Sustainability

Jaemee Rozz M. Galang

Western Washington University

When we think of an exotic beachfront we often think of blue water and white sand with the sunset in the background, but have you ever considered how what you consume affects this fictional image of paradise? Have you ever considered that the white sandy beaches are actually pieces of glass from soda bottles decades ago or even plastic particles from the factory that made the flip flops you are adore? We are born not to question the structures and systems in our society that have been established decades before our time. We accept that we live in a concrete society in which our fields have been paved over to become parking lots for our shopping centers, but we have never stopped and imagined what our world would be without all the industrial influences we have done over time.

We have taken Mother Nature for granted. We struggle to show our appreciation of what Mother Nature has provided us, but instead we have taken over the natural course of life by enhancing it with manmade materials and objects. If and when the human race does not exist, our waste will still be present and the infrastructures will disappear over time. Mother Nature will then again take over the environment and the natural selection process will repeat its course again, but for now we are attempting to reserve the affects of decades of influence for the better of our children's' future. They too deserve to enjoy the white sandy beaches we once adored. Sorin & Irina (2009) note that "sustainable development is a pattern or resource use that aims to meet human needs while preserving the environment so that these needs can be met only in the present, but also for future generations to come" (p. 230).

Globally, we have been influenced by modern technology differently. Some has easily modified to accommodate the increasing demand of electricity and technology, where some have maintained their ancestor's lifestyles with minimal influence of the Western culture. Before modern technology our elders live in a simplistic environment in which each thing had a purpose

and reason of existence. Tribes in Africa build homes out of natural material which can be destroyed and rebuilt over and over gain. Where as the homes in the United States are build of refined natural materials, such as bricks that can endure years of inhabitance without having to rebuild over a period of time. If the human race were to disappear, which of these two homes will be easily taken over by Mother Nature without the presents of human influences? The home build of natural material will eventually deteriorate and compost its self within its surroundings, where as the brick building will take years to naturally break down and return the land to the original form (Weisman, 2007).

Going further into our societal structure we have encompassed the vision of admiring concrete structures that tower over our communities and landscape that are meticulous in colorful details. We, as the human race, take responsibility for maintaining these manmade structures and creations. We spend millions of dollars on maintaining their curb appeal and deposit thousands of pounds of waste in doing so. We build and demolish thousands of structures over time, but these broken down materials are still present in landfills though it's been decades since their restructure.

Reflecting on employment positions within the last several decades we have increasingly has more positions catering to the needs of maintaining these manmade materials compared to the traditional life roles we have in our society. In the Western culture we have an increasing trend of maintenance positions; including landscapers and custodial employees which is not something you will find in rural tribes in Africa or in the Amazon jungles. We have landscapers to tend to the precisely organized gardens and landscape. We have custodians clean facilities and dispose of trash. If and when the human race disappears on the Earth's surface, who will take over these roles and maintain our manmade structures? Some homeowners and renters may

dread doing lawn care, but if they didn't what would happen to our lawns? If the human race didn't exist would they just constantly grow without being maintained or will other species take over these roles? Will the population of grazing animals increase to assist Mother Nature in maintaining these lawns? I highly doubt that without the human species these manmade structures maintain their curb appeal if the human species disappear. Furthermore, what animals are capable of maintaining the corrosion of manmade materials that are the foundations of these large structures?

Weisman (2007) discussed that various types of animals and plants will taken over our concrete jungle when the human race does not exist. The plants will take over all the surfaces and embrace the open areas. Plants that were once treated with chemicals will take over these open areas knowing that they will be able to reproduce without being destroyed. Various animal species will overpopulate our communities and take over our homes. There will be no such thing as wild animals since they will not be the minority of the Earth's population. There will be no humans to hunt for these species, but only natural preys in which they have always feared of. On the Western Washington University campus, we already see the vast improvement of the animals that are present. Deer's are not afraid of moving vehicles or walking pedestrians. They often challenge them and take their time in crossing the streets forcing others to wait. Squirrels have inventoried our trash and disperse of our waste on the lawns which we take pride in maintaining. The birds fly above us without fear of flying into us. The trees, flowers, and natural plants of the area have influenced the landscape. Bricks there were once laid on a flat surface now embrace the curves of the tree roots that have grown underneath them. We, the human race, has now been conditioned to adjust to these contours that Mother Nature has created to compensate for our industrial influences.

The human race has greatly influenced how our environment has accommodated our needs, yet how we have damaged the very source that has kept us alive all these years. We can then further examine more dense communities in which are concrete jungles compared to tribes living in the jungle. Will the occupants have the same playing field of survival or are industrialized individuals struggle to cope with the lost of modern technology. Just think of the last blackout and how others around you cope with the situation. Older generations may have enjoyed the peaceful and relaxing evening in the dark, where the younger generation is having withdrawals from their electronic devices. If we were to go back a decade and limit the advancements in technology, could we minimalize how we influence the environment patterns and/or destruction? Our increasing demands from Mother Nature "imply an increase in the extraction, and eventual destruction, of fossil fuels. Energy is dissipated and cannot be recycled" (Alier, 2009, p. 1100). Though fossil fuels were made years before the human race, since the inception of the human race has influenced climate changed by the "excessive burning of fossil fuels" (Alier, 2009, p. 1101).

There has been numerous research conducted on the industrial affects on our environment, but we continue to live our lives without considering the long term affects of our waste products. Where exactly does our trash go once we dispose of it? How long does it take to compost certain types of material? Weisman (2007) noted how we have greatly influence our environment, but yet we are slowly learning about how we are destroying them. The human race has contributed to one of the many wonders of our environment, the Great Pacific Ocean Garbage Patch is one of the many vortices discovered in the late 1980s which was the beginning of the pollution gathering together mainly below the surface of waste washed out into the ocean (Great Pacific Garbage Patch, 2011). The Great Pacific Ocean Garbage Patch is located

"between Hawaii and California…slowly rotating high-pressure vortex of hot equatorial air that inhales wind and…beneath it, the water…lazy, clockwise whorls towards a depression at the center" (Weisman, 2007, p. 121). At first it was deemed to only exist in the Pacific Ocean, but since its first discovery in the late 1990s researches have discover smaller vortex in other large bodies of water. Though nothing has yet to compare to the Great Pacific Garbage Patch, which some may say it is the size of Texas and almost seemingly representing an island type of structure, but yet it floats on the surface and settles on the ocean floors (McLendon, 2010).

The majority of the mass of garbage is within the pelagic zone and the largest contributor to this massive patch of garbage is plastic. The pelagic zone is the first 650ft depth of the water surface which is highly concentrated with the production of plants and animals due to being the only source of photosynthesis (Pelagic Zone, 2011). Plastic is not biodegradable and when broken down it leaves a trace of polymers that linger in the water. Weisman (2007) noted that there have been various researches done in testing the surrounding waters as to what makes up the Great Pacific Garbage Patch and what are its largest contributors. Plastic particles are already so small that they are able to past through filters. In a 2009 study done by the Scripps Institution of Oceanography/Project Kaisei Seaplex survey mission of the gyre, they sampled the water surrounding the area and found that plastic was present in all of their water samples (Great Pacific Garbage Patch, 2011, para. 9). These plastics does not come from one gernal contributor, but various sources around the world. Some samples were even traced as far as the European countires and others from Japan and/or the U.S.

So how does the Great Pacific Ocean Garbage Patch affect our world as a whole? The more we consume products and generate waste; we need to consider how they are being disposed of. Wikipedia (2011) notes that "that an estimated 80% of the garbage comes from land-based

sources and 20% from ships, is derived from an unsubstantiated estimate" (para. 10). The human race is the largest and only contributor to the "3.5 million tons of trash that's 80 percent plastic" (Bonfils & Ibanga, 2008, para. 6). In the last decade, garbage disposal has been an increasing problem and the resoultion is not to dispose of it at sea. By doing so we are only harming ourselves and the environment. The trash we produce are consumed and/or affect the lives of animals who soley rely on the ocean for their habitatance and reason for existance. For instance, sea animals, such as seals and sea turtles, often get entragled in fish nets which eventually cause them to drown, also known as 'ghost fishing' since no one is actually fisihing for them, but they die anyways (McLendon, 2010). The plastic resign pellets and plastic products are often confused ast plankton or other smaller sea animals that are mistaken consumed by marine life which also may cause them to die and/or are caught for humans to consume (McLendon, 2010). "Research has shown that this plastic marine debris affects at least 267 species worldwide and a few of the 267 species reside in the North Pacific Gyre" (Great Pacific Garbage Patch, 2011, para. 17).

It's an endless cycle in which we are the primary contributor. We increase our consumption and produce waste, the waste is disposed in the ocean, the sea life consumes are waste, then we consume those sea life, and then the cycle starts all over again. We can't rely on Mother Nature's process of photodegradation since plastic is not biodegradable. Photodegraation is the "transformation of a molecule into lower molecular weight fragments, usually in an oxidation process" (Glossary of terms used in photochemistry, 1996). We as human service professionals and a member of the society need to advocate for Mother Nature. We need to parttake in preserving natural resoures before we overwhelm our environment with manmade products and waste.

Appreciating what Mother Nature has provided us is only the first step of sustaining our environment. We have been the greatest influence in destroying and utlizing all of the natural resources. We are now worried that these once infinite source will soon ceast to exist. Would we challenge the system by increasing the prices of these natural resources? How would our society compensate for these increasing prices while maintaining an healthy and safe environment? Keeping in mind that the more manmade products we create, the more waste we will have to dispose of in our landfils. Would that mean that we will contribute more to the Great Pacific Garbage Patch?

Reference

Alier, J. (2009). Socially sustainable economic de-growth. *Development & Change*, 40(6), 1099-1119. doi:10.1111/j.1467-7660.2009.01618.x

Bonfils, D., & Ibanga, I. (2008, August 6). *Hidden, a 3.5 million trash heap lies in the ocean*. Retrieved from ABC Good Morning America: http://abcnews.go.com/GMA/story?id=5524886&page=1

Great Pacific Garbage Patch. (2011, May 5). Retrieved from Wikipedia: http://en.wikipedia.org/wiki/Garbage_island

McLendon, R. (2010, February 24). *What is the great pacific ocean garbage*. Retrieved from Mother Nature Network: http://www.mnn.com/earth-matters/translating-uncle-sam/stories/what-is-the-great-pacific-ocean-garbage-patch

Pelagic zone. (2011, May). Retrieved from Wikipedia: http://en.wikipedia.org/wiki/Pelagic

Sorin, A., & Irina, A. (2009). Sustainable development in global economy. *Annals of the University of Oradea, Economic Science Series*, 18(2), 230-235. Accession Number:**48548468**

Weisman, A. (2007). *The world without us.* New York: St. Martin's Press.

Links for Presentation

Mother Nature Network: http://www.mnn.com/earth-matters/translating-uncle-sam/stories/what-is-the-great-pacific-ocean-garbage-patch

YouTube – Garbage Patch: http://www.youtube.com/watch?v=z7rNYzSH-BA