

Samantha Kelley

Capstone 2019

Abstract

Many communities have implemented various recycling programs to push for a more sustainable life. The city of Huntington wishes to recycle and push for this environmental progress; however, it seems that the city is running into ongoing issues such as money and politics. This research will examine the process and possible issues in Cabell county and figure out what is or the lack that is happening. Research will consist of interviews with workers involved in recycling, sustainability, and city workers. During the public meetings, audio recording will be made and transcribed. Other data will be written notes and transcribed to the password protected Journal subsystem of Blackboard. To keep the confidentiality, we will remove identifying features in any published documents. All paper documentation will be kept in the locked office of the Principal Investigator.

Introduction

Recycling came into play in America around the 1970s when reduce reuse recycle was introduced. Over the years, more states and cities started to utilize the “reduce, reuse, recycle”. Since then many laws and implements have been created to reduce the use of plastic and to recycle, some successful, and others not so much. You may not see it in your streets, but there are streets and water such as oceans and waterways full and covered with trash and plastic.

Our oceans and land are becoming filled with trash and plastic which will remain for hundreds of years causing many issues. In 2015, Jenna Jambeck, a University of Georgia engineering professor, caught everyone’s attention with a rough estimate: between 5.3 million and 14 million tons each year just from coastal regions. A staggering 6.3 billion tons of recyclables never make it to a recycling bin. It’s unclear how long it will take for that plastic to completely biodegrade into its constituent molecules. Estimates

range from 450 years to never. Albeck-ripka, L. (2018, May 29). (Your Recycling Gets Recycled, Right? Maybe, or Maybe Not.) “This isn’t a problem where we don’t know what the solution is,” says Ted Siegler, a Vermont resource economist who has spent more than 25 years working with developing nations on garbage.

Recycling helps to preserve the resources available to society and to reduce the impact of processing these resources on our planet; making more clean water and less pollution. Our culture fell in love with the idea of single use plastics and did not think of the consequences.

Theory

Ecological feminism

Ecological feminism is the view that we are all part of one larger ecology and community, recycling is important for not only “tree huggers” it involves everyone on the planet, being a moral issue. By recycling we are not only thinking of ourselves, we are thinking for the future of our world, trying to fix the mistakes we have created. This theory can be linked with my research in my literature review, People are coming together, finding solutions, and putting differences aside to create a better environment. With cities making the issues “moral” we are even seeing job opportunities for people in need. Being ecofriendly can happen.

Addicts at work

Huntington, West Virginia has its share of addicts, the economy has suffered over the past decade due to the coal mining industry’s downturn, which has greatly contributed to the town’s growing addiction problem¹. Every 10 Hours In West Virginia, a resident die from an overdose. 1 in 4 babies delivered in Huntington has been exposed to drugs before they were born. 443% Increase A total of 1,476 opioid overdose incidents were reported in Cabell County in 2016, that’s a 443% increase since 2014.² NY Higgins, Amsterdam Has a Deal for Alcoholics: Work Paid in Beer- This article is about Eastern

¹ “Huntington, West Virginia Alcohol and Drug Rehab.” AddictionCenter, www.addictioncenter.com/rehabs/west-virginia/huntington/.

Amsterdam program where alcoholics get to work and drink at a minimal rate while cleaning the towns streets. Huntington already has programs arising where people who are out of recovery programs are able to work. If the city were to step it a step further and help people who are still in the program where they might still be using or even if we allowed them to have jobs where they cleaned the streets, maybe the city could be just as successful as Amsterdam.

Knowledge and education

Curbside recycling is available to more than half the people in the US. A study by The Washington based national Waste and recycling association said that 2/3 of Americans are clear on what should be recycled but they need to educate more people on the remaining third of what can be recycled. 39% of people incorrectly believe it is okay to recycle plastic bags not knowing it can be harmful in the bins. 20% of people say they will place the item in the recycling bin even if they aren't sure it's recyclable. By educating ourselves, we could eliminate an entire bag of "recyclables" ending up in landfills. Getting the word out in Huntington could help this issue and allow people to gain knowledge on what to and what not to recycle. ³

Creating jobs

Recycling can save energy and possibly create more jobs. According to make America beautiful, Recycling industry employed over 1.1 million workers and generated over \$236 billion in annual revenue in 2001. Recyclables can become all sorts of different items that people use in everyday life such as paper plates, egg cartons, cat litter, paper towel rolls, toilet paper, car parts, appliances, and so many more! Huntington has programs where they are creating jobs for people just by being ecofriendly, (I will get to that part later!)

Social Norm

A new survey from the Pew Research Center says that 28% of U.S. residents think their community's social norms "strongly encourage" recycling and reuse, 22% don't encourage it and the rest are in the middle. This shows that as more cities establish lofty "zero waste" goals more will need to be done to normalize recycling behaviors. While recycling has become a common part of society over the past 25 or

³ Gerlat, A. (2014, April 22). Americans Can Benefit from More Recycling Education – Study. Retrieved from <https://www.waste360.com/research-and-statistics/americans-can-benefit-more-recycling-education-study>

so years diversion rates have leveled off recently and new research points to the possibility that they could be lower than previously thought. Other recent research points to a possible gender imbalance, with men recycling less than women, and many communities have struggled to boost their diversion rates.⁴ If recycling was more of a social norm and a moral issue and not just considered a behavior and talked about more people would understand how to better recycle and china would allow more.

“The benefits of recycling seem straightforward. The practice reduces waste sent to landfills, conserves natural resources, reduces pollution and creates jobs. And the majority of Americans do recycle... sometimes. Recycling is a behavior, “Much like exercising or eating healthily, people often engage in this behavior less than they ‘should.’” According to a 2011 Ipsos Public Affairs survey, only half of adults recycle daily. Another third of respondents said they recycle less frequently than that, and a full 13 percent revealed that they never recycle.

Because the reward for recycling (saving the earth) and the repercussions for infrequently recycling (damaging the environment) aren’t necessarily immediate, it can be hard for people to make the association between their daily habits and those habits’ consequences.⁵

Other cities progress

Many cities are moving forward and trying to be more progressive with becoming more ecofriendly, including curbside recycling. For example, we see people fleeing to bigger progressive cities with more opportunities for sustainability. Asheville, North Carolina has set a goal of 50% waste reduction by 2035. The town makes it easy to be able to recycle with bins everywhere.

The city also has curbside recycling. Asheville has an ecofriendly business creating homes while teaching other builders how to reduce their energy consumption. “In Asheville, it’s almost expected to do business this way,” says Deltec President and CEO David Hall. “The folks here hold the environment at another level.” “Green meet ups” is the colleges mountain green lunch and learn series that provides in

⁴ Rosengren, C. (2016, October 07). Pew survey: Recycling still not a cultural norm for nearly 1/3 of US residents. Retrieved from <https://www.wastedive.com/news/pew-survey-recycling-still-not-a-cultural-norm-for-nearly-13-of-us-reside/427857/>

⁵ Schumaker, E., & Schumaker, E. (2016, August 03). This Is Why You Have So Much Trouble Recycling. Retrieved from https://www.huffpost.com/entry/psychology-of-why-people-dont-recycle_n_57697a7be4b087b70be605b3

depth discussions about how the city can best practice a developing region. This is running entirely by college students⁶.

Huntington and Marshall progress

In 2008, a “green” focused student movement petitioned for a sustainability Department at Marshall university. This was requested the addition of a \$5 “Green Fee” to be added each year to their student fees to pay for sustainable programs on campus, the program Began in 2009 and include: conservation of water and energy, campus wide recycling, the sustainability gardens, the inclusion of green technologies and materials into the University, and much more. The program also Educates on how actions impact energy and resource consumption, both on and off campus.

Cortex Survey

This was a survey project created by the City of Huntington and the help of Marshall University in August of 2017 determining which neighborhoods would be most supportive of testing curbside recycling. The survey was conducted through a questionnaire and received 2556 responses. The city was supposed to use this for the curbside recycling program mandated by the state- the pilot has yet to happen. 82.2% agreed that they would be willing to separate for recycling. 14.9% disagreed or strongly disagreed with recycling .63% of residents in Huntington are willing to pay extra for recycling. The majority (60.0%) preferred curbside recycling over collection points (17.5%)

Theory predictions

Politics and money get in the way of being able to push for a sustainably future

⁶ Verified), A. (. (2018, March 01). Asheville, NC is Eco-Friendly. Retrieved from <https://livability.com/nc/asheville/real-estate/asheville-nc-is-eco-friendly>

There is a disconnect with the city and Marshall

Huntington will not get curbside recycling anytime soon, but that doesn't mean we aren't going to try for other sustainable programs.

Using people from recovery groups could be a great way to employ while cleaning our town up

Education needs to be more available about recycling

Recycling is not a social norm but a behavior

[Qualitative data](#): methods include Interviews with varies persons who work with the city.

City worker

From a city workers point of view, the biggest obstacle right now is the cost for the program. I was told that there are no other sustainability programs arising in the town, and there are no economic benefits of recycling. "Most of our recyclables are ending up in landfills." When I asked what happened to the old program I was told, "It was not sustainable, and people were not doing it enough to use it. I was then informed that the program pilot was in place but taking longer than expected. "Everyone wants it, not everyone wants to pay for it." He also stated that most of the recyclables end up in landfills even if we do recycle.

[Mark Buchanan director of Cabell county solid waste authority and Amy White, Head of sustainability department at Marshall University](#)

What was once a free option that included 37 bins at eight locations throughout Cabell County has now been reduced to a single drop-off location in Huntington's West End, as a new recycling drop-off center is located at the old National Guard Armory at 800 Virginia Ave. The fee started at \$75 per year but has since been reduced to \$5 the amount had to be raised because Huntington cut funding, not because anyone wanted to try and make money. Though curbside recycling is still up in the air, people in the city are still making changes towards sustainability. Mark said the county is fortunate that they're still able to offer recycling at all but does feel overall community support for the program is dwindling now that the Authority's

countywide recycling program is no longer free. Money is a key factor in which the city does not have.

Both Amy and Mark agreed with the cortex survey and stated the people of the town do want to recycle however, it does not seem like anytime soon we will be getting the program. Instead of dwelling on the curbside recycling program, we need to look another way. Reduce plastic intake for example. Again, this is a money factor in which the city does not have to fund. We need more education and understand what can and cannot be recycled for it to be accepted.

When I mentioned that I had been trying to get in touch with the city's public works employee, and how challenging it seemed, as well as a negative view to the program, Amy and Mark agreed that there is a huge disconnect with the campus and the city.

Amy is doing her best to get as many grants as she can for many different sustainability programs soon to come and working with many people to try and get new ideas in. Amy is working on opening the first commercial compost on campus. City worker stated three years ago that they did not want to be a part of any program of sort and there would never be curbside in Huntington. However, over twenty-six restaurants have already contacted Amy stated they wanted to be included in the compost program. The plan is to test it on campus then possibly spread out and hope to have it up by fall 19- anaerobic digester, sustainability people will take it to the composer. In West Virginia, its illegal to compost food to make it commercial to sell as organic soil for profit (anaerobic digester) however, Amy is working with legislators to have the food waste be able to be an option.

Amy is trying to figure something out with the campus' plastics, she is trying to work something out with pure technology, and proctor and gamble, they have a new factory that takes the dye out the plastic (1-7) pelletize them.

There is still a small market that china is allowing recycling to go, it just needs to be super clean. It is up to us to make sure we are recycling correct.

Our recyclables were going to China, however recently they changed the regulation in which is stricter. Banned 24 materials, including post-consumer plastic and mixed paper, it has also demanded that other materials, such as cardboard and scrap metal, be only 0.5 percent impure. Even a small amount of food scraps or other rubbish, if undetected, can ruin a batch of recycling. “All of a sudden, material being collected on the street doesn’t have a place to go,” People were not informed when this happened. Many people are recycling incorrectly. By educating ourselves, we could eliminate an entire bag of “recyclables” ending up in landfills and be able to have our trash sent to china. While China has Some waste managers say that China’s new contamination standards are impossible to meet, while others are trying to clean up their recycling streams by slowing down their processing facilities, limiting the types of materials they accept or trying to better educate customers on what belongs in the recycling bin. Not only do we need to gain more knowledge on recycling better, but the city needs funds to create the program and that is a major setback.

More cities are started to shut down curbside recycling due to money and china’s ban, leaving the trash to end up in landfills. In Memphis, the international airport still has recycling bins around the terminals, but every collected can, bottle and newspaper are sent to a landfill. And last month, officials in the central Florida city of Deltona faced the reality that, despite their best efforts to recycle, their curbside program was not working and suspended it.⁷ With fewer buyers, recycling companies are recouping their lost profits by charging cities more, in some cases four times what they charged last year. The recycling companies say they cannot depend on selling used plastic and paper at prices that cover their processing costs, so they are asking municipalities to pay significantly more for their recycling services. Some companies are also charging customers additional “contamination” fees for recycled material that is mixed in with trash. Some cities such as Philadelphia, are starting to burn the recyclables and turn it into energy, which is not the best thing we can do but it is a better alternative than the landfill. The incinerator converts the waste to energy, which can be sold back to the electrical grid, said Carlton Williams, Philadelphia’s streets commissioner.

⁷ Corkery, M. (2019, March 16). As Costs Skyrocket, More U.S. Cities Stop Recycling. Retrieved from <https://www.nytimes.com/2019/03/16/business/local-recycling-costs.html>

Coalfield headquarters

I met with Jacob Hannah at Coalfields Headquarters. I was shown around and was enlightened on the work they are putting into the communities. The company is about reusing/being ecofriendly and hiring people in need of not only a job, but people who do not necessarily have experience are given the opportunity to gain a new skill set, and an education all provided from the company.

They have set up nonprofit businesses have sustainable revenue and can create jobs. Utilizing old factories in town, they are using the space for many different enterprises. From creating a space for creative outlets, having people bring in local art work, wood workers (rediscover Appalachia), creating items for the town and giving the grained down wood to Marshall to compost it, refresh Appalachia workers in sustain agriculture trying to create a local food economy, trying to figure out how to increase access healthy food, and many more enterprises. These enterprises are giving many job opportunities.

Jacob stated that he also thinks there is a disconnect with the city and Marshall, he wishes he could get the city on board with more projects and finds it hard to reach people that have the authority to help. Though this seems like a setback, locally speaking- many people, companies, and stores are involved with Coalfields pushing our city to progress in many aspects. Athens Hopkins has a reuse company that Coalfield and Amy are working with, looking to work more with them in the future.

City vs Marshall

When I mentioned that I had been trying to get in touch with the city's public works employee, and how challenging it seemed, as well as a negative view to the program to Amy and Mark, they both agreed that there is a huge disconnect with the campus and the city and wish that they would want to be more involved and how it is impossible to work with.

City worker stated three years ago that they did not want to be a part of any program of sort and there would never be curbside in Huntington.

Jacob stated that he also thinks there is a disconnect with the city and Marshall, he wishes he could get the city on board with more projects and finds it hard to reach people that have the authority to help. Though this seems like a setback, locally speaking- many people, companies, and stores are involved with Coalfields pushing our city to progress in many aspects. Jacob stated its not always about money in this business, its our future and not always about profit.

MU students

What do students think of environmentalism?

Method: Capstone survey

Survey of 13 general education classes in Sociology and Anthropology In person administration, forms collected in locked box with slit. Most were at Huntington campus Excluded online classes (low return rate) Returns from 232 out of 354 possible students (65.5% rate). Distribution among colleges is more strongly correlated with broader student body ($r = .67$) than with Freshmen ($r = .42$)

Predictions

conservatives will not correlate with anything relating

Politics will lean towards liberals who are correlated

LGBTQ will relate to be sustainable

People of Appalachia are sustainable

Reasoning of predictions

I think that Conservatives are less likely to be sustainable because right sided people are less likely to be “tree hugers” or believe in such. Non-Christians are slightly more likely than Christians to say they do as much as they can to recycle and reduce waste; 51% of non-Christians say they recycle and reduce waste whenever possible, compared with 44% of Christians. This difference remains even after controlling for such factors as age, income and education.⁸ Liberals recycle because they generally care about protecting the environment, so appeals should pluck their bleeding-heartstrings. Conservatives generally don't believe in environmentalism, seeing it as a wicked liberal scheme.⁹

⁸ Mitchell, T., & Mitchell, T. (2016, April 12). Highly religious people are not alike in all aspects of daily life. Retrieved from <https://www.pewforum.org/2016/04/12/highly-religious-people-not-distinctive-in-all-aspects-of-everyday-life/>

⁹ Long, R. (2013, May 14). This Is How to Convince Conservatives to Recycle. Retrieved from <https://newrepublic.com/article/113214/recycling-study-finds-liberal-and-conservative-appeals-effective>

LGBT people are more open minded and progressive, growing up being “different”, you have a different perspective. According to “Why are gays more ecofriendly”, Stats show that 55 percent of LGBT adults vs. 33 percent of straight adults say they care a lot about green issues, 48 vs. 25 percent consider the environment when shopping, 45 vs. 27 percent highly value a political candidate’s stance on green issues, 25 vs. 17 percent use the environment as a factor when considering a potential employer. Gay and lesbian people vote progressively, so it seems natural that they would live progressively — like being ‘green,’ for example. Also, many LGBT people live in urban areas, which are hotbeds for environmentally conscious ideas and lifestyles.” gay rights and climate change are both human rights issues¹⁰

I think people from Appalachia will be more sustainable because it is a place from the mountains, no big cities, so the people who are from these areas are more likely to be self-sufficient. Appalachia was a place of farm before coal mining came into play, making it a place where people grew their own food and supplies as well as being forced to reuse products.

How we measure environmental attitudes

A third scale measures an attitude of environmental sustainability and is comprised of the following standard agreement questions:

1. It is not really worth the effort to do recycling (reflected so that disagreement is high)
2. Everyone who can should be recycling
3. Society must work toward a sustainable environment and economy
4. I am willing to do what it takes to develop a sustainable world

This sustainability scale has a Cronbach $\alpha = .62$, with 85.8% of students in general agreement with the questions.

Tables 1 and 3 report the general demographic makeup of the respondents, where 74.7% are between 18 and 20 years of age, 34.6% are male, 7.5% are transsexual, 81.4% are white, 85.4% are in college straight from high school, 45.4% describe their parents as below middle class, 57.8% are from traditional

¹⁰ Richmond, H., & Richmond, H. (2011, January 15). Why are gays more eco-friendly? Retrieved from <https://grist.org/article/2011-01-13-why-are-gays-more-eco-friendly/>

households (i.e. 2 parents and siblings), 61.5% of mothers and 72.4 % of fathers have less than a baccalaureate education, 70.3% are from rural or small town settings, and 85.7% are from West Virginia. The largest religious affiliation is Evangelical at 39.2%, followed by “none” at 25.5%, though 72.6% report religion as either “important” or “very important.” The largest political affiliation is “moderate” at 25.1%, while 16.4% identified as Democrat, 15.5% identify as Republican, 16.0% identify as “other liberal” or “far left,” 5.5% identify as “other conservative” or “far right,” and 21.0% report that they “don’t care.” The distribution was clearly skewed to lowerclassmen as the majority of students were Freshmen 52.5%, followed by Sophomores at 30.4%, with some 17.0% as upperclassmen. The distribution of students between Marshall colleges tended to over represent Liberal Arts, and underrepresent Business and Science, but it correlated more closely with the general population of students ($r=.67$) than the distribution of Freshmen ($r=.42$).

Results for satisfaction

Evangelical correlation, $r_{attitude} = -0.196$, $p = 0.005$, $r_{separate} = -0.228$, $p = 0.001$, $r_{buy} = -0.223$, $p = 0.001$

Conservatives correlation, $r_{attitude} = -0.251$, $p < .001$, $r_{separate} = -0.2$, $p = 0.003$

Heterosexuals correlation, $r_{attitude} = -0.185$, $p = 0.008$, $r_{separate} = -0.194$, $p = 0.004$

Correlation in Appalachia: $r_{attitude} = 0.4$, $p = 0$, $r_{separate} = 0.281$, $p = 0$, $R_{buy} = 0.312$, $p = 0$

Political ideology correlation: $r_{attitude} = -0.432$, $p = 0$, $r_{buy} = -0.222$, $p = 0.002$

Correlation with gender $r_{attitude} = -0.273$, $p = 0$, $r_{buy} = -0.218$, $p = 0.002$

Results of hypothesis

LGBTQ did correlate with being sustainable- making theory correct that people in LGBTQ care more about the environment.

Theory support Appalachia being sustainable, had a significant amount of data proving people from the area are in every aspect sustainable.

People who leaned towards being more liberal correlated with being sustainable, making theory correct that the more conservative you are, the less likely you are to be sustainable or an environmentalist.

Conclusions:

With evidence supporting theory from all methods, we know the people of Huntington want to recycle and think we should be doing more. Cortex survey showed us where it would be best for curbside recycling as well as if people were willing to pay and how much, which resulted in great numbers. Community and Marshall workers are working their best to create programs in the sustainability field while not being able to work with the city. 85.8% of students in general agreement with the Capstone survey questions, leading us to question, if everyone wants this and is willing to pay for this, why isn't it happening?

Bibliography:

Healy, C. (2018, March 09). Huntington, WV hosts workshop to implement Plan 2025's vision of reinvestment. Retrieved from <https://smartgrowthamerica.org/huntington-wv-hosts-workshop-to-implement-plan-2025s-vision-of-reinvestment/>

Zicheng Chen, Xiaopeng Yue, Zhibin He, & Lanhe Zhang. (2018). China's New Regulations on Waste Paper Importing and Their Impacts on Global Waste Paper Recycling and the Papermaking Industry in China. *BioResources*, 13(3), 4773–4775. Retrieved from <http://search.ebscohost.com.marshall.idm.oclc.org/login.aspx?direct=true&db=aph&AN=131285905&site=ehost-live>

Corkery, M. (2019, March 16). As Costs Skyrocket, More U.S. Cities Stop Recycling. Retrieved from <https://www.nytimes.com/2019/03/16/business/local-recycling-costs.html>

Mendez, J. (2018, June 26). Local recycling not what it once was. Retrieved from https://www.herald-dispatch.com/_recent_news/local-recycling-not-what-it-once-was/article_b79ab2b6-781e-11e8-a9e1-43ed1a7e9006.html

Huntington, West Virginia Alcohol and Drug Rehab.” AddictionCenter, www.addictioncenter.com/rehabs/west-virginia/huntington/.

Schumaker, E., & Schumaker, E. (2016, August 03). This Is Why You Have So Much Trouble Recycling. Retrieved from https://www.huffpost.com/entry/psychology-of-why-people-dont-recycle_n_57697a7be4b087b70be605b3

Long, R. (2013, May 14). This Is How to Convince Conservatives to Recycle. Retrieved from <https://newrepublic.com/article/113214/recycling-study-finds-liberal-and-conservative-appeals-effective>

Rosengren, C. (2016, October 07). Pew survey: Recycling still not a cultural norm for nearly 1/3 of US residents. Retrieved from <https://www.wastedive.com/news/pew-survey-recycling-still-not-a-cultural-norm-for-nearly-13-of-us-reside/427857/>