Statement of Topics

Mental Health Living in Cities and How to Improve the Design of Cities to Minimize

Impacts

(Technical Topic)

Moving People Into Cities: A Utilitarian Approach

(STS Topic)

By

Hannah Herrmann

November 26, 2019

On my honor as a student I have neither given nor received aid on this assignment as defined

by the Honor Guidelines for Thesis-Related Assignments

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Date: _____November 26,2019

Hannah Herrmann

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Brian L Smith 1 Digitally signed by Brian L Smith 1 Dire o-University of Vispina, ou-UVA Standard PKi User, email-bis2gryfipina.odu, cm-Birlan L Smith 1 Date: 2019.11.26 12:09:39 -05'00'

Date: November 26, 2019

Brian Smith, Department of Engineering Systems and Environment

Signed: _____ Date: _____

Michael Gorman, Department of Science, Technology and Society

Received Comments

Comments from Professor Gorman:

Comment: I think denial of climate change is a case of normalized deviance, but I want to learn more about the mechanisms since normalized deviance appears to be your STS framework..

Response: I have decided to remove this section as my paper as I felt as though it did not flow into the rest of the paper or relate to it. I have decided to look into the utilitarian approach of ethics to consider the option of moving everyone into the city. Would this garner enough support with the reasons provided and be enough to gain support to move everyone into cities.

Comment: I think you are also right that cities may be better able to deal with climate change than more spread out rural locations. It is easier to implement policies across a city IF the citizens can agree on them and IF the policies do not discriminate against or leave out some neighborhoods. It is also easier to set up a power grid in a city. But you do not do much analysis of or research about these possibilities.

Response: I agree that a consensus will need to be reached for a plan to become in its vision but I feel that this would be better addressed in the thesis paper in that I can expand upon the relationships needed to be formed for this to be implemented. It is a big IF question on whether or not people will get behind this but I think it is also changing the mindset of most people in how they view cities. I will be somewhat addressing this through the utilitarian approach and will be providing examples of how to mitigate urban sprawl through zoning and other ways to regulate development to keep it contained. I will also look at Portland, Oregon in that it implemented some of these tactics.

Comment: Cities are not necessarily worse for the mentally ill. The upside to cities for those with mental health issues is that there are more treatment options than in rural areas and it is easier to get to the treatment places. You have good examples of how

cities can be made friendlier for the mentally ill--and these same improvements are likely to make them more attractive to most city dwellers. It would help if you could find some examples of cities that have good services for the mentally ill. Charlottesville is one--it has a Region 10 facility plus the University hospital.

Response: So provide that cities can also be a good way to provide resources than rural places for mental health and even if they can(potentially) impact people's mental health then they also have solutions built into them now. I will include this within my paper and look into research about this.

Comment: Is this because of the resources Americans consume? The space we take up? Be specific.

Response: One of the questionnaires I took to see how many Earth's it would take to sustain everyone to live like me they asked me about where I lived and what I ate. They also note this in the source. I have added this to the paper.

Comment: I agree with all of these points. I gather the Beatley source provides support.

Response: Yes throughout the course this semester he has stressed sustainable cities and creating open space and permeability of cities to make them more pedestrian friendly. It seemed to be a theme throughout some of the lectures and thought that I would include this I added the reference to the source.

Comment: Also within cities -- greenspace is important for a host of good reasons.

Response: I also agree. I think I mention later that it is important for mental health and physical health.

Comment: Can the Portland experience be replicated in other cities?

Response: I believe that it can be through the different tools that cities can use as described lower in the paper. They really achieved this through politics and laws.

Comment: We are no longer talking about Portland here, right? So start a new paragraph

Response: Will do.

Comment: Cities are also much more likely to have mental health services than rural areas, where you may have to drive to a city to get help with a mental or behavioral condition. The situation can be similar with health problems, especially those that are rarer and therefore require specialists.

Response: I agree and I have always found this to be true

Comment: consider what cities of the future might look like, if you have time and there are sources.

Response: I think this would be an addition to the research question next semester as it would expand and take a different avenue on the paper and topic.

Comments from Peers:

Peyton commented that I should look into the drawbacks of densification and try to see the negative impacts of so many people living so close to one another. I think that this would fit better into my thesis in expansion of the issues associated with living in cities. I could include the negative impacts of living in such dense scenarios.

Yongyi stated their opinion on the matter of urbanization in that it can have negative consequences for many people but that if I can find data to support the movement into cities then I could potentially create a new movement. I realize that there are negatives associated with any decision that would be made, but I feel as though we need to pick the one with the

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least amount. I think that it is also a matter too of changing people's perspective on cities as they stated in their comment.

Robert questioned whether or not I was suggesting living in urban areas could improve mental health and provided a source for me to look at. I responded that I was mainly just looking to see if there were any impacts on mental health one way or the other. The second part of the paper would focus on if cities do create negative mental health impacts then how can we lessen them. Robert then states that maybe I should look into comparing different cities around the globe to see whether or not different planning styles have different mental impacts on people. This would be a great way to provide information on how city planning can impact life quality. I also believe that this would work better into my thesis where case studies would be important data in providing backup to claims mentioned in the paper.

** Highlights indicate edits made to the first draft due to changes in STS framework in response to comments made by others **

Introduction

The purpose of this paper is to deduce whether or not living in cities would be the most sustainable way to accommodate human growth while also looking into the impacts of living in a city on mental health. Sustainability is an idea that has come to the forefront of hot topics in recent years due to climate change. Focusing on the United States, if everyone lived like an average Americans then four Earths would be required due to the products they consume and the places they live(C. McDonald, 2015). Planning cities and counties so that resource consumption is reduced becomes important for a growing population and a population in danger of the impacts of climate change. The first part would focus on whether or not living in cities is more sustainable Next would be discussion on implementing policies to move people into the city and using the utilitarian framework to see how this would impact society. Finally, discussion about mental health impacts and better ways to plan cities to minimize the impacts of living in cities will be explored.

Living in Cities?

When looking for the best possible way to live sustainably most people cite that cities are the best way to live. With compact living areas, people no longer require a car and instead use public transportation. If a city is planned well, walking and biking can also be considered as suitable modes of transportation. The infrastructure required for cars decrease as more people choose to use other means of transportation and allows for the potential to reclaim the area for parks where kids can play and get in touch with nature. When communities live compactly, children are allowed freedom in a way because they do not have to rely on their parents to drive them places (Beatley, 2019). Kids can use bikes, sidewalks, and public transportation to allow them to visit friends and places they like to play without bothering their parents. It also allows for citizens to easily visit the store to buy groceries or other goods (Beatley, 2019).

Carbon emissions from cities may be greater than rural areas but that is due to the fact that larger portions of the population live in the area. When looking at per person, carbon

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emissions is often much lower in cities than in rural cities because of proximity (Steuteville, 2019). Disagreement about the fairness of comparing these measurements is due to the fact that a majority of the food and other products are produced outside the city and transported in(Day, 2016). However, this is no less true for people who live in the country and have to drive to stores to buy some of the goods that they need and more having to do with lifestyle people choose.

Specialization has lead people to separate jobs and production of different goods. If we bring multiple companies into the city then transportation of resources is decreased and the wastes of one company can be used as the products for another (R. McDonald, 2018). The way our communities are set-up will have the most impact on the environment (Penazzi,2019). Living in clustered cities allows for more green areas to surround the cities. Suburban areas disturb large areas of forests, which sequesters more carbon than the grass that would replace it. If not used for forested area, living in densely packed areas allow farmers more land to use to grow more food. With a growing population more land will be needed to grow more food no matter how great the technology or processes become to increase productivity. **Overall**, sustainable living is the key to saving our earth and cities provide a way to keep communities close and reduce the footprint of humanity on the Earth for more green space.

Moving People to the City: A Utilitarian Approach to Viewing Cities

Americans have always had a dream of moving out to the country buying their own house with a yard, but with a growing population this idea needs to change. Cities need to become more appealing to the average American so that we as a whole can benefit. When looking into the ethics of moving more people into the city for sustainability reasons, the utilitarian approach becomes an important framework. Utilitarianism can be described as choosing the scenario that will benefit the most amount of people, so explored in this section will be the benefits and potential (Brown University, n.d.). Cities provide plenty of resources for its citizens. For example, in cities citizens have better access to health care: "Less than 11 percent

of physicians in the U.S. practice in rural areas, yet about 20 percent of the population resides in rural areas." (Georgetown University, n.d.). Having more people living in cities allows more people access to transportation as well. Families will not have to depend on cars as their main mode of transportation therefore effectively lessening the cost of living: "A household can save nearly \$10,000 by taking public transportation and living with one less car" (APTA, n.d.). City planning can be done in a way that allows for maximization of benefits for all. Though it can impact socioeconomic groups differently as in the example of Central Park, where creating Central Park displaced people of lower-income status, city planners can introduce green spaces into affordable housing as well and effectively distribute the benefits of green spaces to all(Beatley,2019). Again, creating compact living areas provides more space for farmers who provide for all. Society gets more food and makes less of an impact on the environment which benefits everyone involved in the long run. Overall, cities provide a plethora of benefits for its residents and for the Earth and seems to be the best option to benefit the majority of people. It would also seem to be the duty of the government to regulate growth so that the majority of their citizens benefit from the opportunities that cities make available to people living in them.

One of the many ways to encourage city development or discourage urban sprawl is through urban growth boundaries. This is meant to limit the growth of developments outside of this line and keep most of the density contained. Portland, Oregon is a great example of a city who used the urban growth boundary. They have tried to encourage infill with this tactic as well as other initiatives to get citizens to develop within the city (The City of Portland Oregon, n.d.). The effectiveness of urban growth boundaries are inconclusive, but no matter what the data shows it still is a great way to put thought into action and show citizens the plan for the future(Yin, 2007). Other ways to implement change in land development is to regulate zoning and create a comprehensive plan. This helps layout where future development is allowed and plays into the urban growth boundary. Portland also has strived to receive input on their initiatives and tried to get the citizens involved in this way(The City of Portland Oregon, n.d.).

Some other tactics can also be used as well. States can implement fees for developing outside or in rural land or even stop services past a certain distance outside the city to reduce the likelihood that someone would develop the land(Resnik,2010). The more people are involved, the more they will get behind the cause.

While this may seem like a solution to all issues there is opposition to these regulations and ideas. Developers hoping to make money by creating a neighborhood might be rid of this right to do so because of the change in zoning(Resnik, 2010). Some other reasons why people are against these regulatory policies listed by Resnik are price drop of other housing, lack of affordable housing depending on how they develop, and increasing sprawl(2010). The way that some of these regulatory policies may increase sprawl is either they fail in what they were trying to accomplish or just "displace" the sprawl to other areas(Resnik, 2010; Yin, 2007). Resnik proposes that one way to progress with "smart growth" is open discussion with proponents of the system. Discussion allows everyone to be heard and allow parties to reach a consensus about how to best approach the growth of their city.

Mental Effects of Living in a City

The main reason for my interest in mental effects of cities on citizens is because for my capstone my group and I are redeveloping a site within Reston, Virginia. We are tasked with creating site plans that will include: a layout design, utility design, stormwater design, and other details associated with site development. My group, which consists of Indigo Breza, Aleyna Bedir, Lindsey Maxwell, and Peyton Rice, wanted to create an open space where people could gather and relax. This site is also geared toward sustainability with LEED requirements from the local district.

With a majority of people having to live in cities, the impacts of having to live in close quarters on mental health must be explored. Cities have a known phenomenon of urban health penalty which includes both physical and mental impacts(C. McDonald, 2015). Physical effect of living in the city, except the United States, means that there is a higher chance of being obese.

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More importantly, living in the city is known to lead to higher chance of stress, depression, schizophrenia, and psychosis. Minorities are more at risk for mental disorders because of the challenges they face everyday and have to internally deal with everyday due to society(C. McDonald, 2015). In this article it is also noted that there is an increase in spousal abuse which therefore leads to more mental issues.(Srivastava, 2009) Some of the reasons for the increase in mental health disorders is because there is usually not a stable community for support. Because most places are rented out people can easily move about and not build relationships with neighbors(C. McDonald, 2015). These important bonds with neighbors are taken away and don't allow the person to rely or even have someone to talk to about their stresses.

One source mentions that pollution, access to green spaces, and the height of buildings can also impact a person's mental health(Bruebner, 2017). Pollution can relate to noise, light, air, etc. which allows for a variety of factors to impact the health of an individual. When people first think of a city one thought that comes to mind is traffic. Car horns, emergency vehicle's sirens, and the overall bustling noise of people moving about can be constant. This in turn can irritate most people and destroy any environment creating a peace of mind and therefore leading to an increased risk in developing a mental health disorder(Gruebner, 2017). The source also briefly mentions light pollution and how that can affect sleep. Cities constantly have on street light for safety but a lot of this light can leak into apartment buildings disrupting the natural internal clock of some people. Sleep can also be disrupted by the noises associated with cities as well: sirens, trash pickup with dumpsters, etc. Sleep is an important regulator for the body and mind and when it is disrupted then the likelihood of mental illness is increased.

How to Improve Planning to Lessen the Effects of Mental Health

In order to lessen the impacts of living in a city on an individual cities need to develop groups that include professionals from different disciplines. Planners, civil engineers, psychologists, environmental scientists, and politicians are required to come together to create the best plan for a city. They can share knowledge that will guide the design of communities and promote

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regulations that will allow for the successful development. The need for green space is no doubt one of the most important aspects in designing a city. They need to be placed strategically so that people of all socioeconomic backgrounds can gain the benefits of having access to some nature. The benefits of interacting with nature or even viewing it is priceless. Studies have shown that it improves your mood and disrupts the negative thought process. Nature also has other impacts including lower blood pressure, lowering stress levels, and having overall beneficial impacts on mental health(Harvard Health Publishing, 2018). Incorporating plant life either as green roofs, plant siding, in the office, or parks is important to make a cities image welcoming and calming. In regards to the feeling oppressed by tall buildings Vancouver does an excellent job of negating this feeling. They scattered their tall buildings scattered throughout the city with shorter buildings to reduce the effect of feeling oppressed(Beatley, 2019; City of Vancouver). Another way cities can and have planned the area around them is to set height limits. With regulation, shorter buildings can be required to front streets where people mainly walk so as to not have the feeling of buildings closing in.

With respect to pollution, adding green spaces helps to filter out some of the pollution and trees and plants have been known to help regulate building temperatures therefore reducing cost of electricity bills. Having public transportation will also help with pollution in that more people are sharing emissions rather than a bunch of people standing in traffic in one car going to the same place. Providing infrastructure for bikes and pedestrians will also encourage people to walk more which will help with obesity rates. Looking into the Actor-Network Theory, the participants in order for cities to be successful are as aforementioned but also the pathways, buildings, and nature around the area. All parties must know what is at stake and have an agreed upon solution. They also must keep interest throughout the years along which includes investing in research and plans for such projects. A successful venture will keep everyone interested in the work and gain benefits from it in the long run. Designers will hopefully seek to improve designs along the way through community input.

Conclusion

My future hope for the paper is to expand upon certain case studies to see if there is an overall benefit to living in cities with growth boundaries than ones without. My thesis will explore more into the other benefits that cities may provide to citizens compared to country dwellers. Another consideration for my thesis will be looking into other ethical frameworks to see if they produce different outlooks on the situation. Planning cities for the future will be important with the new technological advances such as autonomous vehicles, vertical farming, and other emerging trends in society. Mental health is also becoming a pressing issue as well and finding a way to mitigate that through the way we plan our cities is important as well.

Resources

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