

Variability in Health within Urban Places

Panel Contribution to the Population-Environment Research Network Cyberseminar on Urban Spatial Expansion (29 November-15 December 2004) by John R. Weeks, International Population Center & Dept of Geography, San Diego State University, USA, Email: john.weeks@sdsu.edu

Tony Champion, drawing especially from his new volume “New Forms of Urbanization,” (Champion and Hugo 2004) has already made the case very well that we can no longer afford to view urban places as somehow being dichotomously different from rural places. Urban and rural places are changing their character dramatically as the world’s population surges from 3 billion in the middle of the 20th century to 9 billion by the middle of this century. Most of that increase has been and will continue to be sopped up by cities, even though much of it has originated in the countryside. This massive urban transformation has had the somewhat unexpected effect of making many rural places more urban, while at the same time urban places are becoming less urban, as cities lose density in the old center and absorb population in the suburbs. These are processes that are occurring across the globe, and several contributors have noted correctly that suburban sprawl is not unique to the developed world.

The overall pattern of urban evolution that has been occurring inexorably around the globe has been fueled especially by the technological innovations of the past two hundred years. Cities have been around for a long time, but technology has permitted an increase in agricultural output per worker that, paradoxically, has permitted more people to be freed from agricultural activity and, thus, available to move to jobs being created in cities. At the same time, technology (including that which created better food supplies and the ability to store them for longer) has helped to improve the health of the population, which has led to cities becoming demographically self-sustaining (i.e., having a positive rate of natural increase and thus not being completely dependent upon migration for population increase). Concurrent with that are the advances in engineering technology that have allowed for an expansion of the possibilities for city size and structure because they have permitted an increase in the size of buildings, improvements in systems of transportation and communication, and more effective and stable supplies of clean water and proper sewerage.

Technology has also led to a larger population worldwide through its impact on controlling mortality, and that has led to the need for populations to be increasingly urban—to get out of the way of the mechanization of agriculture which is required to feed the larger population. Thus, only in modern times has it been not only possible but also necessary for a large fraction of the population to live in cities. More importantly, the future will virtually demand that most people live in urban places because, ironically, that is the only way that we will be able to sustain the 9 billion people that are expected on the planet by the middle of this century. Sustainability of urban and suburban places thus becomes more generally an issue of the sustainability of the human population. Cities are attractive to humans for a variety of reasons, but millions of years of rural life still leaves many humans with an innate discomfort at the high density of central cities. Everywhere in the world the suburb has been the compromise--close to the city, but not

completely enveloped by it. The challenges of a suburbanizing society are, in my opinion, among the central issues that all nations will be dealing with in this century.

These challenges are especially overwhelming in developing countries because the infrastructure required to keep an urban population healthy are harder to come by in resource-poor nations. When people are scattered in rural areas, their access to clean water, adequate sewerage, and proper nutrition are hidden from sight and thus simultaneously hard to deal with but easy to ignore. When these same people show up in urban places, their plight is more obvious, and one of the biggest issues facing the city population relates to health. Throughout most of human history, until approximately the beginning of the twentieth century, cities were less healthy places in which to live than were rural areas. However, increasing human control over disease benefited city dwellers far more than the rural population for most of the twentieth century. Yet, early in the twenty-first century there is concern that rapid population growth in the cities especially of developing countries has resulted in a new set of health inequalities. There is increasing evidence of growing disparities in morbidity and mortality within city populations, as Mark Montgomery and his colleagues have shown in the volume “Cities Transformed” (Montgomery *et al.* 2003), the urban elite may still have superior health levels relative to others in a country, but many urban residents probably live in less healthy environments than people in the countryside.

This intra-urban variability in health has important implications not just from a human rights perspective, but from an economic perspective as well. Sustainable economic growth is a cornerstone of global policy to reduce levels of poverty worldwide and simultaneously increase the well-being of populations and reduce the pressure on the natural environment that poverty tends to produce. It is urban economies that almost always lead the way in development, and it is in the urban areas of developing nations where the highest rates of population growth are being experienced. Since population growth is now essentially an urban phenomenon, the health of that population is a key ingredient in the sustainability of economies. To the extent that an understanding of the patterns of intra-urban health can lead to policy directed to mitigate and ameliorate inequalities, it will increase the chance that urban residents and the urban economy will be healthier in the future.

For these reasons my colleagues (Allan Hill at Harvard, Arthur Getis, Douglas Stow, and Stephanie Brodine at San Diego State University) and I have embarked on a study of intra-urban variability in health in Accra, Ghana, collaborating with researchers at the University of Ghana. We hope that our research will allow us to test many of the propositions that have emerged over the past few days in this internet exchange. We have adopted a model that derives from a social ecological/epidemiological perspective that we describe in a recent paper (Weeks *et al.* 2004). One of our contributions is to emphasize the interaction of the built and social environments as factors that influence each other and in turn affect the health of inhabitants at the local, neighborhood level. We use remotely sensed imagery to quantify aspects of the built environment, extending the data about housing characteristics that are captured in census and survey data. We then overlay those data with a variety of health measures derived from census, vital statistics, and survey sources, and apply newly emerging spatial statistical procedures to model the spatial variability in health levels and the predictors of those health levels.

It should be noted that we are not suggesting that the rural population should be ignored, just because the urban population is “where the action is.” Rather, it seems that the challenges to health in urban places are so overwhelming, and so overwhelmingly important to the future of developing nations, that we must rapidly improve our understanding of this variability in order to pinpoint those places where changes in policy are required and where scarce resources must be applied.

Literature Cited:

- Champion, Anthony G. and Graeme Hugo. 2004. "New Forms of Urbanization: Beyond the Urban-Rural Dichotomy." London: Ashgate.
- Montgomery, Mark R., Richard Stren, Barney Cohen, and Holly Reed. 2003. "Cities Transformed: Demographic Change and Its Implications in the Developing World." Washington, DC: National Research Council.
- Weeks, John R., Arthur Getis, Allan G. Hill, M. Saad Gadalla, and Tarek Rashed. 2004. "The Fertility Transition in Egypt: Intra-Urban Patterns in Cairo." *Annals of the Association of American Geographers* 94:74-93.