

Urbanization, Population, Environment, and Security

A Report of the Comparative Urban Studies Project



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“One of the most significant observable global trends with operational implications is increasing global urbanization.”

AS THE WORLD WELCOMED its six billionth child on October 12, 1999, it also prepared

As shown by the above data, the sheer rate of urban growth in the next century

in response to an incident involving chemical or biological weapons, and in coordination with police and fire departments. Conduct a mid-intensity combat operation in an urban environment against a backdrop of civil unrest, and restore order.⁸

Urban researchers, on the other hand, tend to get nervous at the thought of Marines parachuting into local communities. They are more concerned with the loss of “citizen security” that accompanies high rates of crime and violence in societies that increasingly are spatially and politically fragmented. From the point of view of a research associate who works with poor communities in São Paulo, security is defined as a child’s ability to leave his/her home to play and be relatively certain of returning unharmed. In other cities plagued by air pollution, poor sanitation, and contaminated water, such as Ahmedabad, India, security means being able to live in a city without becoming ill. For others, security is defined by a safeguard against environmental disasters. Although “urban security” has not yet been adopted as the preferred way to view urban problems, this rubric allows us to discuss the host of variables, each impacting the other, that affect the stability of cities and the well-being of the people who live in them.

In the growing debate about urbanization and security, it is clear that urbanization by itself is not the key piece to the security puzzle. Not all urban areas are dangerous; in fact, many are success stories. However, combined with variables such as high population growth rates, high incidences of violence and crime, environmental pollution, decentralization policies lacking adequate resources, and political illegitimacy, urban areas can potentially become explosive. Studies of urban areas throughout the globe have pointed to the lack of state capacity as a critical factor in the failure of many city administrations to meet the basic needs of their growing urban populations.

Central authorities should have

central governments and local populations expect local government to do more, while neither the national government nor the taxpayer seems willing to put up the funds required to sustain local administrations. Meanwhile, social inequality has been growing within cities for more than two decades, regardless of those communities' overall economic wealth and well-being.

Competition over scarce urban resources means conflict from below, while devolution of responsibilities by national governments to their constituent parts, often not accompanied by resources, means that communities lack the capacity to respond effectively to the mounting challenges. The resulting absence of authority

creates fresh opportunities for activities threatening to the international security system as seen in the expansion of organized crime, international drug and arms trafficking, and the rise of urban-based epidemics of previously eradicated diseases.

The way in which urban areas relate to the global order is also significant to how we understand them. Subnational units emerge as international actors, as may be discerned by the growing presence of city, provincial, and state representational offices in the world's political and financial capitals. Less visibly—but arguably of greater significance—social conflict and political instability tied to mass urbanization and its concomitant environmental and social disruptions readily spill across international frontiers. There is evidence that international narcotics dealers and arms traders—as well as their criminal organizations—thrive in the interstices created by ineffectual local governments.

Although the “potentiality” of cities may be overwhelming, how alarmist one should be about our urban future largely depends upon the extent to which governing structures can be created to ameliorate the worst effects of massive growth.

Michael Renner, senior researcher at the Worldwatch Institute, identifies environmental stress factors, unemployment, small arms proliferation, and inequality as contributing to the rise of urban violence and crime. Although slowing population growth rates will help reduce the pressure on cities to provide housing, employment, and access to basic necessities like water and sanitation, cities will still continue to grow.

Alan Gilbert, professor of geography at the University College London, tackles the urban security debate. He argues that there is no consistent or meaningful relationship between urbanization and security. Gilbert first assesses current literature on urbanization and security. He then concludes that a city's success or failure to create a secure environment depends upon specific policies employed by the city government rather than on urbanization itself.

Taken together, these three papers and a collection of excerpts from other research, constitute a major contribution to an ongoing discussion about the challenges of urbanization, population growth, environmental degradation, and security.

THE CITY OF EKATERINBURG, situated astride the boundary between Europe and Asia in the southern Urals region, is Russia's fifth largest city and is located in the country's second most productive economic region.¹ Ekaterinburg, which long served as one of the Soviet Union's most important military research, development, and production centers, has been a significant urban center almost from the day of its founding in 1723. Renamed Sverdlovsk between 1924 and 1991 in honor of local Bolshevik hero Iakov Sverdlov, the city has become home to 1.4 million people. Standing in the heart of Russia's rust-belt industrial economy, it contains some of Russia's leading ferrous and nonferrous metallurgy centers, electronics factories, chemical refineries, pharmaceutical production facilities, and equipment manufacturing plants for the processing of raw materials.²

Ekaterinburg, not surprisingly, has been hit hard by the post-Soviet industrial collapse of Russia throughout the 1990's in which Russian industrial production fell nearly 60 percent. As recently as July 1995, four out of every ten Ekaterinburg employees worked in largely state-controlled industries while a quarter of the city's population attempted to live on continually diminishing state pensions.³ The preponderance of the population depended on the Russian Federation state budget in one way or another for sustenance, yet the Federation increasingly failed to deliver on its promises.

Soviet-era Sverdlovsk was one of the country's richer and more privileged cities. The population grew accustomed to an availability of goods and services absent elsewhere, especially during the time when the young, energetic, and home-grown Boris Yeltsin served as the local Communist Party chief during the early 1980s. Rallying behind Yeltsin, local reform-minded intellectuals made their city a hotbed of democratic activism during Gorbachev's perestroika era.

The post-Soviet period has been one of considerable upheaval, even though the Bank of Austria ranked Ekaterinburg and the surrounding region fifth in 1995 among Russia's 89 constituent subunits in terms of favorable investment climate.⁴ As elsewhere in Russia, an imploding central government abandoned Ekaterinburgers and left them largely to fend for themselves. Faltering local administrators—ambitious in their reach yet limited in their capacities—similarly failed to maintain control over local life. The subsequent vacuum left by state collapse has been filled by organized criminal groups trading, among other goods, the intellectual and industrial production of what was one of the world's leading centers of military research, development, and production but a decade before.

Local strongman, Sverdlovsk Regional Governor Eduard Rossel, emerged as one of the leading advocates of a powerful state sector in Russian economic life.⁵ Rossel advocated sustaining state industrial production at a level of approximately one-third of

Rossel had grounds for complaint. Sverdlovsk remains a “donor region,” passing forward more tax revenue than it receives in return from central authorities. Meanwhile, the region and its municipalities, such as Ekaterinburg, are struggling to meet their obligations for social programs. As elsewhere in Russia, wage and pension arrearages have plagued local efforts to jump-start the economy. Workers and researchers, left on their own, increasingly seek sustenance where they can find it. Frequently, organized crime provides the sort of living wages the state and a rudimentary private sector cannot.

By mid-1997, the Russian Ministry of Internal Affairs estimated that 40 percent of all private business in the country, 60 percent of state-owned enterprises, and 50 to 85 percent of all Russian banks were controlled directly or indirectly by organized crime syndicates.⁶ The United States Federal Bureau of Investigation simultaneously identified “some 8,000 crime gangs” operating throughout the former Soviet republics, including 200 that operate globally.⁷ Two-dozen post-Soviet criminal groups were known to be operating at that time within the United States while many Russian “mafia groups” developed direct working arrangements with U.S., Sicilian, and Colombian crime syndicates. These groups largely survive off the entrails of the Soviet state, selling assets whenever possible. In Ekaterinburg those holdings often include weapons, military technology, and, quite possibly, nuclear secrets and materials.

The threats to the international order posed by Ekaterinburg mobsters are real no matter how traditional one’s definition of “international security.” Purchasing agents from several “pariah” states are known to have found their way to Ekaterinburg doors. Credible experts on Russian organized crime suspect that local industries are providing those states with weapons and technologies that could prove destabilizing to global consonance. The ability of local organized crime groups to operate effectively is a direct consequence of the deterioration of both national and urban governance structures. Ekaterinburg is one place where urban crisis and international security concern converge with little deceit. There, local and global are one.

1. Gosudarstvennyi komitet Rossiiskoi Federatsii po statistike, Narodnoe khozaistvo Rossiiskoi Federatsii, 1992. *Statisticheskii ezhegodnik*, p. 87. Moscow: Respublikanskii informatsionno-izdatel'skii tsentr, 1992; “Regional Profile: Sverdlovsk Oblast,” *IEWS Russian Regional Report 2*, no. 27 (21 August 1997).

2. “Regional Profile: Sverdlovsk Oblast”; “Sverdlovsk,” *Bol'shaia Sovetskaia entsiklopediia*, vol 23, pp. 39–40. Moscow: Sovetskaia entsiklopediia, 1976.

3. “Regional Profile: Sverdlovsk Oblast.”

4. Ibid.

5. Ibid.

6. William H. Webster, et al., *Russian Organized Crime* (Washington, DC: Center for Strategic and International Studies, 1997), p. 2.

7. Ibid., pp. 2–3.

International Drug Trafficking: Seeing the Urban Component

Presented by Jorge Chabat at the Woodrow Wilson Center

Jorge Chabat, director, International Relations, Centro de Investigación y Docencia Económicas, Mexico City, Mexico, linked economic crises, ineffective national policies, and failed urban management in Mexico City with the growth of drug cartels there. According to Chabat, urban based drug cartels have grown during the recent decades in Mexico because of several factors: a) the development of a mafia inside the Mexico City Police; b) the failure at the national level of the anti-drugs campaign of the 1970s; c) the chaotic development of Mexico City, that favored other forms of organized crime; and d) the economic crisis of 1982, 1987, 1995, that contributed to the increase of common crimes in the cities.

Drug trafficking is primarily an urban activity: it takes advantage of the concentration of resources and increases in drug consumption. Since cities are the space where organized and common crime meet, governments need to address both dimensions of urban crime. The sheer rate of population growth in Mexico City has placed enormous pressures on the city government. With a population estimated to be about 20 million, it is no wonder that it is difficult for government to manage criminal activity. From 1993 to 1997 alone, crime rates rose 91 percent. Today Mexico City is known for its high rates of homicide, kidnapping, drug trafficking, and organized crime.

Chabat questioned the interdependent variables that cause people to engage in ordinary crime and drug trafficking. He found that people resort to the informal and often illegal economy when there is a lack of legitimate economic opportunity on the local and national levels. Chabat concluded that improving the national and urban economies as well as effectively managing urban growth are critical to reducing ordinary crime and international drug trafficking.

THE MAGNITUDE OF THE PROBLEM

In the large urban areas of developing countries, about 30 percent of the population does not have access to safe water, and 50 percent do not have adequate sanitation. That means that over 500 million people do not have safe water, and 850 million people do not have proper sanitation. Now consider that by the year 2020, there will be nearly 2 billion more people in urban areas needing these services. Putting it another way, in the next 20

processes, and, above all, adopting sanitation systems that place minimal demands on water supply; and (c) change intersectoral water allocations, in particular from inefficient, low-value irrigation usage to higher value, higher efficiency urban supply.

REDUCE UNACCOUNTED-FOR WATER

Many cities do not know what happens to more than half of the water that is pumped into their systems. This water disappears through physical leaks, is stolen through illegal connections, and is not recorded because meters are not functioning or are not read, or is not billed because of institutional inefficiency or corruption. The proportions vary, but the result is the same: a system that is hard to manage, in which scarce water is lost and by which the revenue necessary to support proper operation and maintenance is not generated.

The ways to solve this problem are well known and not technically complicated: reduce physical losses to the lowest level economically; meter at least all major consumers (universal metering may have to be a longer-term project); and bill everyone for water supplied, and enforce payment. Why these have not been rigorously applied by “water-short” cities, or insisted upon by multilateral donors, is one of the mysteries of the sector; the current levels of losses would not be tolerated in a commercial operation.

AVOID OR DISCOURAGE WASTEFUL USE

Just as the methods for curtailing unaccounted-for water are well known, so are many of the tools for reducing needless water use. Tariffs should increase with consumption. Although low-income users should be protected by “lifeline” rates, higher consumption should be charged at the marginal cost of developing new supplies (caused by excessive use); this extra cost, two to three times higher than the current cost of supplies, should deter frivolous water use. Water-saving devices should be mandatory, so that all installations and renovations use only such devices. Industrial processes should be made much more water-efficient, either by process redesign or by recycling within the industry itself. Alternative on-site sanitation systems offer the same health benefits as conventional sewerage at a fraction of the cost and require little or no water for operation. Where sewers are needed, simpler, less expensive alternatives to conventional systems can provide the same level of service. Since most “waterborne” diseases have their origin in fecal-oral transmission due to inadequate sanitation, policy endorsement and widespread adoption of these alternative sanitation systems is the single most significant contribution that could be made to water conservation and public health.

CHANGE INTERSECTORAL WATER ALLOCATIONS

Although water use in urban areas may be inefficient, the losses are lower and the cost recovery better than the equivalent use in irrigated agriculture, which may account for 70 to 80 percent of that use. Therefore, if water is to be treated as an economic good, it

is reasonable to consider reallocating water from irrigation to municipal use. The marginal value of agricultural water use is substantially lower by perhaps a factor of 10, than the willingness of urban households to pay for it. A small increase in the fees charged for irrigation water (or introduction of such fees, in the many cases where water is supplied without charge) should release sufficient water resources to meet anticipated urban deficits.

Of course, this is a politically sensitive issue. This alternative would probably be considered when the institutions responsible for urban water supply have clearly demonstrated (by undertaking the other two steps successfully) that they are using water as efficiently as possible with limited shortfalls. Insistence on water resource allocation would then be justified; after all, water used in food production can in effect be imported (in the form of the food itself, for example, grain), but it is not feasible to import the water needed to sustain a city.

ONE QUESTIONABLE “ SOLUTION ”

Currently the conventional thinking on the part of the multilateral financing institutions (MFIs) is that municipal water supply should be provided through private sector intervention. There is no doubt that private sector participation has much to offer in terms of better management skills and a more commercial approach. However, this option raises some serious issues: What are the implications of handing over a “natural monopoly” to a commercially-oriented private sector company, especially (as seems to be the case at present) if this company is foreign? Can such a company be expected to ensure affordable service to the urban poor? If it is required to do so under the terms of its agreement with the municipality, does the regulatory capacity exist to enforce such practices? Is the limited number of companies internationally involved in this privatization effort able to provide the services demanded? And, the most fundamental of all, given the required preparation and the relaxation of existing constraints essential to ensure success of the privatization, would the results be as efficient if local sector institutions were to operate under the new commercial rules, with the same degree of external assistance?

WHY EASY SOLUTIONS HAVE NOT BEEN IMPLEMENTED

The following list of reasons why these apparently easy solutions have not been implemented is long and highly dependent on individual circumstances. (1) Commissioning major new source and transmission works is far more politically rewarding than the mundane task of reducing unaccounted-for water. It is also much easier to obtain external funding for new works, and the MFIs have not made unaccounted-for water reduction a precondition of funding for new investments. (2) Water supply has not been treated as a commercial enterprise. Keeping water tariffs low can be presented as controlling inflation or making service affordable to the poor (in reality, it ensures service deficiencies such that the poor never get supplied and have to pay very high rates to vendors). Raising tar-

iffs, on the other hand, can result in riots, especially if it has to be done before service can be improved. (3) Service standards are too often based on inherited inappropriate codes, leading to unaffordable, nonsustainable systems, rather than ones permitting progres-

SECURITY RAMIFICATIONS

Security refers to conditions of stability, order, and predictability. Cities that are secure are generally well integrated within their respective metropolitan regions, both economically and politically. Secure cities are able to implement various regulatory policies and carry out administrative responsibilities. This includes attracting public and private investment (development policies), servicing local populations (allocational policies), and tending to social welfare (redistributive policies). Cities that are less than secure will be impeded from carrying out one or more of these functions. Although cities may vary in their levels of security, they also differ in the degree to which security issues can reverberate throughout the larger body politic.

Catalytic security risks can be defined as likely to have an impact well beyond metropolitan boundaries and entailing disruptions that have a global effect. Catalytic risks occur in cities that have a central economic, technological, or political role. These kinds of cities are usually at the nerve centers of global commerce (London, New York), play a powerful political role (Paris, Brussels), or possess immense symbolic importance (Berlin, Jerusalem, Sarajevo). Because of their inherent importance, these cities can be flashpoints of major disruption whose effects can be contagious.

Degrading security risks are limited to specific geographical areas and generally remain contained within municipal or metropolitan bounds. Cities that experience degrading conditions are either secondary cities or are found within nations whose international influence is minimal. These cities can be important within their surrounding metropolitan areas and serve as manufacturing, service, trading, or political hubs; examples include Liverpool, Marseilles, Manila, and Bogota.

URBAN CONDITIONS

Stable conditions mean that a city can do well by simply tending to routine functions of capital investment (development policies) and physical or social maintenance (allocational and redistributive policies). These cities are attractive to investors because they possess a stable employment base, a large middle class, and a healthy economy. Problem conditions mean that a city is confronted with an impediment to carrying out normal functions. This can entail blockage in pursuing development policies (fiscal crisis, squatter occupations) or in carrying out political functions.

RELATIONSHIPS, CUMULATIVE PROBLEMS, AND VULNERABILITY

Rather than being definitive, the examples are intended to stimulate a search for possibilities. Therefore, some observations may be helpful. First, there may not be a necessary relationship between all conditions. Much depends upon the nature of the issues

Secondary Cities and Challenges for Health

Presented by May Yacoob at the Woodrow Wilson Center

May Yacoob, senior social science and environmental health specialist at the Research Triangle Institute, discussed the growing international importance of secondary cities and the challenges to environmental health. Using case studies of three cities in Western Africa, she explained that, in developing countries, the majority of urban residents live in cities with less than 200,000 people. Acting as the “nexus between rural and urban areas,”

Urban Environmental Management: Ahmedabad, India

Presented by Dinesh Mehta at the Woodrow Wilson Center

Urbanization is a product of development; however, unregulated urbanization is frequently accompanied by growing poverty, inadequate infrastructure, and deteriorating environment. Rather than fear “the inevitable,” we need to learn to mitigate the negative aspects of urbanization. Dinesh Mehta, regional advisor, Urban Management Programme for Asia, United Nations Development Programme/United Nations Centre for Human Settlements (UNDP/UNCHS), New Delhi, India, examined the case of Ahmedabad, India, where changes in urban management have allowed the city to address the growing environmental health needs of its citizens.

Located in western India, Ahmedabad is the seventh largest city in India with a population of 3.31 million in 1991. It is a major industrial and financial center of India, and has educational and research institutions of national and international repute. The case of Ahmedabad is typical of cities in the developing world; the city is faced with a combination of rapid population growth, decline in the traditional industrial base (textiles), poor civic services, deteriorating environmental conditions, growing slum population, increased informal sector employment, and growing violence.

In Ahmedabad, 25 percent of the population resides in slums where they lack basic services such as water, sanitation, and roads. As with many cities in developing countries, the initial investment necessary to improve the urban environmental conditions was not available from the local government. In order to provide services, cities like Ahmedabad depend upon assistance from external donors or national and provincial governments. In the absence of such assistance, Mehta cautioned, environmental conditions continue to deteriorate.

In 1993, the city of Ahmedabad was in dire financial straits with a deficit of Rs.350 million (US\$10.5 million). However, with the technical support of USAID, Ahmedabad became the first city in Asia to raise Rs.1000 million (US\$30 million) in municipal bonds from the domestic market without any sovereign guarantee. Public-private partnerships have been instrumental in street and slum improvement, as well as programs to green and clean the city. Additionally, air and water quality has improved while the city's economy and the older walled part of the city have been resuscitated.

Mehta outlined the process by which the previously debt-ridden city earned fame for its innovative urban management program. Strict law enforcement ended corruption and improved tax and revenue collection. Increased city revenues, more efficient government staff, and innovative leadership of the chief executive officer allowed for

Percolating through the time periods as well was an old demographic adage about the composition of the migrant stream: that it was predominantly unmarried young males. Concurrently, rapid urban growth fueled concern about denigration of the surrounding physical environment.

These models, trends, and to some degree social realities were consequential for policy. Rural-urban migration was seen as a problem. Urbanization was seen as too rapid, and efforts were considered to slow it or shift the balance of growth to other areas. Notable, for instance, was China's policy of encouraging development in mid-size cities during the 1980s. Growth pole or satellite town developments were other responses. Of course, an alternative line of thinking evolved, arguing that the public sector was the cause of some of the urban ills, with its disproportionate investment in (selective) cities and resultant urban bias.

The adequacy of our stock of knowledge and our set of models to understand population movement and redistribution today, especially in contemporary developing economies, requires some rethinking. Two major changes have come to many systems of population distribution in the last decade or two: (1) the revolution in technology of transportation and communication and (2) the restructuring of national economies to allow more market activity. Both of these changes have received considerable attention elsewhere, but it is worth tracing through how they reshape the nature and composition of migratory flows.

The changes in the technology of communication and transportation have made it easier for migrants to stay in touch with their origin communities. This is more than maintaining simple social ties. The tightness and stability of these connections can reinforce the implicit contracts that generate sharing of resources across locations. Most notably these are remittances. Despite the high level of interest in remittances, it remains to be clearly documented that these technological developments help maintain a continuous flow. There are related influences. The technologies of communication help impart knowledge of job market opportunities within and across national borders.

The "new migration" includes circulation. Migrants oscillate between origin and destination. Circulatory migration patterns, often timed with the agricultural season, have been identified in various parts of the world. In West Africa, Thailand, and Mexico, for instance, individuals remain in the origin region from planting through harvest season and then depart for the cities (or to the United States for Mexicans) during the off-season. Limited evidence suggests that the movements are repeated, but not necessarily every season. Landing a "good" job in one year may lead to a longer stay in the destination. This is just another way of managing the informal-formal sector issue.

It may be the case also that the ability to store earnings (in banks) and move funds geographically is contributing to the new migration. One marker of economic development is the improvement in financial infrastructures. If one can move money across international borders, then the ease with which one can be a new migrant and remain a connected member of the origin community and household rises. Although there have been efforts to account for the value of international flows of remittances, there is little under-

standing of whether improvements in financial infrastructure help generate and support migration in the first place.

Data coming from various field sites suggest that the conventional demographic profile of the rural-urban migrant may be shifting as well. Migrants are still young. Although many are male and single, there seems to be an increasing fraction of migrants who are female and a larger pool of family migrants. The work on Mexican migration to the United States finds substantial fractions of females in the migratory flow, fractions that increase with time. Work in Ghana challenges the notion that migrants are detached from families in the destination. What we need to know more about is the timing of the movements of family members. It is probably the case that frontier or first-wave migration is predominantly young single males, but how exactly the stream is altered after that is not well known.

The second major impetus for the new migration is economic restructuring. Many countries have reoriented their economies in the direction of more free market activity. It would be ridiculous to argue that this trend is universal or that the movement is to an unfettered marketplace. Nevertheless, in several important ways the shift is on, and population distribution is a manifest component of this shift. The most notable case is China. Where once all residence was controlled by registration permit (or hukou), the years since market reform have enabled individuals to relocate to areas of economic opportunity. This has created a huge pool of persons, a “floating population” in the tens of millions, living apart from their place of formal registration. Although often referred to as “temporary” migrants, the length of residence away from home may now approach several years. Considerable controversy swirled about the motivations of these temporary migrants (including the claim that women were moving to avoid the structures of the one-child family planning policy), but the migration seems to be economically driven.

This kind of movement, a migration problem, in the wake of the relaxation of strictures on economic activity and housing, has been seen in other settings as well. Vietnam is now going through a process similar to that experienced by China. Although residence registration was never as strictly controlled as in China, the economic restructuring (Doi Moi) has generated internal migration. In Ethiopia, the fall of the Derg and its more authoritarian and socialist ways ushered in a period of economic relaxation. This loosening not only lets people move to new locations (often back to older villages they were forced to abandon), but also generates differential economic growth by region, producing labor force opportunities to which workers respond.

Even in economies without a history of government restrictions on residence and movement, there have been patterns of population movement that are similar in many respects. The undocumented movement of the Mexican-origin population to the United States and parallel movement of former colonial populations to high-income economies of Europe have created similar floating populations, each with its own stamp for the particular migratory flow and condition of reception in the host society. Again, “temporary” migration is sometimes sustained by circulation, at some risk of being caught. Additionally, temporary or guest-worker migration, in fact, is rarely temporary. Circulation may be substituting for return.

The evidence from Ghana indicates that the country's pursuit of structural adjustment has resulted in substantial shifts in regional activity, even as the overall growth of economic activity outpaces other sub-Saharan African nations. In the age-old way this induced movement directed differentially to some urban areas.

MIGRATION'S CONSEQUENCES

Migration from rural to urban areas generates a series of concerns, including worries about environmental stress and social adaptation of the migrants themselves. Since migration feeds urbanization, and since urban growth is associated with industrial development (pollution) and land consumption, migration is often held culpable in environmental degradation. Although the link is there, it is not clear how strong that link is.

Direct public policies regarding environmental conditions, the underlying infrastructure for transportation, and the national level of income may have much more to say about the amount of insult visited upon the environment than the number of rural-urban migrations per se. As income rises, so does consumption of consumer goods, transportation, and land. These all can lead to more pollution and sprawl in any country. But as the level of income rises so does the demand for a cleaner local environment, lending an element of feedback to all of this.

There is another demographic component of the comparison. It is useful to remember that a large fraction, maybe nearly half, of urban growth is generated just by natural increase of the urban population. Thus, stemming urbanward migration will not stem urban growth. This reminds us that in the absence of migration, but in the presence of positive population growth rates, there is more "population pressure" in both urban and rural areas. Migration may be more implicated than its true demographic contribution would warrant. The increasingly intensive use of rural and quasi-rural areas can lead to soil erosion, deforestation, and the like. This might lead to a call for stronger emphasis on fertility reduction measures, but the demographic community seems somewhat agnostic about the empirical connection between population growth and environmental conditions.

The other major area of concern in urbanward migration is that of the absorption of migrants into the host community. Migrants have always generated apprehension about their ability to mix into the receiving society. Migrants are seen as adapting slowly or not at all. Empirical evidence runs counter to this.

In many studies of immigrant adaptation in the United States, the first generation exhibits substantial differences from the native population along socioeconomic lines: income, education, language ability, and so on. By the second generation, however, differences are narrowed considerably. Even without adjusting for background characteristics, the second generation gap is modest compared to the first generation gap. But when one does adjust for the (usually lower) level of resources for members of the second generation, the gap narrows even more.

In a parallel vein, we find a process of occupational adaptation that differentiates

Participatory Budgeting: The Case of Porto Alegre, Brazil

Presented by Pedro Jacobi at the Woodrow Wilson Center

The mechanism of “participatory budgeting” was implemented in the city of Porto Alegre as a new resource allocation practice. According to research by Pedro Jacobi at the University of São Paulo, participatory budget-

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DEALING WITH NATURAL DISASTERS has been part of the history and culture of Central America and the entire Caribbean basin since time out of mind. One of the classic volumes on the culture and history of the region, by the anthropologist Eric Wolf, uses the metaphor of natural upheaval in his title, *Sons of the Shaking Earth*. As Wolf makes plain, living where the earth shakes does something to you. It shapes your perspective: it tends to make people fatalistic, it leads them to expect the worst, and it gives everyone a powerful sense of impermanence. On the other hand, it gives you a healthy respect for nature and for natural phenomena. When not shaking, the earth in most of the region is remarkably fertile—it gives in abundance to those who work on it.

that would not be threatening to the turf of any existing organization, either at the national or the regional levels, so that it might be set up without causing too much of a political stir.

The second most prevalent demand by stakeholders at the conference was that resources should be set aside to deal with natural disasters. While the demand is understandable, it is virtually out of the question. If it is politically difficult to store resources

The community activists were in agreement that the most important action by governments, aside from being more efficient and better coordinated in their responses to disasters, would be to provide credit for low-cost housing. And, this is what the IDB is working on. Local governments and local organizations need the resources to gain access to this housing, considered by most to be the first line of defense against natural disasters and the first priority in reconstruction.

Ultimately, mitigating the suffering caused by natural disasters requires political will and respect for local communities, including communities of the indigenous peoples of the region, on the part of the governments in the region. The long-term policy objectives of those concerned with disaster relief must focus on better communication between national authorities and local groups so that any effort at mitigation responds to the needs of the people most affected by the disasters, the most vulnerable sectors of the population. At the regional level, the donor community must act to help the nations of the region create some mechanism that will plan how cooperation or coordination can be maximized in responding to the next disaster. It does not have to be a big bureaucracy. It does not have to be granted huge amounts of resources. Yet some agency or institution to improve coordination in the mitigation of suffering is vital. There is no question as to whether the next disaster will strike; only when.

Population, Urbanization, Environment, and Security

A Summary of the Issues

ELLEN M. BRENNAN

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A Report of the Comparative Urban Studies Project

IN THE LATTER HALF of the twentieth century, megacities have been on the rise and future projections for the twenty-first century show an increase in population growth in developing countries' urban centers, with potential catastrophic effects at the international level. To understand the critical linkages between urbanization, public health and habitat, the environment, population growth, and international security, this article highlights the trends in urban growth, particularly in the developing world, and their potential to affect the international community. Issues addressed include migration to the urban centers, the immediate environmental and health impacts of urban pollution on developing country cities, and the link between crime and security.

According to the United Nations Population Division, the world passed the historical six billion mark in October 1999. Recently, the United Nations issued long-range projections to 2150. According to the medium-fertility ("most likely") scenario, world population will stabilize at slightly under 11 billion persons around 2200.¹

One of the most striking features of world population growth is the rising predominance of the developing world. Currently, 81 million persons are added annually to the world's population—95 percent of them in developing countries. According to the United Nations' long-range projections, the population of Africa will nearly quadruple—from 700 million persons in 1995 to 2.8 billion in 2150. Significant growth is also projected for Asia. China is projected to grow from 1.2 to 1.6 billion inhabitants. India, increasing from 900 million to 1.7 billion, will surpass China to become the world's largest country. The rest of Asia is projected to grow from 1.3 to 2.8 billion. Latin America is projected to increase from 477 to 916 million, whereas Northern America (Canada and the United States combined) will increase from 297 to 414 million. Europe is the only major geographical area whose population is projected to decline—from 728 million in 1995 to 595 million in 2150 (United Nations 1998a).

The second striking feature is related to urban growth. Although the growth of world urban population has been slower than projected twenty years ago, it has nevertheless been unprecedented. In 1950, less than 30 percent of the world's population were urban dwellers. In a few years, roughly around 2006, a crossroads will be reached in human history when half of the world'

Looking at the regional breakdown, Africa has the lowest level of urbanization and the fastest urban growth. Currently, a little more than one third of Africans are urban dwellers; by 2030, the proportion will be a little more than half. The problem facing much of Africa is that such rapid rates of urban growth make it exceedingly difficult to provide services. The urban growth rate for Africa as a whole currently is around 4.4 percent. East Africa is growing at 5.6 percent per annum and West Africa at 5.1 percent, with individual countries growing at even higher rates. Projections show that the growth rate for Africa as a whole will stay above four percent through 2005 and above three percent until 2020–2025.

The region of Latin America and the Caribbean is the most urbanized in the developing world. Between 1995 and 2030, 249 million people will be added to the urban population of this region, bringing the percentage of people living in cities to 83 percent. Asia has a level of urbanization similar to that of Africa—a little more than one third in 1995. Asia as a whole, however, will have to absorb huge population increments—a total of 1.5 billion new urban inhabitants by 2030. South Asia faces particularly daunting prospects, with India having to absorb as many as 385 million new urban inhabitants between 1995 and 2030, Pakistan 113 million, and Bangladesh 55 million (United Nations 1998b).

A central characteristic of current world urbanization trends is that megacities—cities with populations of ten million or more—are becoming larger and more numerous, accounting for an increasing proportion of urban dwellers. At the same time, more than half of the world's population continues to live in cities with fewer than 500,000 inhabitants. Currently, there are 14 cities in the world with over ten million inhabitants, ten in developing countries. By 2015, there will be 26 cities with over ten million inhabitants—22 in developing countries (18 in Asia, four in Latin America, two in Africa) (Table 1). These megacities will shelter 418 million inhabitants (10.6 percent of world urban population). By 2015, there will be 38 cities of five to ten million inhabitants, representing 6.7 percent of world urban population. There will be 463 cities (three-quarters in developing countries) of one to five million inhabitants—representing nearly a quarter (23.6 percent) of world urban population. Between 1950 and 1995, it is interesting to note that the percentage of population worldwide residing in the 407 cities of 500,000 to one million inhabitants, remained nearly constant—at around 9 percent, both in developing and developed countries. The same is true for cities with fewer than 500,000 inhabitants. Although they have remained relatively stable with regards to population growth, secondary cities are nevertheless critical. Around half of the urban population in both the developing and developed world live in cities of fewer than 500,000 inhabitants (United Nations 1998b).

The emergence of megacities is a modern phenomenon, occurring over the last half century. In 1950, only New York had a population of ten million or more. In addition to the increase in their number, megacities are becoming considerably larger. The minimum population size for a city to make the list of the world's 15 largest urban agglomerations was 3.3 million in 1950. By 1995, a population of 9.9 million was required as the threshold. Projections for the year 2000 showed Dhaka, with 11 million inhabitants, as the fifteenth largest urban agglomeration; by 2015, Los Angeles, with 14.2 million, is expected to be fifteenth on the list (United Nations 1998b).

	POPULATION (thousands)	GROWTH RATE
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Table 1 —Source: World Urbanization Prospects, United Nations 1998b.

Whereas the average annual rate of population growth was one percent or less for megacities in the developed world during 1970–1990, megacities in developing countries have exhibited significantly higher rates of population growth, as well as a larger range of rates, than those in developed countries. Some megacities are continuing to grow very rapidly. kotdyy 7.6 s for

REGIONAL OVERVIEW

There is a great diversity of experience among the world's megacities. Broad differences in patterns of megacity growth persist among the major geographical regions. In Latin America, 78 percent of the population lived in urban areas in 1995 (a proportion comparable to that of the developed countries). The rate of population growth of most major cities in the region peaked during the 1960s, when fertility levels were still relatively high and governments in the region were pursuing policies of import—substituting industrialization that drew large numbers of migrants to the cities.

In recent years, a dramatic and unanticipated slowdown in the growth of megacities in the Latin American region surprised even local observers. Whereas a process of intra-metropolitan employment dispersal has been taking place for a number of years in such cities as Buenos Aires, São Paulo, and Mexico City, the scale has increased greatly. Manufacturing plants have been moving much greater distances and often beyond metropolitan boundaries within a 200km radius from the central core of São Paulo for example (Gilbert 1993). In addition, profound changes have taken place over the past decade in Buenos Aires, Mexico City, Rio de Janeiro, São Paulo, and other large Latin American cities as a result of economic recession and structural adjustment programs.

Despite its relatively low level of urbanization (34.6 percent in 1995), Asia accounts for 46 percent of world urban population. Amounting to 1.2 billion persons, this number is higher than the current urban population of the developed world (Chen, Valente and Zlotnick 1998). In the future, a majority of the world's megacities will be located in Asia. Indeed, in 2015 Asia will be home to 18 megacities, increasing its share from 50 percent in 1995 to 69 percent (United Nations 1998b). Many megacities in Asia have experienced dramatic economic growth in recent years. Seoul, with a gross domestic product (GDP) of \$93 billion in 1990—the twelfth highest in the world (Prud'homme 1994)—is rapidly moving away from “developing” country status. Until the Asian economic crisis in 1998, Bangkok and Jakarta had booming economies. In the Southeast Asian countries as a whole, urbanization has been penetrating deep into the countryside, resulting in extended and dispersed mega-urban regions encompassing hinterlands as far as 100 km from the central core (McGee 1995).

In recent years, China's megacities have been growing at very rapid rates, although this growth is partly due to reclassification. Goldstein (1993) cautions that the meaning of “urban” in China is now far different from the generally accepted meaning of that term. The use of official urban and migration statistics to measure levels of and changes in urbanization can be seriously misleading. Moreover, the experience of China's megacities has been fairly unique. Urban migration over the past several decades has been closely related to political swings, economic changes, and related policy shifts.

The megacities of the Indian subcontinent (e.g. Bangalore, Bombay, Calcutta, Delhi, Hyderabad, and Madras in India; Karachi and Lahore in Pakistan; and Dhaka in Bangladesh) have followed a different pattern. More similar to the African experience, urban growth is fueled less by economic dynamism than by rural poverty and continuing

high fertility. Many megacities on the subcontinent have fairly stagnant economies, yet they will have to absorb huge population increments over the next several decades. Bombay, where at least half the population does not have access to adequate shelter, is projected to have a population of 26.2 million in 2015. Karachi, a city experiencing continuing political unrest, is projected to have a population of 19.4 million inhabitants. Dhaka, one of the poorest cities in the world where the average annual income for slum dwellers currently is around US \$150, is projected to have a population of 19.5 million in 2015 (United Nations 1998b).

Fueled by continuing out-migration from impoverished rural areas and by very high natural increase, despite years of sustained recession, cities in Africa are growing very rapidly. At nearly twice the world average, this growth puts incredible pressure on already strained economies. Whereas much of the academic literature stresses the strong link between economic development and urbanization, the relationship between the two is much weaker in Africa than elsewhere in the developing world. Many countries in the region experienced negative rates of Gross National Product (GNP) growth in the last two decades, whereas others grew very slowly. Yet almost all countries in the region exhibited high urban growth rates, including those with negative GNP growth. The two megacities in sub-Saharan Africa, Lagos and Kinshasa, are among the world's poorest yet most rapidly growing megacities and are expected to continue to grow at a similar pace over the next two decades.

PATTERNS OF INTRAMETROPOLITAN POPULATION GROWTH

Just as there are widely divergent patterns of economic development and urban growth among the major geographical regions, there are striking demographic differentials within megacities. Aggregate rates of population growth for the megacities may be quite misleading. Megacities are spatially very extensive, with sizes ranging from the traditional core city of 100–200 sq. km to regions of 2,000–10,000 sq. km and more (Hamer 1994).

Population growth in large cities usually does not increase the population density of high-density areas, but promotes densification of less developed areas and expansion at the urban fringe. In particular, population densities in the central core frequently decline as households are displaced by the expansion of other activities. As Ingram (1998) notes, this finding is very robust in both industrial and developing countries and has been observed in cities as diverse as Bangkok, Bogotá, Mexico City, Shanghai, and Tokyo. Whereas the traditional urban cores of many megacities are experiencing very slow or negative population growth, areas on the periphery typically are experiencing rapid growth. For example, the city of São Paulo grew by one percent per annum during 1980–1991. The central core as well as the interior and intermediate rings lost population (at rates of -1.3, -0.9 and -0.4 percent per annum, respectively). The exterior ring grew by only 0.4 percent per annum while the periphery expanded by 3 percent (Rolnik, Kowarik, and Somekh 1990).

In many megacities, periurban areas have grown or are continuing to grow at staggering rates, making it impossible to provide services. In São Paulo, for example, the growth of the peripheral ring was nearly 13 percent per annum during 1960–1970, declining to 7.4 percent during 1970–1980 and to 3.8 percent during 1980–1987. It is not uncommon for peripheral areas of megacities to be growing by rates of 10–20 percent per annum. However, because of the rapidity of growth in these newly developing areas, sometimes as a result of sudden land invasions, the magnitude of this growth is unrecorded.

Such rapid population growth in periurban areas has serious implications for infrastructure provision and land markets. A major reason why local administrations in many developing country cities have not coped successfully with urban population growth is that they simply do not know what is going on in their local land markets. Most megacities lack sufficient, accurate, and current data on patterns of land conversion, infrastructure deployment, and land subdivision patterns. Frequently, urban maps are 20 to 30 years old and lack any description of entire sections of cities, and particularly of the burgeoning periurban areas (Dowall 1995). Clearly, the typical ten-year census interval is a problem in the analysis of megacities, as the metropolitan population might easily grow by more than 2 million within a five-year period (Richardson 1993a).

THE COMPONENTS OF MEGACITY GROWTH

Even if all in-migration to the megacities were somehow to cease, cities will have to absorb huge population increments as a result of natural increase. This point is often lost in the popular literature. In many megacities, natural increase is and will continue to be the most important factor explaining population growth. At the world level, net migration from rural to urban areas accounts for less than half of the population growth of cities. Around 60 percent of urban growth is due to the excess of urban fertility over urban mortality.

A study of the components of urban growth prepared by the United Nations Population Division found that, whereas internal migration and reclassification was the source of 64 percent of urban growth in developing Asia during the 1980s (around 50 percent if China is excluded), it accounted for only 25 percent of urban growth in Africa and 34 percent in Latin America (Chen, Valente and Zlotnick 1998). These findings have important implications for policymakers and planners. In regions characterized by economic stagnation, where rates of rural out-migration have declined over the past decade, such as Africa and Latin America, the contribution of natural increase has been strengthened. Consequently, if the growth of urban areas is to be significantly reduced, more emphasis needs to be given to the reduction of fertility.

Interestingly, for all of the theorizing about the linkages between urbanization and fertility decline over the past several decades, detailed work in this area has been quite sketchy. Using Demographic and Health Survey (DHS) data collected between 1987 and 1993 in 14 African countries, recent research on fertility behavior in African cities has

1970s, Mexico has had one elaborate plan after another—typically a new one in each six-year presidential term of office. It is generally acknowledged, however, that these plans have had minimal impact on influencing Mexico's patterns of spatial distribution (Brambila Paz 1998).

The great paradox is that profound changes have occurred in patterns of spatial distribution in Mexico and in other developing countries, yet regional policy is considered to have contributed very little to it. Indeed, as Gilbert (1993) notes, deconcentration has occurred in practice when regional planning has been at its weakest, with few governments in heavily indebted developing countries having any funds to invest in infrastructure in the poorer regions, or to offer incentives to industrialists to locate to the periphery.

It is now widely acknowledged that it is counterproductive to talk about how to “control” the growth of megacities, whether through coercive measures or channeling growth to secondary cities. Moreover, despite the rhetoric which still abounds, megacity size per se is not a critical policy variable. Since the 1980s, there has been a remarkable shift of research attention from the demography of cities to the polity of cities, with particular focus on issues of urban management and, in the 1990s, urban governance (Stren 1995). With respect to management, a virtual consensus has emerged among urban scholars that the costs and benefits of cities are not merely a product of population size (hence growth), but are primarily a consequence of the commitment and capabilities of municipal governments to implement policies that improve population welfare. The assumption that good management overcomes population constraints of cities would appear tenable based on recent history. Many cities of the world, for instance those of recent origin in sub-Saharan Africa, are too big relative to their managerial capacities. Yet some of these “oversized” cities are quite small, e.g., in the range of 100,000 to 200,000 inhabitants (Brockhoff and Brennan 1998). Similarly, many megacities—Tokyo is cited most often—are seemingly well-managed and, therefore, not too large.

ENVIRONMENTAL ISSUES

Megacities throughout the developing world are experiencing tremendous environmental stress. Quantification of the extent of pollution in specific megacities is difficult, because monitoring stations are rare or non-existent. Nevertheless, it is widely recognized that environmental degradation in many of the world's megacities is becoming worse. Given this fact, it is ironic that the greatest attention—even at international fora such as UNCED (the United Nations Conference on Environment and Development, Rio de Janeiro, 1992)—has been paid to issues of managing the “global commons” rather than to the critical “brown issues,” such as polluted air, filthy water, and inadequate sanitation that affect hundreds of millions of the world's urban inhabitants. It is even more ironic that this distortion is sometimes reproduced within developing countries. Some national environmental groups have become active in saving endangered species, but pay little attention to the acute public health hazards and problems of environmental pollution facing their own citizens (Hardoy and Satterthwaite 1989).

sunlight on the smog from vehicle emissions (WHO and UNEP 1992). Ambient lead is almost exclusively generated by motor vehicles burning leaded gasoline, except in China, where it also originates from the very large amount of coal that is burned.

Automotive air pollution in the developing countries is largely an urban phenomenon confined to the very large cities. In many megacities, atmospheric pollutants commonly associated with motor vehicles often exceed World Health Organization guidelines (WHO and UNEP 1992). WHO recommends, for example, that human beings should not be exposed to ozone concentrations of >0.1 ppm for more than one hour per year and that ozone levels not be exceeded for more than 30 days per year. The population of Mexico City (which has half of Mexico's total vehicle fleet) was exposed to more than 1,400 hours of high ozone concentrations during 145 days in 1991 (Pendakur 1992). The situation was equally bad in two other Latin American megacities, São Paulo (which has a quarter of Brazil's vehicle fleet) and Santiago. Although the Asian cities do reasonably well in terms of ozone levels, many of them greatly exceed WHO standards for suspended particulate matter and sulfur dioxide; five cities exceeded these thresholds in 1991: Bombay, 100 days; Beijing, 272 days; Jakarta, 173 days; Calcutta, 268 days; and Delhi, 294 days (Pendakur 1992). The situation is also quite serious in Lagos, Cairo, and Teheran (Faiz 1992).

Although automotive lead emissions have declined sharply in most developed countries, they are generally rising in the developing countries. Moreover, shares of automotive sulfur dioxide, and particulate and lead emissions are likely to be significantly higher in the future because of the high rate of motorization in many of the world's megacities, the more extensive use of diesel-powered vehicles, and the poorer quality of automotive fuel (Faiz 1992).

ENVIRONMENTAL IMPACTS ON HEALTH

Having briefly examined a number of macro environmental problems (e.g. water and air pollution citywide), it is important to address the issue of environmental impacts on the health of megacity residents. Compared to the complex linkages among the environment and city size and rates of urban growth, the linkages between environmental degradation and health are more straightforward. In most cases, the poorer residents of the world's megacities bear the human costs of the most debilitating impacts of environmental degradation. In many megacities, environmental pollution affects the poor more severely in part because many of them live at the periphery where manufacturing, processing, and distilling plants are often built. The periphery is also where environmental protection is frequently the weakest.

In recent years, there has been a growing body of literature on the linkages among the urban environment, poverty, and health. A 1992 review, for example, identified over one hundred studies concerned with relative environmental health impacts of urbanization (Bradley, Stephens, Harpham, and Cairncross 1992). A notable aspect of many of these studies is the focus on differentials in health status or mortality rates between var-

ious population groups within cities. Not surprisingly, many of the studies found conditions in poorer areas of cities to be much worse than in the more affluent areas or even than the city average. Infant mortality rates in poorer areas, for example, were often four or more times higher than in more affluent areas, with much larger differentials apparent in the poorest district as compared to the most affluent district. Large differentials between rich and poor districts were also common in the incidence of many environmentally related diseases (e.g. tuberculosis and typhoid [Satterthwaite 1993]).

Whereas a majority of the studies to date on environment and health have focused on infant mortality, only a few systematic studies examine urban chronic disease or adult health (this is true of developing countries generally and is not confined to urban groups). Indeed, as Stephens (1994: 9) notes, “when one opens the Pandora’s box of adult as well as child health in cities, the linkages of urban environment, poverty and health become overwhelmingly complex; the physical conditions of urban poverty seem to act with economic circumstances to compound threats to health.” Evidence suggests that, internationally and at the city level, the complexity of urban poverty and its health consequences have not been taken seriously enough either in our analyses or agenda setting (Cohen 1992). This is perhaps linked to a continued search for single solutions to an increasingly complex problem: “it could be argued that tackling the sanitary health of the urban populations in developing countries today is, in the long term, the least of our challenges; history tells us that the insults of urban poverty do not go away with such interventions” (Stephens 1994: 21).

PSYCHOSOCIAL HEALTH

Psychosocial diseases and trauma (e.g. violence in young adults, depression, drug and alcohol abuse, suicide, and interpersonal violence, including child and spousal abuse) have received increasing attention from researchers and policy makers in recent years. As in the case of physical health, there is a growing literature on differentials in mental health within cities which has found a higher prevalence of mental illness in low-income, physically deteriorated areas in a wide variety of settings (Bradley et. al. 1992). As Stephens (1994) notes, the complex roots of psychosocial disease in urban environments are deep within the poverty-environment nexus and are common to the poor of both developed and developing countries. However, the precise linkages between different elements of the physical environment and psychosocial disorder or disease are difficult to ascertain and to separate from other variables. Moreover, care must be taken not to overstate the effects of environmental factors on psychosocial health when more fundamental social, economic, and political factors (such as low and very unstable incomes and oppression or discrimination), underlie psychosocial disorders (Satterthwaite 1993).

Trauma and particularly violence are increasing problems of the social environment of cities that relate to psychosocial health. They are articulated as a major concern of the urban poor (and rich) in a growing number of cities. In public health terms, deaths

from violence now overshadow infectious diseases as child killers in some poor urban environments (Stephens 1994). Violence (mostly homicides), for example, now account for 86 percent of all deaths in boys aged 15–19 in São Paulo and over half of all deaths in 5–14 year olds (SEMPLA 1992).

São Paulo has tackled its less complicated urban poverty questions—its basic infrastructure questions—with comparative success. But the urban poverty has not gone away; education and income differentials still exist in severity, with a seven-fold differential existing between best and worst zones. This is perhaps reflected in the health data— infectious diseases have gone largely from the favelas of São Paulo, but they have been replaced ferociously by an epidemic of violence—rates of mortality are the second highest internationally (after the US) and it appears that the children saved from sanitary diseases have grown up to kill each other (Stephens 1994: 15).

CRIME AND SECURITY

Crime and public security in the world's large cities has been receiving increasing attention from many quarters in recent years. Crime challenges the very foundations of the

parison, the murder rate in Washington, D.C. was over 70 per 100,000 in the early 1990s (United Nations Centre for Human Settlements 1996).

The increase in crime has generated a feeling of insecurity, transforming the spatial forms of many cities. The result has often been the geographical and social segregation of the wealthy from the poor. In some cities, insecurity and fear are changing the city's landscape and patterns of daily life, including people's movements and the use of public transport, sometimes discouraging people from using the streets and public spaces altogether (United Nations Centre for Human Settlements 1996). In many of the world's megacities, the poor are the main victims of urban violence, including crimes against property and violent crime such as rape or assault. The poor cannot afford burglar alarms and other protection devices and have no access to private security services. At the same time, these services are becoming a burgeoning worldwide industry: as of the mid-1980s, there were 127 security companies in operation in Bogotá (with five times more privately paid guards than regular policemen) and 80 security firms in Nairobi; likewise, 94 percent of automobiles in Bangkok were fitted with security devices (Buendia 1989).

Urban crime and violence in the world's large cities is generally not a spontaneous occurrence, but rather the product of inequality and social exclusion. Although rapid urbanization and poverty partly explain the scale and extent of urban violence and crime, other factors such as the political and economic climate, local traditions and values, and the degree of social cohesion and solidarity among urban communities also play a role. Erosion of moral values and the collapse of social structure and institutions, such as the family or the neighborhood, puts communities more at risk of urban violence and crime (Habitat Debate 1998).

Urban violence is also deeply embedded in the specific local context. Among the world's large cities, there are sharply different degrees of social welfare development and income distribution patterns, contrasting demographic patterns (e.g. in terms of population growth, internal and international migration flows, age structure), varying cultural factors (e.g. religion, ethnicity), and differing paces of cultural change.

There is considerable debate about the relative importance of different factors. Many specialists stress the significance of inadequate incomes. These disparities are usually combined with very poor and overcrowded housing and living conditions, and often insecure tenure. Together the situation presents fertile ground for the development of violence (United Nations Centre for Human Settlements 1996). Other explanations focus on the contemporary urban environment, particularly the ostentatious display of wealth and luxury goods in certain areas. These displays engender an attitude that legitimizes the "distribution of wealth" through criminal activity (United Nations Centre for Human Settlements 1996). Indeed, in a simple "Robin Hood" model of income redistribution developed by a World Bank economist, inequality variables seem to play a significant role, particularly in the case of property crimes (Bourguignon 1998). Little is known about how crime varies with business cycles; a study of Lagos in the early 1980s found that fraudulent offenses appeared to occur only in times of economic prosperity, while

robbery occurred during periods of both prosperity and depression. However, violent crimes tended to diminish when a new government or economic recovery signaled hope of political or social improvement and stability (Buendia 1989).

In many cities there has been a greater susceptibility to the negative outcomes of

A second reason for addressing these urban issues relates to globalization. In coming decades, large cities will be at the forefront of globalization and will be the principal nodes generating and mediating the flows of capital, people, trade, greenhouse

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Environmental and Social Stress Factors, Governance, and Small Arms Availability

The Potential for Conflict in Urban Areas

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A Report of the Comparative Urban Studies Project

EXECUTIVE SUMMARY

According to Michael Renner, environmental degradation, economic scarcities, social inequalities, and the easy availability of small arms (firearms) are generating conditions that are conducive to urban conflict, both by triggering population movements into cities and by creating debilitating living conditions in urban agglomerations.

Renner cites environmental degradation (of both land and water resources), climate change, increased demands on arable farmland, unequal power distribution, frequent population movements, and lack of rural services as factors which cause rural populations to turn cities for a means of subsistence. Unfortunately, the pressure of population growth in urban areas is combined with economic scarcities, internationally imposed structural programs, unemployment, and economic downswings. Renner connects the rise in urban violence with the increased pressures on urban systems and the growth of small arms dispersal at all levels and sectors of society.

ABOUT THE AUTHOR

Michael Renner has been involved in a variety of peace, security, and disarmament issues during the past 17 years, the last 12 of which at the Worldwatch Institute. His activities have been primarily in research and writing, and public education. He is the author of *Fighting for Survival: Environmental Decline, Social Conflict, and the New Age of Insecurity*. In addition, Renner authored seven Worldwatch papers including "Budgeting for Disarmament: The Costs of War and Peace," "Small Arms, Big Impact: The Next Challenge of Disarmament," and "Ending Violent Conflict." He has also been a contributor to the other Worldwatch Publications: *State of the World*, *Vital Signs*, and *Worldwatch Magazine*. Mr. Renner is interested in the small arms issue both from a disarmament perspective and in terms of the social development impact. Renner is also the author of *Economic Adjustments After the Cold War: Strategies for Conversion*, a study commissioned by the United Nations Institute for Disarmament Research (UNIDIR) in Geneva, Switzerland. Before joining Worldwatch in 1987, Renner was Corliss Lamont Fellow in Economic Conversion at Columbia University from 1986–1987 and a Research Fellow at the World Policy Institute in New York City from 1984 to 1986. Renner is a native of the Federal Republic of Germany. He holds degrees in international relations and political science from the University of Amsterdam, the Netherlands, and Konstanz, Germany.

INTRODUCTION

Urbanization continues at a rapid clip, and with it grows the urban challenge. Since 1950 the number of people living in urban areas has jumped from 750 million to 2.64 billion. Each year, 61 million people are added to cities worldwide, or more than one million per week. By 2025, urban areas are expected to comprise more than five billion people (Mitchell 1998a). Through rural-to-urban migration, natural increase within cities, as well as the transformation of villages into new urban areas, city dwellers now account for 46 percent of the global population, up from less than 30 percent in 1950. More than half of humanity will reside in cities within a decade, according to UN estimates (*ibid.*). About 90 percent of the projected urban growth over the next quarter-century will occur in developing countries (World Resources Institute 1996). In the 1950s, just 17 percent of Third World inhabitants lived in urban areas, rising to 37 percent in the early 1990s, and an expected 57 percent by 2025 (Chege 1995).

Today, there are 326 cities with more than one million inhabitants; twenty of them are “megacities,” home to at least ten million people. Almost all of these are in the developing world, and they have acquired, or are acquiring, this status with unprecedented speed. Mexico City, for instance, grew from eight million residents to fifteen million in just sixteen years. But megacities with megaproblems may unduly overshadow the rest of the urban realm: they account for just 10 percent of all urban dwellers, while cities with less than one million people account for close to two-thirds of the total.

The rural poor continue to be lured to cities by the promise of jobs, better education, or improved services—though sometimes they are simply compelled to move. But according to a recent study by the U.S.-based Population Council, the quality of life in many urban centers of the developing world is poorer today than in rural areas. Partly because of continued large-scale influxes of people, cities experience high levels of homelessness and unemployment, pollution and congestion, the loss of agricultural land, and the accumulation of waste.

This paper attempts, in broad outline, to identify trends and dynamics that have a bearing on the potential for triggering or aggravating political, communal, and criminal violence in urban contexts. In doing so, it is important to distinguish between sets of factors that (a) have their origin in rural areas but nevertheless impact urban areas, principally by forcing or inducing people to migrate from the countryside into cities—either domestically or across international borders—and hence swelling the size of cities, and (b) those that are generated or at work within urban areas themselves.

Among the first set of issues, a key factor is environmental decline and the resulting resource scarcity—principally water scarcity, erosion and degradation of arable land, and deforestation—that forces peasants and pastoralists to abandon their fields and grazing grounds and often induces them to migrate to urban areas. These factors are often tightly entwined with population growth and unequal access to land, water, and agricultural credit and extension services. Also, in some cases the rural population is not

uprooted by adverse circumstances, but rather is expelled by powerful farming, ranching, and resource extraction interests.

Among the second set of issues are the lack of adequate services to meet such basic human needs as housing, sanitation, potable water supplies, education, employment, and so on. Particularly in cities of the developing world, sheer numbers—the rapid expansion of urban populations—overwhelm the ability of city administrations to provide needed human services. Rising inequalities greatly exacerbate these problems, as class differences tend to be more visible and glaring in dense conglomerations than in rural settings.

FORCES THAT CAUSE MIGRATION TO URBAN AREAS

Environmental Stress Factors

The rapid degradation and depletion of natural systems is an important source of insecurity and stress in many societies, whether in the form of reduced food-growing potential, adverse health impacts, or diminished general habitability. Although soil erosion, desertification, deforestation, and water scarcity are worldwide phenomena, the human impact is most pronounced and most immediate in regions that encompass fragile ecosystems (such as arid or semiarid zones) and that have an economy heavily geared to agriculture. Natural support systems may be weakened to the point that rural families and communities find it harder and harder to sustain themselves, eventually forcing them to abandon their fields and homes.

Land degradation poses a major challenge—principally through the plowing of highly erodible land, the overgrazing of rangelands, and the loss of arable land, rangeland, and forests to expanding urban needs. According to UN Environment Programme (UNEP) estimates at the beginning of the 1990s, some 3.6 billion hectares—nearly a quarter of the earth's land area, or about 70 percent of potentially productive drylands—are affected by desertification (Bächler 1994). One third of all agricultural land is lightly

More than 700 million people live in countries whose per-capita supplies are at or below the level where food self-sufficiency is problematic. Some 230 million people live in the twenty-six countries that are most water-scarce (see Table 1). As water demand grows with population and economic development, their ranks are expected to swell (Postel 1992).

Many rivers and aquifers—and not just in countries with acute water scarcity—are overexploited. Excessive withdrawal of river and groundwater leads to land subsidence, intrusion of salt water in coastal areas, and desiccation of lakes. As groundwater is drawn at a rate surpassing natural replenishment, water tables decline. Eventually, the water becomes too costly to continue pumping, too saline for irrigation purposes, or is depleted altogether. Aquifer depletion due to overpumping is occurring in crop-growing areas around the globe, including regions of China, India, Mexico, Thailand, northern Africa, and the Middle East (Postel 1992, 1996).

could eventually threaten some five million square kilometers of coastal areas worldwide. Though accounting for only 3 percent of the world's total land, these areas encompass one third of all croplands and are home to more than a billion people. The Intergovernmental Panel on Climate Change (IPCC) points out, for example, that almost

figures of arable land and other resources tell only part of the story—and may even obscure the key factors and pressures. In most developing countries, where agriculture

land on steep hill slopes that now account for one fifth of all Mexican cropland (Myers 1993). Others turn to seasonal or permanent wage labor on large agricultural estates; many others end up seeking new livelihoods in already crowded cities (see Table 2).

Unequal landownership is of course nothing new—in Latin America, it is an enduring

areas. In the Sudan, mechanized agriculture projects drove out some 4.5 million peasants and pastoralists; many went to Khartoum, the capital (Suliman 1992). Large-scale irrigation projects and hydroelectric facilities often lead to the displacement of sizable local populations which, in turn, may lead to disputes among ethnic or economic groups (Gleick 1992). A study by the International Rivers Network found that the construction or expansion of 604 dams in 93 countries displaced at least ten million people during 1948–93, most of whom received no compensation or rehabilitation support. This is by no means a complete accounting, and the ranks of the displaced are continuing to swell with additional projects. A 1994 World Bank study put the current displacement toll of dams in developing countries at more than four million a year (Deutch Stiftung für Internationale Entwicklung 1995b; World Bank 1995; Kane 1995).

The implications for social stability are stark. The frictions between subsistence or near-subsistence peasants and commercial farms can lead to intensified social conflict in the countryside and in some cases to violent skirmishes. Or marginalized peasants, already facing environmental and demographic pressures, may join the trek to urban areas, where they add to the strain on infrastructure, social services, and jobs.

Population Movements

Large numbers of people are on the move each year—either voluntarily or under duress—and many of them move to urban areas. The first category of people on the move is migrants. The number of cross-border legal migrants is estimated to have reached about one hundred million worldwide, while illegal migrants are thought to number anywhere from another ten million to thirty million. More than one hundred countries are now experiencing major migration outflows or inflows, according to the International Labour Organisation. A quarter of these nations are simultaneously a source and recipient of migrants. Within countries, too, substantial flows of people are taking place, typically from rural to urban areas (an estimated twenty to thirty million people migrate to cities within their own country each year), and from poorer to more prosperous provinces (Kane 1995; UNHCR 1995).

The other category to consider in the present context is the flow of refugees. Although it is certainly true that not all refugees originate in the countryside and not all refugees seek asylum in cities, a substantial portion of them are part of the rural-urban migration picture. The number of people that, under international rules, qualified for and were given refugee assistance soared from slightly more than one million in the early 1960s to an estimated 27.4 million in 1995 before declining somewhat to 22.7 million in early 1997. But because official definitions of what constitutes a refugee and who therefore is eligible for assistance and protection are quite narrow, these statistics do not include all those forced to abandon their homes. UN High Commissioner for Refugees estimates that some thirty million people worldwide may be internally displaced, although its programs covered only slightly below five million in 1997 (UNHCR 1995; *Refugees Magazine* 1997; Mitchell 1998b).

These numbers are still conservative; they do not include people uprooted by environmental calamities or “oustees”—those displaced by large-scale infrastructure projects (including dam projects, as noted above). Over the past decade, for example, as many as ninety million people may have lost their homes to make way for dams, roads, and other “development” projects. In addition, land degradation, water scarcity, and the threat of famine are powerful factors forcing people to move. The mid-1980s drought in the Sahel region, for instance, drove more than two million people out of Burkina Faso, Chad, Mali, Mauritania, and Niger. Desertification has uprooted one sixth of the populations of Mali and Burkina Faso. Many of these individuals ended up in cities and towns (Jacobson 1988; Kane 1995).

The potential for “environmental refugees” is far larger, though. As we have seen

Where would these people go? Most likely to the southern and coastal provinces, putting immense pressure on local governments. Already in the past several years, the coastal cities have been swamped with unmanageable waves of unskilled peasant migrants seeking better economic opportunities—neither needed for farming nor

Unmet Basic Human Needs

For people at the bottom of the global economic heap, particularly in developing countries, the day-to-day reality is typically one of innumerable hardships and chronic insecurity. They contend with meager incomes despite long hours of backbreaking work, insufficient amounts of food and poor diets, lack of access to safe drinking water, susceptibility to preventable diseases, and housing that provides few comforts and scant shelter. Despite undeniable improvements in living standards and health and education since mid-century, massive numbers of people, mostly in developing countries, remain mired in poverty, with some of their most basic needs unmet (see Table 4; UNDP 1991).

Safe drinking water and adequate sanitation illustrate this point. More than one billion people worldwide do not have access to safe drinking water, of which 170 million live in cities (Chege 1995; US Government Printing Office 1993:17). Although availability of sanitation grew in absolute terms, the share of developing-country populations with access to adequate sanitation nevertheless fell from 36 to 34 percent between 1990 and

1994, and the unserved population grew by 274 million people—at a faster rate than during the 1980s. In urban Africa, the share of population with access to adequate sanitation fell from 65 to 55 percent between 1990 and 1994 (Gardner 1998). According to the WHO, half the population of developing countries suffers from one of six diseases (diarrhea and others) associated with poor water supply and sanitation. Although the greatest shortcomings are found in rural areas (some 2.3 billion lack adequate sanitation compared with 590 million in urban areas), the need for adequate sanitation is most urgent in cities because of the greater potential there for mass infections from pathogen-tainted water.

Unemployment

One key reason for rising inequality and poverty—and a major threat to social cohesion and stability—is found in what various observers have termed the global jobs crisis. Out of the global labor force of about 2.8 billion people, at least 120 million people are unemployed, while 700 million are classified as “underemployed”—a misleading term because many in this category are actually working long hours but receiving too little in return to cover even the most basic of needs (Marshall 1995; Barnett 1994; Kane 1995).

Unemployment, underemployment, the threat of job loss, and the specter of eroding real wages are challenges for many workers across the globe, though the particular conditions and circumstances diverge widely in rich and poor countries. Three phenomena can be observed. First, the rise of microelectronics has dramatically reduced the need for labor—particularly unskilled labor. Second, measures such as subcontracting work and temporary or part-time hiring allow companies to adapt rapidly to fast-changing market conditions but render job tenure more tenuous and insecure. Third, due to modern communications and transportation networks, the ability to parcel out components of the work process, and increased capital mobility, corporations are increasingly able to tap into a large pool of cheap labor in developing countries, replacing a much higher paid work force in the old industrial countries. Initially, unskilled or semiskilled jobs were at risk in this manner, but recent evidence suggests that skilled workers are now facing similar pressures (UNRISD 1994; Barnett 1994; Bradsher 1995; Uchitelle 1994).

Countries that embrace a low-wage strategy and “flexible” labor markets may be able to create more jobs than those countries that do not, but strong downward pressure on wages is associated with such policies, as evidence from the United States makes clear. Between 1973 and 1990, real wages for production or nonsupervisory workers (excluding agriculture) declined by more than 20 percent; despite recent gains, wages today have still not caught up with those prevalent in 1973 (Dembo and Morehouse 1995).

Many other industrial countries have not embraced the low-wage strategy—for fear of rapidly growing economic inequality among their populations and the implied threats to the social and political health of their societies. But in a globalizing economy,

ple are out of work. In France and Germany, unemployment now runs at more than 12 per cent—postwar records. Among members of the Organisation for Economic Co-operation and Development (OECD), Japan alone has managed to keep joblessness low—at 3.9 per cent in early 1998, this is nevertheless the highest it has been since the end of World War II (Marshall 1995; Andrews 1997; Whitney 1998; Cowell 1998a, b).

Increasingly, there is a gap among workers who, due to advanced technical and other skills, have relatively secure and well-remunerated jobs; workers whose hold on jobs is tenuous or who have marginal and poorly-paid jobs; and those who are now considered

lenge: in the early 1990s, it reached 14 percent in the United States, 15 percent in the United Kingdom, 26 percent in Italy, and 36 percent in Spain. Japan and Germany are the exceptions, with rates of 5 and 6 percent, respectively (UNDPI 1996c; ILO 1993, 1995).

The world's labor force is projected to grow by almost one billion during the next two decades, mostly in developing countries hard-pressed to generate anywhere near adequate numbers of jobs (Kane 1995). During the 1990s, an additional 38 million people sought employment each year in these countries (UN 1994). High rates of population growth and the resulting disproportionately large share of young people in many developing countries translate into much greater pressure on job markets there. Roughly 20 percent of the population in industrial countries is age fifteen or younger. But in China, the figure is 27 percent; in Latin America, 34 percent; in South and Southeast Asia, 38 percent; and in Africa, 45 percent (Population Reference Bureau 1995). The uncertain prospects that many young adults face are likely to provoke a range of undesirable reactions: they may trigger self-doubt and apathy, cause criminal or deviant behavior, feed discontent that may burst open in street riots, or foment political extremism (UNDPI 1996c; Gizewski and Homer-Dixon 1995).

Inequality, poverty, and lack of opportunity are, of course, nothing new. But today's polarization is taking place when traditional support systems are weakening or falling by the wayside. In developing countries, there is an erosion of the bedrock of social stability—the webs and networks of support found in extended family and community relationships (although these are admittedly often paternalistic and exploitative). It is unclear what will take its place.

SMALL ARMS PROLIFERATION AND THE POTENTIAL FOR VIOLENCE

The ability of different societies to cope with urban challenges varies considerably, depending to a considerable degree on their ability to counter—to mitigate and reduce—the environmental, social, and economic pressures discussed earlier. This may to a large extent be a question of the resources and capacities that are available to them. But they will also be better able to respond and cope if the social resilience—the strength and cohesion of the communal fabric—is strong.

Gross disparities in wealth and power and ability to cope with life's pressures tend to tear at the fabric of society and lead to polarization. If profound social and economic grievances are unable to find expression or are ignored, they may assume violent forms. Governments do not always show themselves capable of dealing adequately with accelerating political, social, economic, and environmental pressures, and disputes fester; in the worst cases, they may even be tempted to exploit the resulting divisions for their own benefit in divide-and-rule fashion. Particularly where the legitimacy and effectiveness of political institutions is shaky, people will try to find support, identity, and security in the immediate group they belong to or feel kinship with. But as diverse groups and communities step into the breach, they will almost inevitably be in competition with each other. As zero-sum thinking prevails, societies splinter and tensions build.

These developments do not have to lead to violence. But increasingly, societies are suffering from the broad dispersal of small arms—firearms of both civilian and military type. There is growing, if belated, recognition of the dangers inherent in this proliferation. These weapons filter through all levels of society—to armed opposition groups, drug traffickers, organized crime, terrorists, private security forces, paramilitary groups, and vigilante squads. To the extent that ordinary citizens feel that the state fails to provide them with a sense of security, they, too, are increasingly arming themselves.

Small arms are infecting many communities and particularly urban conglomera-tions, where they encourage the impulsive, habitual, or deliberate use of violence for power, profit, and vengeance. Empowering those least hesitating to use violent means to act with impunity. The dispersal of small arms not only fuels widespread violence and escalates minor disputes into potentially major carnage, but it also debilitates societies by obstructing social and economic development and by hindering efforts to address the political, social, economic, and environmental challenges of today.

Because there has to date been little effort to track and control these types of weapons, no one really knows the quantities of small arms in circulation, or even the number that are added from new production each year. Ownership—whether by institu-tions or individuals—is widespread in many countries. Only a portion of all firearms are held legally, and only a portion of legally-held firearms are registered. A weapon pro-duced and sold legally may at some point fall into the “wrong” hands and become an ille-gal weapon. Hence, any global figur

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Urbanization and Security

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A Report of the Comparative Urban Studies Project

EXECUTIVE SUMMARY

Alan Gilbert argues that no consistent or meaningful relationship exists between urbanization and security because even if we observe some correlation between those two factors, it does not tell much about the nature of causation. It fails to explain how the links between urbanization and variables like life expectancy, nutrition, and literacy actually operate. No doubt, urbanization often contributes, and sometimes detracts from, the quality of people's lives, but we cannot tell by how much.

According to Gilbert, the very words "urbanization" and "security" do not mean a great deal because they

INTRODUCTION

This paper will argue that no consistent or meaningful relationship exists between urbanization and security. First, the words “urbanization” and “security” do not mean a great deal because they embrace too many cross-cutting ideas and processes. Second, researchers have found few consistent correlations between the numerous dimensions of security and urbanization. Third, insofar as one can find a close correlation, independent variables usually account for the statistical relationship. Fourth, even when a direct correlation between security and urbanization exists, the direction of causation is by no means obvious. Finally, every country and every city contains so much internal variation that most generalizations across nations, let alone across regions, are rendered meaningless.

Of course, because urbanization does not produce poverty, crime, and political protest either automatically or inevitably does not mean that poorly managed urbanization cannot stimulate undesirable forms of social development. What is required across the globe, and particularly in the poorer parts of the world, are sensible urban policies backed by adequate resources. Providing that the shantytowns receive electricity and water, the poor have the opportunity to work, the transport system allows them to get to work, and urban wealth is not distributed so unequally that the system appears wholly inequitable, then cities will continue their historical role of helping to improve the human condition.

WHAT IS MEANT BY “URBANIZATION” AND “SECURITY” ?

The terms urbanization and urban development are often confused. Urban development, or urban growth, simply means an increase in the number of people living in urban areas. Insofar as urbanization is used as an analogy for urban development, it means precisely the same thing. But urbanization also has a more subtle meaning that conveys something about economic, social, and cultural change. It is part and parcel of the process of modernization—a phenomenon that involves a shift from agricultural to urban forms of work, a change in social relationships, and important modifications in family life. People change their lifestyles when they move from the countryside to the city.

None of this is especially complicated, although measuring it can be. It has never been very clear what distinguishes an urban from a nonurban area. When I was at school in Britain, a handy definition was that a town had a Woolworth's; a city had a cathedral. Today, the first definition has ceased to be very helpful; perhaps McDonald's should be substituted for Woolworth's? Elsewhere such definitions are even less helpful. As a result, virtually every country around the world defines an urban area, a town, and a city somewhat differently. If we have difficulty defining an urban area, we will naturally have difficulty measuring the level and rate of urbanization (I will set aside the seemingly increasing difficulty that most countries have in actually counting people).

Perhaps the greatest problems, however, lie with interpreting the limited data that we have. Urbanization is a heterogeneous process, even in a single country. Life in a small town is very different from that in a huge city. Lifestyles among the urban poor are very

different from those of the rich. Unfortunately, when writing about the effects of urbanization, many people only seem to think about large cities. And, within large cities, mental blinders often exclude large chunks of the population: the poor in the case of most planners and the middle class in the case of most academics. The quality of writing about urbanization is vitiated by value judgments and selective thinking.

However, certain problems in defining urbanization shrink into insignificance in the face of the problems involved in defining security. As usual, my Oxford English Dictionary is both useful and unhelpful. Security is "a secure condition or feeling," and secure means "untroubled by danger or fear; safe against attack; reliable." The major problem in defining the meaning of security is twofold. First, what variable is under discussion; if I feel insecure, what is the nature of my insecurity? The answer might be almost anything: nuclear warfare, unemployment, my savings, my roof falling in, my students rebelling, and so on. Second, there is the problem of scale. Does security relate to international relations, national matters, my particular city, my neighborhood, my street, my family, my household, or my individual feeling of welfare?

Once we narrow down the issue and the scale in question, then we may be better placed to measure the relationship between security and urbanization. Only then might we attempt to measure whether a particular form of security, at a specific scale, rises or falls with the level of urbanization, the rate of urban growth, the nature of the urban process, or the size of urban centers.

SOME URBAN MYTHS OF OUR TIMES?

1. Migration to urban areas causes social anomie

Urbanization has frequently been portrayed as a social ill by novelists of the nineteenth century, such as Dickens, Hardy, and Zola, as well as many twentieth-century novelists from the Third World, such as Ngugi and Paton. Social scientists have often echoed this negative attitude toward urbanization, particularly when referring to the Third World city.

be protests, riots, and, in places, even revolution. In practice, there is limited evidence of such behavior, and even those who have looked hopefully for signs of political radicalism have been forced to note its absence: "It is remarkable how few riots—even food riots—there have been in the great Latin American cities during a period in which the masses of their impoverished and economically marginal inhabitants multiplied, and inflation as often as not was uncontrolled" (Hobsbawm 1967: 56).

What quickly became clear was that the majority of the population was conser-

to satisfy most demands and urban protest would break out. If carefully channeled, these protests might develop into true social movements that would demand the radical restructuring of society.

During the 1970s, many "Marxists lost faith in the labor-proletariat as a vanguard of social change [and looked to the] huge masses of people living on illegal occupied land

Unfortunately, many analyses have demonstrated that the path from totalitarian to democratic government is narrow and prone to disappear. In most parts of Africa, the path has never appeared on any map, and in Latin America, regular military incursions have blocked the path for decades at a time. Table 3 shows that in practice the tide of global democracy has ebbed and flowed.

Had there been a simple correlation between economic development, urbanization, and democratization, the results in Table 3 would have been different. In practice, only urbanization among the three processes has continued uninterrupted. Economic development effectively stopped in Africa between 1970 and 1990 and in Latin America during the 1980s. Urbanization in Latin America was loosely associated with increased numbers of democratic governments during the 1960s, but the 1970s produced urbanization and totalitarian rule (Hartlyn and Morley 1986; O'Donnell 1973).

Of course, there is plenty of evidence that urbanization encourages political liberalism and sets in motion a whole series of for

countryside, and that even when the urban poor have participated, they have rarely been among the leaders of radical political change. The differences between Marx and Mao on this issue are well known, as well as the fate of Che Guevara in the depths of rural Bolivia; but to me there appears to be little evidence in support of a unilineal link between urbanization and revolution. Perhaps the safest conclusion is that it is impossible to generalize because there are so few true social revolutions on which to base reliable judgment.

6. Urbanization reduces living standards

Despite fears, urbanization was long associated with an increase in most households' level of economic security. Certainly, the figures suggest that the average person living in urban areas lives better than those in rural areas (Table 4). We also know that most migrants tell researchers that they have moved to the city because of better opportunities for employment (Butterworth and Chance 1981; Gilbert and Gugler 1992; Cornelius 1975). Theory also suggested that inequality would fall with urbanization and economic development (Kuznets 1955).

Unfortunately, the 1980s threatened to change that situation. In Latin America, stabilization policies led to poverty increasing in most urban areas and declining in many parts of the countryside (Altimir 1994:11; UNDIESA 1989:39). In certain cities, the combination of rapid inflation and structural adjustment hit the urban poor very hard. In Peru, for example, "in 1985–86 one out of every 8 residents of Lima were poor, but by 1990 more than half were poor" (Glewwe and Hall 1992: 25).

For some, increasing urban poverty was a temporary problem that would be resolved once structural adjustment had corrected macroeconomic distortions (Dornbusch and Edwards 1991; Edwards 1995). The New Economic Model would stop inflation, the most significant poverty tax, and would eventually lead to economic expansion and the creation of more work. In practice, the economic conditions of the 1990s, although undoubtedly better for the urban poor than those of the 1980s, have often failed to raise living standards.

As the Inter-American Development Bank and United Nations Development Programme (1993: 1) point out: “The tendency for income to concentrate in the wealthiest sectors has not only continued, it has also intensified. An additional result of the crisis and of some of the stabilisation and adjustment measures, is that broad segments of the middle-income sectors and most of the workers in the industrial and service sectors have slipped below the poverty line, while conditions for their access to housing and basic health care and education services worsened.”

What many fear is that under the new conditions of global competition, economic growth will not create enough work and will reward only those with the requisite skills to sell in the marketplace (Klak 1989; Tardanico and Menjívar-Larín 1997). There are signs that if the New Economic Model does not necessarily increase absolute poverty, it increases the differences between the rich and the poor. The evidence is that this is occurring in the United States, in Britain, and in most parts of the Third World (Phillips 1991; Tardanico and Menjívar-Larín 1997; Londoño and Szekeley 1997). Clearly, there will be places that will not be able to compete in the global marketplace, and there it is feasible that urban poverty may well increase. The rise in urban unemployment in the very different circumstances of Argentina and South Africa suggests that this could become a real problem (Tardanico and Menjívar-Larín 1997; May 1998; Natrass 1998). It is possible that in the future we will see growing evidence of a link between urban poverty and urban growth. Arguably, in much of Africa, that link has been very evident for the last twenty-five years (O'Connor 1993; Stren and White 1989; UNDIESA 1989).

7. Urbanization increases crime

“It is held as a matter of common sense that the main cause of violence in society is urban development and the growth of huge cities. This conviction has deep roots that go back to the wave of urbanization that started in the twelfth century and the resulting polarization between town and country” (Pinheiro 1993: 3).

Pinheiro does not believe that urbanization is the cause of crime; nor do I. Unfortunately, it is difficult to present any reliable evidence either way because in most countries the figures on crime are desperately unreliable. Many people do not report crimes to the police, the police only record certain kinds of crime, different police forces record crimes in different ways, and politicians manipulate the figures according to the argument they wish to demonstrate. In Britain, the statistics are so poor that it is not even certain whether crime levels are rising or falling over time. If that is true in a country

where many people report crime because they are insured, where there is broad trust in the police, and where the police are expected to tabulate the crimes reported to them, what is the situation like elsewhere?

Despite the statistical problems, it is likely that certain forms of crime are more common in urban areas if only because urban people are more affluent and therefore have more to steal than their rural compatriots. The limited figures available for developed countries suggest that crime is more common in urban areas than in the countryside (Richardson 1973: 102). However, this does not mean a great deal because there are such important variations in crime rates between urban and rural areas. Within the same country, some cities are much safer than others, and within cities most suburbs are much safer than many inner city areas. In Britain, crime rates in certain "sink" estates are horrifyingly high, whereas in the suburbs of most towns and cities crime is relatively uncommon. The nature of crime also varies by area (not many tractors are stolen from the center of Manchester, even if a lot of other things are).

In any case, there would appear to be no obvious logical connection between urbanization and crime levels. Like most of the other supposed linkages discussed here, crime is predominantly the outcome of a range of social factors, and urbanization is only a secondary explicator. This is clear if we look at variations in crime rates across urbanized countries. In some parts of the world, such as the Middle East, most urban areas are largely free of crime; in Latin America, the United States, and South Africa, many urban areas are major crime centers.

Even when crime levels rise in urban areas, it is difficult to associate that rise with urbanization per se. For instance, the rapid rise in crime that has been noted in so many Latin American cities during the 1980s and 1990s (Green 199

In Colombia, most people are much safer from paramilitaries, guerrillas, and drug gangs

more common in six other Colombian cities than in Bogotá (Richardson 1973; Coyuntura Social August 1993: 32).

Equally problematic for the relationship between social pathology and urban size is that some large cities suffer from different problems than other cities of similar size. Some big cities have a great deal of poverty whereas others do not; some have terrible traffic congestion and others less. Most of the differences can be attributed to intervening variables. Air pollution is worst in cities with a great deal of manufacturing industry (Shanghai, Seoul, and São Paulo), that use coal as a domestic and industrial fuel (Shanghai and most Eastern European cities), and that suffer from temperature inversions (Los Angeles, Mexico City, and São Paulo). Other large cities experience less air pollution (UNEP 1992). Certainly the debate about optimum city size suggests that urban problems are not generally worse in giant cities, except possibly with respect to traffic congestion, land prices, and nonviolent crime.

In addition, very large cities have certain advantages over smaller cities with respect to economic performance and service provision (Richardson 1973). This is reflected in the fairly common finding that the incidence of poverty is less marked in large than in small cities. For example, a United Nations study in the mid-1980s found that levels of poverty in Bogotá, San José, Panama City, Lima, Montevideo, and Caracas were all lower than those found in other urban areas of their respective countries (Fresneda 1991: 164; Bolvinik 1991).

Overall, therefore, the case for or against megacities is inconclusive. Hma, Montatftn city fo re8

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