The impact of smart city development on the perception of quality of life

Nicholas Victor Julius ALEXANDER

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Smart City Development (SCD) is one of the most prevalent paradigms in urban planning in the developed world, emerging as a response to post-industrial demographic transformations. On one hand, in developed countries, including the United States, urban populations are once again increasing. This trend is somewhat surprising, given the demographic decline of populations born in these cities and the loss of many jobs requiring physical presence in urban areas, which had previously contributed to the phenomenon known as Shrinking Cities—a term describing the decline of major cities from the interwar period until the 1990s. To some extent, these pressures towards urban decline should have been exacerbated by the recent shock of the Covid-19 pandemic, but nevertheless, city depopulation is still not ocurring. On the other hand, in developing countries, there are large demographic shifts from rural to urban environments, thus replicating the transition experienced by the developed world in the early 20th century.

There is concern that a return to the urban densities of the interwar period could lead to a loss of quality of life (QoL), based on the historical developments documented during the transition to the city in the developed countries. In this regard, recent cross-sectional observational studies from the USA indicate an inverse correlation between subjective well-being and population density in a given territorial unit. On the other hand, similar studies conducted in Western Europe or focused on specific age cohorts suggest that this inverse correlation is often missing. There are several attempts to explain this discrepancy, including Type II statistical error, or epoch-specific idiosyncrasies within each sample.

A third hypothesis attributes the difference between American and European QoL changes during urban crowding to differences in social attitudes, as captured by the witticism “Americans live to work, while Europeans work to live.” This approach suggests that cultural differences facilitate Europeans’ higher tolerance for increased demographic density. A relevant corollary would be that policies allowing Americans to live similarly to Western Europeans could improve the formers’ perception of urban density.

SCD can be seen as a generalization of this principle. Experts from both sides of the Atlantic believe that cities with shorter distances between key locations, public spaces facilitating social interactions, accessible public transport, and green spaces tend to provide a better QoL at the same objective level of demographic density, compared to cities developed around the personal automobile or gated communities. Furthermore, they argue that an active effort to reshape cities from an individualistic to a more community-focused model would enhance urban residents’ QoL.

This trend toward community-oriented urbanism is generally linked to the belief that the introduction of newly available technologies, such as real-time monitoring, can slow down or reverse urban decline. In this regard, the European Commission (EC) has defined the smart city as a place where traditional services and networks are enhanced by modern telecommunications technologies. Among the goals set by the EC for developing smart cities are efficient resource use, pollution minimization, improved availability of public transportation, safe drinking water and sanitation infrastructure, nergy-efficient lighting and heating, and faiclilptimization of public-authority interactions

In short, the European understanding of SUD places emphasis on the ultimate goal of development: improving Quality of Life (QoL).