Comparing Child Development in Urban and Rural Areas of the U.S.

A Research Paper submitted to the Department of Engineering and Society

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

Keenan Alchaar

Spring 2023

On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

Advisor

Pedro A. P. Francisco, Department of Engineering and Society

Introduction

Today, in the contiguous United States (U.S.), inhabited land usually falls into one of three types or "contexts": urban, suburban, and rural. These are not formally defined terms, but they are still useful in distinguishing between residential areas. In this paper, I will discuss the most disparate of the three: urban and rural areas. On the surface, rural areas are understood to be "relatively sparsely settled with small populations and relatively isolated from large cities" (Clark et al., 2022). One specific aspect of living in different contexts worth considering is how children develop differently in them. If we want to ensure children have comfortable childhoods and fulfilling futures, we should at least ensure they have quality education, loving families, and safety, among many other positive factors for their development. As one author puts it, "growing up in rural areas matters not only for children's development and well-being, but also for their future life chances" (Clark et al., 2022). It is worth ensuring that American children grow up comfortably no matter where they live, and that begins with understanding where they may live and any related challenges.

The differences between urban and rural areas lead children to experience life differently in each, and this paper seeks to understand what exactly is different, why it is different, and what citizens and policymakers can do to resolve negative differences. Specifically, this paper seeks to answer the following question: "How does child development differ between urban and rural areas in the United States?" Although this question does not focus on a particular "technology," there are specific public services such as well-funded education and public transportation that help children develop cognitive skills and independence, respectively. Additionally, healthcare availability, whether funded publicly or privately, helps children remain healthy with regular check-ups and short wait times. In essence, public services and infrastructure can serve as

positive actors that help children develop comfortably, both directly and by easing financial pressures on parents. Rural areas tend to be more lacking in these community resources and infrastructure, but disinvested neighborhoods in urban areas can face similar challenges, in addition to high crime rates. In general, children benefit significantly from healthcare centers, high-quality schools and libraries, and community resources. Areas lacking in these should receive investment to improve their children's quality of life.

Scope and Methods

In this paper, I will discuss the differences between urban and rural areas with regard to child development in the contiguous United States. To research the differences, I will primarily use past literature on urban planning and child development. The past literature I will present includes specific statistics on different aspects of life in urban and rural areas, such as poverty rates and healthcare availability, which I will synthesize to more broadly answer how child development differs in urban and rural areas. Some statistics will also come from the United States Bureau of Labor Statistics. In addition, I will gather related historical context and firsthand accounts to further understand differences in quantitative measures between urban and rural areas. There will be a strong focus on infrastructure differences since we can interpret infrastructure as a technology, which makes sense to discuss from the perspective of STS. To that end, I will also analyze the differences between urban and rural areas through Bruno Latour's framework of actor-network theory. Actor-network theory "[traces] the complex relationships that exist between governments, technologies, knowledge, texts, money, and people" (Cressman, 2009). The differences between urban and rural areas and subsequently child development are, arguably, very closely tied to government action. Considering this, broader

ideas such as funding and policymaking for infrastructure projects fit well with what actor-network theory analyzes effectively.

As mentioned earlier, the definition of "urban" varies by author; some differentiate them from suburbs as being denser or near a region's downtown (Hermida et al., 2019; Votruba et al., 2015), while others will consider suburbs (less dense than urban cores, but denser than rural areas) part of "urban" data (Atkinson, 1994; Probst et al., 2018). My paper will focus on the latter definition to focus on comparing rural areas to non-rural, well-populated areas.

This paper does not seek to *closely* examine any particular difference between urban and rural areas. While I will include statistics where appropriate, policymaking as applied to solve these issues requires more contextual awareness that I will not delve into. Investing public funds to solve societal problems is inherently political, and the details of these investments can get quite complex. Still, I think there is value in a general understanding of what challenges children face more often in rural or urban communities so that we understand how to advocate for stronger and healthier ones.

Comparing Urban & Rural Areas

Childhood poverty is a common research area among sources that compare child development in urban and rural areas (Amato & Zuo, 2019; Clark et al., 2022; Hermida et al., 2019; Probst et al., 2018). Although poverty is "not a homogeneous experience for individuals," (Amato & Zuo, 1992), understanding its causes and how to address them can be one way of improving children's quality of life in all living contexts. Poverty has far-reaching negative consequences for a child's quality of life. The poor are "more likely than others to be exposed to stressful life events, such as unemployment, crime, victimization, and illness" (Amato & Zuo, 1992). Additionally, "they live with chronic strains such as economic hardship, job

dissatisfaction, and frustrated aspirations" (Amato & Zuo, 1992). Though these hardships affect adults more directly, they can affect children if they are not given the necessities due to stressed or financially burdened parents. In 2019, the childhood poverty rate in rural areas was 21%, while the child poverty rate in urban and suburban areas was 16% ("Rural Poverty," 2022).

Two authors argue rural child poverty has begun to mirror urban poverty with regard to the challenges faced; however, "the reasons behind rural poverty are dramatically different from urban poverty" (Nadel & Sagawa, 2002). At a qualitative level, the decline of the manufacturing sector and the general shift from blue-collar to white-collar employment in the suburbs negatively affected many African Americans living in inner urban areas. As middle-class African Americans moved away, inner cities found themselves with a "lower tax base, poorly funded schools, deteriorating facilities, and high crime rates" (Amato & Zuo, 1992). Meanwhile, many isolated rural communities "lack the people, skills, and money to support schools, libraries, child development programs, health clinics, child care centers, and public transportation that [helps] poor families change their lives (Nadel & Sagawa, 2002). So, while urban areas generally have better-developed public infrastructure, some neighborhoods may continue to suffer due to generational poverty dating back to the mid to late 20th century. However, children may find it easier to break this cycle of poverty with the greater amount of infrastructure and services typically available in urban areas than in rural areas. Still, both contexts can lack sufficient and accessible healthcare.

One study comparing 1,976 rural counties with 1,166 urban counties found that 28.2% of these rural counties had over 20% of their children living in poverty, while only 12.9% of urban counties had over 20% of their children living in poverty (Probst et al., 2018). Health professional shortage areas (HPSAs) identify areas that have a shortage of healthcare

professionals in them. To quantify the comparative lack of healthcare described earlier, rural HPSAs have 1845 people per physician, while urban HSPAs have 1590 people per physician (Probst et al., 2018), nearly 14% less. This can lead to longer wait times for children who may be experiencing health problems, and the problem appears to be worse in rural areas. Additionally, transportation availability and reliability also play a role in healthcare accessibility.

Another study sought to observe how transportation barriers affected a low- or moderate-income family's ability to keep an appointment. 183 caregivers were studied in greater Houston, TX. The authors found that respondents who used transportation other than a car had 3.23 times the odds of not keeping their appointment than those who did use a car (Yang et al., 2006). Finally, the majority of respondents also felt costs of transportation were too high in Houston. Using recent numbers from 2020-21 Consumer Expenditure Surveys, on average, transportation accounts for about 18% of resident expenditures in Houston, compared to 11% in Boston and 12% in New York ("Consumer Expenditures," 2022). It is reasonable to say strong public transit systems in both of these cities help keep transportation costs down for those who don't own a car. Although the first study was specific to the urban area of Houston, it still suggests a general idea: that transportation accessibility is an important component of a child's health. Missed appointments result in "missed dental care, immunizations, and chronic illness care" (Yang et al., 2006), potentially harmful to a child's health. If owning a car in a rural area is taken as a given, then urban areas with poor public transportation stand out as being the most problematic for low- to moderate-income families. They incur the often higher costs of urban living with reduced transportation benefits.

Another study compared average reading and math scores across various family incomes for 6,600 American children from infancy through kindergarten. The authors found reading and

math skills of poor children were lowest in families in large urban areas (Votruba et al., 2015). However, they also found links between income and children's early academic skills, suggesting that a child's living context does not matter nearly as much for their education as their family's income. It is difficult to draw any comparative conclusions about education in rural or urban areas from this study, but the authors do advocate for "[identifying] targets for intervention and prevention programs aimed at improving poor children's development" (Votruba et al., 2015), considering the correlation observed between income and test scores across all living contexts.

Understanding Rural Areas Through Firsthand Accounts

This section focuses on firsthand accounts of rural life presented by children who grew up in rural contexts. The accounts were gathered and summarized in "America's Forgotten Children" by authors Wendy Nadel and Shirley Sagawa.

In one account presented by Nadel and Sagawa, one child grew up in an impoverished rural area surrounded by many negative influences– weapons, drugs, alcohol, and gangs. He claims "the reason we sell drugs and weapons is because we can't get jobs anywhere else" (Nadel & Sagawa, 2002). While many generally consider gangs more ever-present in urbanized areas, they can still exist in rural areas, and they can harm a child's chances of long-term success the same way.

For those in rural communities that do manage to attend college and break out of generational poverty, there still exists the unique problem of "brain drain" in rural communities. "Brain drain," in this scenario, describes the departure of highly-educated people from rural communities to more employment-rich urban areas. Anecdotally, another child recounts "people who go to college around here, they leave immediately, and no one actually comes back" (Nadel & Sagawa, 2002). Although this is not directly related to child development, it partially explains

why rural areas may lack sufficient leadership to improve education and youth programs. This cycle could hinder a child's quality of education in areas where the well-educated are constantly migrating, leaving the rural areas they grew up in lacking strong educational opportunities.

This particular phenomenon is also supported by current research: "Lack of economic opportunities in rural areas is one of the primary drivers of out-migration" (Clark et al., 2022), leaving such regions deprived. The Midwest, for example, experienced a 50 percent decline in its population aged 25 to 34 from 1990 to 2005 (Clark et al., 2022). Finally, in 2015, only 19 percent of rural residents, relative to 33 percent of urban residents, had a bachelor's degree (Clark et al., 2022).

Actor-Network Theory: How Technology Differentiates Urban and Rural Communities

Perhaps one of the most significant differences separating most urban and rural areas, as shown previously, is the quality and availability of their infrastructure and public services. Both of these aspects play into how children develop cognitively and socially, whether directly or due to how these affect their parents. Consider some of the public services mentioned earlier, without regard for the geographic area they may be in: schools, libraries, child development programs, health clinics, child care centers, and public transportation. Then, consider some of the physical infrastructure that serves these: roads, bridges, and communication lines.

So far, this network consists of the aforementioned public services and infrastructure, the taxpayers who pay for them (potentially local or federal taxes), parents and children who benefit from them, and the government who hires contractors to carry out these infrastructure projects or writes policies to incentivize the development of new infrastructure and services. Nearly all of these services serve as actors that help all children, but especially poor children, grow up more comfortably since the cost is subsidized by taxpayers. It is worth noting that cities tend to have a

higher cost of living than rural areas which may harm impoverished children in the short term: "In 2011, urban households spent $50,348, which was 18 percent more than the $42,540 spent by rural households" (Hawk, 2013). However, broader access to public services can certainly help children break their family's poverty cycle compared to an area with fewer jobs and poorer education. Infrastructure and public services can create a more productive population for both the poor and well-off, which can serve as good actors to improve a child's development– whether they are the parents, healthcare professionals, educators, or any other adult participating in a child's upbringing. Going further up the network, control over infrastructure and public services like clinics, schools, roads, public transportation, communication lines, etc., is largely something the local or state government controls, though federal aid may assist them. Then, in a democratic society, all Americans of voting age also have some power in this network, albeit less than the government itself. These beneficial aspects of everyday life are especially political when compared with new technologies where engineers and corporations hold much of the power in integrating the technology with society. In the case of urban planning, the evidence presented suggests *new* technologies and services are not needed as far as a base level of comfort for child development is concerned. Communities simply need a broader adoption of the infrastructure and services listed previously, and of course, this takes money, most often public money. This means funding these services for disinvested areas, whether they are urban are rural, requires political willpower that is often absent. In the end, the voting population *does* have power in this network; probably more than the poor urban and rural populations, which are in the voting minority. Knowing this, without widespread support among the broader public, it would be harder to push policymakers to enact the change required to improve disinvested rural and urban areas.

Conclusion

Initially, I asked, “How does child development differ between urban and rural areas in the United States?” If society at large wants to ensure children have comfortable childhoods and fulfilling futures, we should ensure they have high-quality education, loving families, and safety, among other positive factors. To that end, I wanted to see if urban and rural areas faced different challenges with regard to child development. Generally, rural areas lack the same amount of public services and community resources (transportation, healthcare, child care, libraries, etc.) urban areas have more of. In comparison, children in urban areas, especially poorer ones, are generally more likely to be exposed to crime, and the costs of living in urban areas tend to be higher for their parents. However, beyond their definitions, there can be significant variation between every rural area and every urban area. So, in the interest of improving child development everywhere, the way children experience poverty (perhaps one of the most damaging yet widespread phenomena) in each of these settings stands out as the most important issue to address. Solving this issue involves investing in these areas to break cycles of generational poverty. This involves investing in infrastructure like schools, community centers, and healthcare facilities, which are all actors in the actor-network that help children develop comfortably. In addition, governments must invest in people by making education, training, and healthcare more accessible. Investing in both places and people are beneficial, complementary policies (Clark et al., 2022). I did not discuss housing policy in this paper, but it becomes ever more important for families and children in costly urban areas, especially when this cost is exacerbated by a lack of affordable housing and housing in general (“A Shortage of Affordable”, 2023). Of course, the political will of the people, as well as state and federal governments need to be present to do this, as federal and state governments stand as the strongest actors with the

most power to allocate more substantial tax dollars compared to local governments with poor residents. It will be especially important to find ways to fund these investments, considering people acting in their self-interest may not be as receptive to their tax dollars being used in a way that will never directly benefit them.

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