de Janeiro State University, from where she worked in collaboration with bird ecologists with focus on conservation biology. After completion of her master's, Adriana realized that environmental conservation was only possible with society participation, in which she felt was lacking in her work. In 2013, she enrolled in the Brazilian school of Landscape Design, a career that would allow her to blend botanical knowledge and creativity, and act directly towards society. In her landscape designs, Adriana used native species to create immersive spaces where people would find peace and connect with nature. In 2014, Adriana relocated to North America, this geographical change has forced her to reshape her professional life. In the United States Adriana has started her artistic career through ceramics, but her interest in interdisciplinary explorations drove her to enroll in the Intermedia program at the University of Maine, where she is a candidate for the degree of Master of Fine Arts in Intermedia at The University of Maine in August, 2022.