

**Urban Sprawl and Its Societal and Health Effects: An Interdisciplinary Risk and Outcome
Analysis**

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Urban sprawl is a widespread problem in the United States that impacts millions of people daily in many ways. Urban sprawl can be defined as “rapid geographic expansion of metropolitan areas in a “leapfrog” low density pattern” (Iram, Rasool, Shahzad, Saeed, 2012). In simple terms, it can also be defined as the uncontrolled expansion of urban areas. According to UN DESA (United Nations | Department of Economic and Social Affairs), 82% of the United States population lives in urban areas as of 2018. Since then, the number has only been rising and is projected to increase even more. Out of all the regions, the United States ranks number one for most urbanized over regions like Latin America, Europe, and Asia. Urban sprawl is not something that the public is necessarily aware of and or educated on but knowing the risks and outcomes of this problem would give insight into the depth of it.

The research into the health and societal effects of urban sprawl is lackluster. The research for the mental effects does not need to be as strong because we can take the other effects and tie them into how urban sprawl affects people mentally. Now while there are of course societal effects, they are not easily researched due to the related disciplines lack of awareness. More specifically, psychology and sociology are the two disciplines that have the least amount of insight to provide. Luckily, enough was found to be able to talk about it and tie it to urban sprawl. Aside from sociology and psychology, there are other disciplines, such as business/economics, biology, and geology. These are the 5 disciplines that will be discussed and intertwined to produce one solution that solves the big problem at hand. Now one may ask, what is the big problem? The big problem at hand is urban sprawl and what it does to society and the environment. Each discipline has its own insight on urban sprawl so elaborating on those and drawing connection between them will be the main task. The discipline with the most insight would have to be between geology and business/economics. I say this because from a geological perspective, their take is that urban sprawl is changing the land cover and in turn, is causing other problems by effecting things like “quality of water, land and air resources, ecosystem processes and function, and the climate system itself through greenhouse gas fluxes and surface effects” (Sundarakumar, Harika, Aspiya Begum, Yamini, Balakrishna, 2012). From a business perspective, their take is that urban sprawl is costly. According to one source,” Sprawl has multiple economic costs, increased travel costs; decreased economic vitality of urban centers; loss of productive farm and timberland; loss of natural lands that support tourism and wildlife related industries (worth \$7 billion (about \$22 per person in the US); increased tax burdens due to more expensive road, utility and school construction and maintenance costs; loss of the rural characteristics that make many communities attractive to homebuyers; and increased car use

leading to higher air pollution and increased health care costs for diseases like asthma” (McMahon).

Note how earlier it was stated that one of the impacts of urban sprawl from a geological standpoint was that water quality is affected. This is where another discipline comes into play and can tie into another. This discipline is biology, the water quality being affected by runoff is what causes pollutants and oil to get into streams and rivers. In turn, leading to several health issues in animals and humans. With these two disciplines having a communal problem, it makes it easier to connect and produce a solution. Although psychology was one of the disciplines that I listed as having the least amount of insight and the least information after research, I can say that I can think of many ways that urban sprawl would pose a severe problem from a psychological standpoint. For example, depression in farmers who once owned farmland, people losing jobs due to sprawl, and in people who are forced to move from a place they once called home. I also must include that while my research on psychology and sociology resulted in little information, I must say that these two are connected themselves. The psychological impact that urban sprawl has leads to a sociological impact and this is done by the people mentally affected by sprawl changing the way society is. One could think of it as one big domino effect if that helps.

Aside from the sociological, psychological, biological, and geological perspectives on urban sprawl, there is still one more discipline that should be thoroughly discussed. This discipline is business/economics. The big debate with this discipline is urban sprawl vs smart growth. Smart growth is simply defined as planned economic and community development that attempts to curb urban sprawl and worsening environmental conditions. New Climate Economy has thoroughly defined it as “compact, connected and coordinated urban development. Smart growth cities and towns have well-defined boundaries, a range of housing options, a mix of residential and commercial buildings, and accessible sidewalks, bike lanes and public transportation. By reducing per capita land consumption and infrastructure and transportation costs, smart urban growth policies can deliver significant economic, social, and environmental benefits” (New Climate Economy, 2015). This is the counter to urban sprawl and could very well be the solution. As stated earlier, there could just be one simple solution and that would be to just stop urban sprawl, but we know that this is something that is easier said than done. So, with that being known, this is where smart growth comes into the equation. Urban sprawl costs the American economy more than US \$1 trillion annually, according to a new study by the New Climate Economy. These costs include but are not limited to, building infrastructure, public service delivery, and transportation. These are only a few of the many costs. Some of the bigger expenses are building things like roads, buildings, etc. Urban sprawl increases the distance between homes, businesses, services, and jobs, which raises the cost of providing infrastructure and public services by at least 10% and up to 40% according to NCE. New Climate Economy has also found that acting to implement smarter urban growth policies on a global scale could

reduce urban infrastructure capital requirements by more than US \$3 trillion over the next 15 years.

Now as we are boiling down to the bottom here, we can start to realize that while urban sprawl does have many consequences and effects from different perspectives and disciplines, they can all relate to one another. The way that they all relate is how they all lead to health effects which in turn, affect society. Every effect that urban sprawl has from the different disciplines can all relate to and say how it affects society and health. The rapid increase in urban population worldwide is one of the important global health issues of the 21st century. Urban sprawl affects mental health through the influence of increased stressors and factors such as overcrowded and polluted environment, prominent levels of violence, and reduced social support (Srivastava, 2009). These are just a few of the things that the effect on mental health that urban sprawl has and can lead to. As far as health goes, studies also show that due to urban sprawl, the number of caregivers in rural areas is extremely low and that is a problem when 58 percent of the population is 60+ years old. In result, they are left to care for themselves and often do not get taken care of properly. The impact of urban sprawl is also associated with mental disorders because people are being pushed to move and live in urban areas and the necessary facilities are not available. This then leads to a decline in social support as the number of nuclear families increases. It is also worth noting that poor people experience environmental and psychological adversity that increases their vulnerability to mental disorders (Srivastava, 2009). Multiple disciplines are being intertwined at this point and the root of them all is health.

The range of disorders and deviancies associated with urban sprawl is enormous. Some of the disorders are severe mental disorders, depression, substance abuse, alcoholism, crime, family disintegration, and alienation. Dementia and major depression are the two leading contributors (Srivastava, 2009). Everything previously listed was just mental health issues, some of the physical health issues caused by urban sprawl consist of things like diarrhea, malaria, and biggest of all, obesity. Due to urban sprawl spacing everything out, the use of an automobile is required to get where you need to be. So, because of that, there is a lot less walking and decreased physical activity. When we combine less physical activity with a polluted environment, one could assume that the result is negative. To back this all up, a survey was taken of 120 male and female respondents from Ravi town (Lahore). They were asked a series of questions and most of them agreed on there being a lack of facilities with clean water, their families being affected by the pollution, urban sprawl leading to health problems, motor vehicles leading to pollution, and much more. This just goes to show that urban sprawl is not just something that a certain group of people dislike or have bias against but more so a real problem that needs to be solved.

It was stated earlier that smart growth was a solution that would benefit all disciplines while solving the problem of urban sprawl. Although smart growth is indeed the main solution, there is another solution that may seem minimal but goes a long way. This solution is education, one of the biggest problems concerning urban sprawl is lack of education. If communities are educated about the negative impacts of urban sprawl, they are more likely to take action to prevent irresponsible development. Communities need to understand the drawbacks, including increased traffic due to an increased number of commuters and lack of public transportation resulting in increased pollution. Community and family-owned businesses are affected as they are replaced with large retail stores. Other problems include higher taxes and farmland being transformed into housing developments and shopping centers. Once the community is educated, it is more likely to act (Citizen Scientist Project). This statement by the Citizen Scientist Project sums up everything that has already been talked about while explaining the importance of education on the problem. Now, for smart growth, it is the best solution available currently. Smart growth counters urban sprawl by promoting compact development and what this means is changing things little by little and in a way that does not harm the community or land. It also promotes mixed-use development, combining residential areas with places of employment and commerce instead of isolating individual areas, allowing for more pedestrians and public transit rather than traffic and pollution. Think Richmond, Virginia or to be more specific, the VCU area. That area is the perfect representation of mixed-use development as there is a mix of pedestrian life, commerce, housing, and more. Everything is within walking distance, public transportation is available, etc. When it comes to smart growth there are only pros/benefits. The list is long and could go on forever but to list a few, minimization of air and water pollution, reduce greenhouse gas emissions, encourage clean-up, reuse of previous infrastructures, and preserve natural lands.

Smart growth can be researched more in-depth as there is much more to learn about and if done, that puts us one step closer reducing urban sprawl.

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