UC Irvine UC Irvine Previously Published Works

Title Human Security Through an Urban Lens

Permalink https://escholarship.org/uc/item/3xj4x6w7

Journal Journal of Human Security, 4(3)

Author Bollens, Scott

Publication Date 2008

Peer reviewed

Human Security Through an Urban Lens

Violence and Deprivation in Cities

Scott A. Bollens

UNIVERSITY OF CALIFORNIA, IRVINE

ABSTRACT

This article applies the human security perspective to the urban setting and examines how it can be employed to address city violence and deprivation. The author examines specific urban-based human security practices and evaluates both the potential and limitations of urban planning and policy as a means toward human security. Urban policymaking and planning shaped by human security objectives has the capability to create more equitable physical cities, but also to connect the management of the built environment to those deeper and root issues of disadvantage, marginalisation, and exclusion that are key drivers of crime, violence, and human insecurity.

Keywords: Urban ethnic conflict, violence, slums, urban planning/policy, built environment.

This work considers the local pragmatic and policy implications of the human security perspective. It does this by analysing the application of the human security concept to cities and exploring how this concept can be used to address significant urban challenges such as violence and deprivation. Conceptually, the article links the literatures in security and development studies with those from urban policy and planning domains. Specific spatial and economic interventions within urban planning that can meaningfully enhance human security are identified, and tensions and limitations in their use are explored.

URBAN HUMAN SECURITY

The concept of 'human security', introduced in United Nations Development Programme (UNDP) [1994], advances a more people and individual centered notion of security than found in dominant state-centric concepts of national security. It also broadens the concept of security from strictly one of freedom from aggression to encompass social and economic aspects of living (Tadjbakhsh & Chenoy, 2007). 'Freedom of fear' as a basic element of peace and security was joined by 'freedom from want' in terms of day-to-day subsistence, employment, education, health care, and shelter. Using this notion of human security, cities and urban policymakers emerge as key platforms and participants in its promotion or denigration. This is so because the planned (and unplanned) development of cities and the provision of urban services can produce sudden and hurtful disruptions in the patterns of daily life, or in less striking but similarly impactful ways, create over the long term significant urban landscapes of economic disparity and marginalisation.

A broadened, multidimensional concept of human security moves us from looking solely at the threat and dynamics of overt violence in the city to include types of 'structural violence' that create and maintain urban disadvantage and marginalisation. Structural violence is woven into social, economic, and political systems (United Nations Human Settlements Programme [UNHSP], 2007, p. 51); it 'shows up as unequal power and consequently as unequal life chances' (Galtung, 1969, p. 171; see also Moser, 2004; Eversole et al., 2004; Iadicola and Shupe, 2003). Exploitation, exclusion, and discrimination forms of structural violence by institutions and powerful private interests can create and perpetuate cities of massive socioeconomic divisions. Planning-related and often land-based policies that structure opportunities and costs in cities emerge then as important targets of study and potential leverage points for building cities of greater inclusiveness and thus more robust human security.

There are distinct urban-based processes and patterns associated with the specific components of human security concept elucidated in UNDP (1994). Urban policy interventions that stabilise and democratise the urban environment can enhance *personal* security from crime and violence and increase *political* security protective of human rights. Urban policies and investments can substantially influence the distribution of economic benefits and costs and the allocation of service benefits, key indicators of *economic* security. Unemployment, lack of economic opportunity, and insecurity of tenure that can result from ineffective policymaking may become important contributors to ethnic violence and human insecurity. Further, city spatial and regulatory policies can drive poor residents into marginal, underserviced territories (affecting *food* and *health* security) and increase their exposure to hazardous conditions and unimproved, unhealthy water supply and sanitation (and thus lessening *environmental* security).

Of special importance in the world's growing and culturally diverse cities is *community* security—the ability to derive a cultural identity and reassuring set of values from membership in a group, whether it is family, community, or racial or ethnic group (UNDP 1994). This protection of community identity or collective rights has special salience for those cities in the world that are prone to intense inter-communal conflict and violence reflecting ethnic or nationalist fractures. In these cities and societies, ethnic identity¹ and nationalism² combine to create pressures for group rights, autonomy, or even territorial separation. Cities such as Jerusalem, Belfast, Johannesburg, Nicosia, Montreal, Algiers, Grozny, Mumbai, Beirut, Brussels, Mitrovica (Kosovo) and Baghdad are urban arenas susceptible to inter-group conflict and violence associated with ethnic or political differences. Such politicised multiculturalism constitutes a 'challenge to the ethical settlement of the city' (Keith, 2005, p. 8). Political control of multinational cities becomes contested; governance amidst severe and unresolved multicultural differences can be viewed by at least one identifiable group in the city as artificial, imposed, or illegitimate. These cities are characterised by ethnic/nationalist saturation of what are typically mundane urban management issues.

Not only in these extreme cases of ethnic polarisation, however, do issues of group-based community identity assume salience. Rapid urbanisation and growth in informal settlements can strain the urban system and government's capacity to respond effectively. Especially important is whether the ethnonationalist composition of urban in-migrants and informal settlement communities reinforces or disrupts pre-existing ethnic composition. Recent growth and informal settlements that intensify group sorting and stratification can provide fuel for inflammatory leaders in the future. These 'groups' may be ethnic, racial, religious, tribal or other kinship-based arrangements. An ethnic or inter-group dynamic can have greater effect on urban human security and violence than the more quantifiable pressures of urban growth and informal settlements.

With about forty percent of the world's states having more than five sizable ethnic populations within their borders (UNDP, 1994), cities can become tinderboxes of potential ethnic explosion. Demarest (1995), for instance, describes how criminal organisations operating in immense, under-serviced shantytowns can exploit ethnic allegiances to further their ends. Even in states where ethnic identity has not been historically salient, ethnicity can emerge as a key identifier of individual and group identity amidst weak state strength and the non-institutionalisation of non-ethnic political party identities. Ethnic conflict gains its greatest intensity at the local scale where individuals and small groups interface with each other daily. Usually it is in urban, big city environments that 'ethnic antagonisms can achieve a peculiarly focused, "molecular" nastiness' (Boal, 2001, p. 4804). Urban migration of foreign immigrants, as well as domestic migrants who have ethnic origins different than the urban indigenous population, compete with each other for housing, employment, and educational opportunities. As more and more people from diverse ethnic origins and religious groups increasingly come into close contact with each other, urban unrest in the world's largest cities will increase (Worldwatch Institute, 2005).

Adopting an 'urban lens' through which to view human security is necessary today due to the massive growth of urban populations and the inability of public authorities to handle numerous and significant pressures coming from this growth. Studying cities allows us to understand the on-the-ground dynamics of practices and processes that can further human security, and those conflict-generating trends that can hinder it. Urban human security is threatened when states are at war internationally, repressive domestically, or lack the capacity or willingness to protect public security and address root issues of conflict (Canada Department of Foreign Affairs, 2006a). However, it is within specific geographical locations in urban areas—such as ethnic enclaves, informal settlements, safe zones, and refugee camps—that human security is violated or provided. Urban social polarisation and spatial segregation are important instigators of instability and can be mapped in ways that identify potential hotspots (Demarest, 1995).

Cities are also focal points for building peace after conflict and during major political and economic transitions (Bollens, 2007). As Paris (2004, p. 235) argues, democratisation and the marketisation that has usually come with it are 'inherently tumultuous and conflict-promoting processes' and postconflict societies are poorly equipped to manage these disruptions. Thus, there is the need for the development of domestic (political and economic) institutions that can dampen these tendencies during fragile transitional periods. Significant conflict-dampening methods—such as development of civil society, economic policies, and effective and neutral institutions—all have urban significance. Cities and urban programs can be bottom-up stabilisers that counter the damaging effects, exposed by Klein (2007), of economic liberalisation.³

URBAN GROWTH AND SLUMS

The pace and nature of contemporary urbanisation are reshaping the human security and development challenges facing the global community. In 2007, the urbanised population reached 50 percent (approximately 3 billion people) of world population for the first time in human history; it will reach 60 percent by 2030 (UNHSP, 2006). We are now in the latter part of a roughly 60 year time period from 1960-2017 when urban population will have grown from 1 billion to 4 billion people (Satterthwaite, 2005). Cities in the developing world—where needs are greatest—now account for over 90 percent of the world's urban growth. In Latin America, 64 percent of the poor now live in urban, not rural areas. The mayor of Mexico City—home to about 20 million people—governs more people than the leaders of 75 percent of the world's states (Ziegler, 2003).

Of particular alarm is the fact that much urban growth today is taking place not within the planned, bricks-and-mortar, and serviced 'formal' city but in burgeoning slums and informal settlements of inadequate shelter, overcrowding, insecurity of tenure, and inadequate access to improved sanitation and to safe water.⁴ One-third of all urban dwellers in the world now live in slums (UNHSP, 2006). From 1990 to 2005, the world's slum population increased from nearly 715 million to 998 million; if current trends continue, 1.4 billion people will live in the world's slums in 2020 (UNHSP, 2006). The nature of disadvantage and exclusion found in slums is pervasive and debilitating and means that, 'what were previously described as growing urban inequalities and differences have now become intergenerational forms of exclusion' (UNHSP, 2007, p. 4).

Slum population growth is particularly intense in the 'least developed countries', where 78 percent of urbanites live in slums (UNHSP, 2003). In Sub-Saharan Africa, 72 percent of the urban population is slum dwellers. South-central Asia is another slum hotspot, with 58 percent of its urban population now in slums. Constituting significant potential flashpoints and explosiveness are 'megaslums'—continuous belts of squatter and informal settlements at the periphery of major cities. Ranging in population from .5 million to 4 million, these slum-scapes are located near such cities as Mexico City, Caracas, Bogota, Lima, Lagos, Baghdad, Johannesburg, Gaza, Karachi and Cape Town (M. Davis, 2006).

Because residents in informal settlements commonly lack security of tenure, they are vulnerable to displacement and eviction by the state, competing ethnic group leaders, and private entrepreneurs. Worldwide, there are an estimated 2 million forced evictions per year. Often supported by bulldozers and heavy police presence, such actions disrupt urban life and can inflame political and ethnic tensions (UNHSP, 2007). Because slum dwellers usually lack perceived 'rights to the city', there is commonly the sanctioning of violent and illegal forced evictions as part of ethnic cleansing and land commercialisation campaigns.

The slums of the informal city often appear unmanaged and ungoverned. UNHSP takes the public sector to task, stating that slums are not just a manifestation of population explosion, demographic change, or globalisation, but are 'the result of a failure of housing policies, laws and delivery systems, as well as of national and urban policies' (2003, p. 5). The absence of the 'state' in the form of basic provision of infrastructure and shelter leads one to question whether the ungoverned informal city may actually be condoned, even desirable, to the state as a method to control and curtail urbanisation demands that it is unable or unwilling to meet⁵. Urban informality as a planning strategy has a useful benefit to those in power—'it allows urban elites to represent urban government as open, civil, and democratic, while at the same time, denying urban residents and workers basic rights and services' (Yiftachel & Yakobi, 2003, p. 218). From a state's view, segregation of informal from formal urban populations helps it contain 'alien' populations, insulates a host culture and/or middle-class and elite sectors linked to global economies from undesirables, provides a means of minimised electoral impact of immigrant ethnics and, at the extreme, sets up ethnic clusters as readily definable targets of attack and repression by the state (Boal, 2001).

The costs to the public sector of detaching and marginalising urban slums, however, seem extensive and counterproductive. To the extent that sprawling poor communities become independent of state control, criminal organisations will likely step in to secure loyalties, impose law and order, and offer economic survival opportunities (Demarest, 1995). The disappearance of the formal economy from many urban areas also is damaging. Whereas traditional formal industries tended to foster some interethnic solidarity through unions and radical political parties, the largely unprotected informal sector now is prone to ethnic

and religious differences and sectarian violence (M. Davis, 2006). Because informal settlements exist at the uncertain, contestable frontiers of state control, state police action in slums may consist of more repressive actions than elsewhere in the more managed sections of the city⁶. Amidst an overall environment of unmanageability and state absence, when the state does intervene, it may likely do so in hard, repressive ways that are contrary to urban human security.

VIOLENCE, CRIME AND URBAN CONFLICT

Crime, violence, and unrest pose significant and direct challenges to urban human security. Urban crime leads to generalised feelings of insecurity, powerlessness, and incomprehension on the part of the general public, abandonment and stigmatisation of certain neighborhoods and districts, creation of a fortress-like architecture of fear and the rise of private security responses, erosion of social mobility and community linkages among the urban poor, and the imposition of significant societal costs (estimated costs of insecurity are 8-10% of GNP in the South; 5-6% in the North) [UNHSP, 2007, 2008]. Urban crime can 'threaten the democratic foundation of a community or society' (UNHSP, 2007).

Crime has become a problem in most of the cities of the world, both North and South. From the 1970s to the 1990s, crime increased 3 to 5 percent in the urban North. Since the early 1990s, it has stabilised in many categories with the exception of crime by youth and minors. In the South, crime has increased in cities considerably beginning in the 1980s, and crime by youth and minors in particular has increased exponentially. The increase in urban crime has been in parallel with increases in drug trafficking and abuse and by the rise of destabilising organised crime.

Seventy percent of urban dwellers in Latin America and Africa and 60 percent of those living in cities in Europe and North America were victimised by crime at least once in the preceding five years (International Crime Victims Survey data).⁷ Violent crimes such as assault and other forms of personal contact crimes are increasing; by 1995, there was a 19 percent likelihood that an urban resident would be so victimised over the previous five years (this rises to 33 percent in African cities; 31 in South American cities). It is estimated that the rapidly growing metropolitan areas of Rio de Janeiro, Sao Paulo, Caracas, and Mexico City account for over 50 percent of violent crime in their respective countries (UNHSP, 2007). Other cities that have had reputedly some of the highest murder rates in the world include Washington, DC and Detroit, Bogota, Cali, and Medellin (Columbia), Karachi (Pakistan), Lagos (Nigeria), Dhaka (Bangladesh), Panama City, and Port Moresby (Papua New Guinea). In such urban areas, there has developed a 'naturalisation of violence' where it has become an everyday part of city life and survival (Soares, 2008). Faced with urban squalor, a pervasive drug culture, the neoliberal transformation and downsizing of the state, and the increasing availability of firearms, for many young urban dwellers of today crime and violence appears as their only path of survival.

The most direct and seemingly intuitive way of combating urban crime and violence is through strengthening of formal criminal justice and policing. Yet, crime is a symptom and consequence of underlying root causes of exclusion, disadvantage, and dehumanisation found in contemporary urban life. Accordingly, efforts to counteract urban crime and urban insecurity must encompass a more comprehensive program of initiatives that address these foundational causes.

Causes of Violence and Instability

Urban researchers have investigated the relationship between rapid urban growth, the inability of societies to adapt to such growth, and the way in which this may contribute to urban violence and instability. Three of the main explanatory models are (Gizewski & Homer-Dixon, 1995):

- 1. Relative deprivation—economic frustration and thwarted mobility expectations on the part of urban in-migrants, together with proximity of conspicuous consumption by elites, leads to propensity to engage in radical political activity and violence.
- Cultural conflict and migrant normlessness—cultural conflict and disruption of past living habits and customs cause personal identity crisis on part of in-migrants, weakening traditional social controls on deviant behaviour.
- Social communication and competition—urban environment allows high levels of social communication and creates increased competition among competing groups. Conspicuous political activity in cities politicises in-migrants and increases their support for political opposition and violence.

The first two models focus on certain types of grievance (deprivation, alienation, rootlessness) that intensify in urban settings; the third model emphasises how opportunities are increased in cities for these grievances to be voiced and acted upon.

Numerous factors underlying urban crime and violence have been investigated, including social and cultural factors, poverty, inequality, youthfulness of population, pace of urbanisation, city size and density, and attributes of the built environment (UNHSP, 2007). Comparative studies have consistently found high correlations between income inequality and homicide rates (see, for example, Gartner (1990); Fajnzylber et al (1999)). Regarding the built urban environment, it has been estimated that 10 to 15 percent of crimes are influenced at least in part by poor urban planning, design, and management considerations (Schneider & Kitchen, 2007).

It is probable that urban crime and violence are caused by a confluence of interlocking and self-perpetuating conditions. By shrinking the physical distance between economic classes and ethnic groups and by generating demands and expectations that cities cannot meet, rapid urban growth probably makes material inequalities and social injustices more obvious to those marginalised. Cities afford greater opportunities for direct social comparisons, intensified by elite conspicuous consumption and popular media reinforcement. Globalisation and the neoliberal restructuring of the world's economies are other exacerbating influences (Klein, 2007). As democratisation takes on specific and narrow forms in newly democratising states—privatisation, downsizing of the state, free trade—starkly uneven economic opportunities and disruptions to daily life may contribute to sustained experiences of social and economic injustice and high levels of frustration. In the urban context, frustrations surrounding lack of access to water, housing, electricity, and lack of state service delivery can create new sites of political violence when effectively mobilized by community and ethnic leaders.

Gizewski and Homer-Dixon (1995) contrast three types of violence that can occur in urban settings—political violence (caused by mass unrest and dissatisfaction with the state, or perpetuated by the state itself), ethnic and communal violence (where racial, ethnic or religious identities serve as rallying points for political mobilisation), and criminal and anomic violence (although not overtly political, it is linked to breakdown in social control and the moral authority of the state; it can accompany communal strife)⁸. The Canada Department of Foreign Affairs (2006b) developed a four-part typology of urban violence:

- 1. Open armed conflict—involves struggle for territory in a civil war context that occurs in cities. Struggle is motivated by political, ideological, and/or identity factors and main actors are rebel groups, paramilitaries, and state military forces. Commonly, civilian casualties and population displacement occur. Examples include Sarajevo, Mostar, and Srebrenica (Bosnia), Kindu (Democratic Republic of Congo), and Baghdad.
- 2. Endemic community violence—due to a failure of the state to assert social control and provide public security in urban areas, needs are filled by private actors such as vigilante groups, gangs, militia groups, and mobilised ethnic groups. Such violence is manifest in widespread and routine violent crime, high rates of gang/ police/ civilian casualties, 'social cleansing' of marginalised groups, and trafficking. Violence is motivated by economic and territorial control goals. Examples include Rio de Janeiro and Sao Paulo.
- Organized crime—actors such as drug cartels, human trafficking networks, and arms smugglers (often transnational in operation) take advantage and use urban areas having limited public security. Targeted killings, extortion, human trafficking, and small arms proliferation occur. Examples include Medellín (Columbia).
- Anomic crime—ad hoc, random acts of violent crime by individuals not affiliated with organised groups and that are usually economically motivated. Examples include Washington DC and post-apartheid Johannesburg.

URBAN POLICY AND CONFLICT

The international community (IC) has begun to highlight the role of the urban built environment in influencing human security. UNHSP (2007, p. 239) puts forth that 'attempts to manipulate the physical environment in order to reduce the opportunity for crime as part of design processes are potentially useful elements in the fight against crime and violence.' It asserts that a human settlements perspective emphasising spatial-physical and economic forms and processes of urbanisation can contribute to urban security and safety. Such discussion pushes the IC, heretofore emphasising broader, programmatic recommendations, in the direction of more specific on-the-ground spatial and policy considerations when confronting human insecurity. I seek to deepen this line of thinking in this article by explaining the important linkages that exist between local policymaking and human security.

Urban policies have direct and tangible impacts on components of human security. They affect the spatial, economic, social, and political dimensions of urban space and can thus intensify or lessen intergroup and interpersonal hostility. These policies include land use planning, real estate development, economic development, reconstruction, housing construction and allocation, refugee relocation, capital facility planning, social service delivery, community planning and participation, and municipal government organisation. Urban policies affect four specific types of conditions—territoriality, economic distribution, policy-making access, and group identity—that in turn can exacerbate or moderate urban disparities and inter-group tension (Gurr, 1993, Stanovcic, 1992, Burton, 1990, Murphy, 1989; Sack, 1986) [see Table 1].

Table 1: Urban Human Security and Public Policy

Territoriality/ control over land: Settlement of vacant lands; control of settlement patterns; dispossession from land; return and relocation of displaced and refugee populations; control of land ownership; demarcation of planning and jurisdictional bound-arise vis-à-vis ethnic settlement patterns.

Distribution of economic benefits and costs: Magnitude and geographic distribution of urban services and spending; allocation of negative and positive 'externalities' of urbanisation.

Access to policy-making: Inclusion or exclusion from political process; formal and informal participation processes; presence and influence of nongovernmental organisations.

Group identity: Maintenance or threat to collective ethnic rights and identity; education, language, religious expression, cultural institutions.

These urban conditions of land control, material wellbeing, political voice, and group respect are important influences on the degree of urban human security. Urban policies are capable of both producing a widely shared sense of deprivation conducive to sustained communal resistance and providing a platform for purposeful actions by inflammatory ethnic group leaders. Urban actions that intensify inequality and are oblivious to group-based and individual needs for security create 'fuel' of material grievance and psychological threat that can be employed by ethnic entrepreneurs utilising derisive, conflict-producing agendas.

One can hypothesise that movement toward tolerance and greater human security in a city would be indicated by increased flexibility or transcendence of ethnic geography, lessening of actual and perceived inequalities across ethnic groups, greater inter-ethnic political inclusion and inter-group cooperation, and growing tolerance and respect for collective ethnic rights (see Table 2). In contrast, signs of decaying human security would include ethnic territorial hardening, solidification of urban material inequalities, an ethnic group's nonparticipation in political structures, a public sector disrespect of a cultural group's identity, and most palpably a continuing sense of tension, intimidation, and potential conflict on city streets and in political chambers.

Table 2: Degree of Urban Human Security

 Facilitation (or impedance) of movement toward co-existence :

 Decrease (increase) in organised resistance and political violence;

 Loosening (compartmentalisation) of ethnic territoriality;

 Lessening (widening) of inter-ethnic disparities;

 Greater (lesser) political inclusion of all groups and inter-group cooperation;

 Growing (eroding) of respect for collective ethnic rights.

PRACTICES OF URBAN HUMAN SECURITY

I now examine specific urban-based human security practices that utilise planning, spatial, and design interventions, and evaluate both the potential and limitations of employing urban planning and policy to pursue human security objectives. This focus on the physicality of urban space is necessary because how the urban environment is constructed and organised can be cause, object, and limiter of urban violence, as well as a factor that shapes strategies for state management of violence (Demarest, 1995). The built urban environment is strongly symbolic of power, embodying tangible evidence of underlying legal and financial structures that allocate power (often unevenly) across the urban landscape. Built urban space is targetprone.

Enhancing urban safety and security through intervention in the built environment is certainly not an end-all. Practitioners must not fall into an environmental determinist frame, believing that changes in the physical environment shape social behaviour so extensively that crime and violence will be substantially minimised. Planning actions and principles will not turn around a society that is splintered or unraveled; they cannot create peace where it does not exist in people's hearts and souls. What urban policies can do, however, and it is significant, is to create physical and psychological spaces that can co-contribute to, and actualise, human security in cities. UNHSP (2007, p. 97) reminds us that 'deeply-embedded problems of crime and violence are rarely amenable to simple, one-dimensional solutions.' Thus, urban planning interventions need to be part of a broader and multi-faceted approach encompassing changes in formal criminal justice and policing, reduction of risk factors aimed at potential perpetuators, community involvement and development of local capacity, and methods of community-based conflict management.

In the face of conflict and violence, the challenge is not whether public and private authorities should or should not take action amidst an unstable city—they most assuredly and necessarily do when the personal safety of the middle- and upper-classes is threatened. Rather, the question becomes what types of actions will be undertaken and how these will impact human security in the short and long term. A common response by politicians and developers in the midst of such crises is to build walls and dividers, increase police and military presence, facilitate greater use of privatised security forces, and build gated communities that seal the middle-class and elites away from problems. Yet, the establishment of walls, urban buffers, and other urban forms that delineate physical segregation of groups or facilitate psychological separation may buy short-term relief at the costs of long-term societal instability. An exclusionary, unequal metropolis does not enhance urban human security. In contrast, it is the increased integration of diverse groups and individuals and the normalisation of urban fabric, *together* with a frontal assault upon the root issues of inequality and exclusion that are critical elements in the strengthening of urban human security.

Urban policymakers and professionals in the fields of planning, urban design, and engineering have within their power the capacity to foster an 'unconventional' sense of urban human security, one built on sustainable co-existence rather than constructed through the more conventional means of increased criminal penalties, police and military might, and gated and divided districts. Such an agenda consists of more inclusive, democratic human security practices. To achieve this potential, human security practitioners operating at the international level and human settlement practitioners focused on material and spatial considerations at the local level will need to build mutually supportive networks. In addition, since many cities having the least amount of urban human security are in countries having limited financial and technical capacities, the international community and others need to train and equip public planners (Devas, 2001).

Planning and spatial interventions have a unique capacity—able to connect the manipulation and management of the built environment to deeper and root issues of disadvantage, marginalisation, and exclusion that trigger crime and violence in cities. This will require, however, that policymakers and practitioners shift planning from its traditional focus on urban symptoms to actions that address these root causes. In Barcelona (Spain) during and after the Franco regime, progressive urbanists linked urban deficiencies in working-class neighbourhoods to lack of political voice and in this way catalysed community organising (Bollens, 2007). In Johannesburg, community activists helped transcend sole emphases on urban symptoms of racial polarisation and targeted the need to radically transform and restructure apartheid-based urban governance (Bollens, 1999). Such a refocusing of the collective planning enterprise changes it from a relatively conservative one of 'societal guidance' to a broader reaching objective of 'social transformation' (Friedmann, 1987). Structural and root causes need to be addressed alongside attempts to improve the built environment and residential wellbeing. Urban policy interventions dealing with public spaces, land use planning, street layouts, and access to services and goods are potentially able to increase civic interaction and standards of living, which can increase urban human security. Yet, if urban policies do not also counter the long-term structural causes of conflict and tension, interventions that increase civic interaction amidst deep disparities could work to incite violence, not decrease it. In Brazil, for example, upgrading of a number of informal settlements has been physically transformative, but has occurred amidst worsening problems of drug boss territoriality, systemic unemployment, marginalised perception by residents (vis-à-vis the formal city) and militarised violence by the state (Perlman, 2004). A focus on physical improvements-what Roy (2005) calls the 'aestheticization of poverty'-must be balanced with programs aimed at improving the capacities and livelihoods of individuals and households.

The substantial human security challenges of growing slums puts the spotlight on the disconnection that exists between traditional regulatory planning and master planning and the needs and realities of these urban areas. Mainstream master planning from Europe and North America has often been imported into developing countries, or brought over through colonialism. Such planning often is ill-fitting to the needs of these countries, particularly of their urban poor (Watson, 2007). Master planning often seeks to promote a modernist version of urban form, characterized by aesthetic features, efficiency, car dominance, highrise development, and separation of land use functions. It is commonly done by experts, results in end-state blueprints, involves little or no community consultation, and applies rigorous land use and zoning regulations to landscapes having clear ownership (Watson, 2007). Each of these characteristics is incompatible with the realities of rapidly growing cities having substantial zones of urban poverty and informality. Where informal settlements needs are socioeconomic, the town planning model focuses on physical space. Where informal settlement needs concern empowerment and participation, the traditional planning model tends to be non-participatory and hierarchical. And, where informal settlement needs seek transformation of basic conditions of livelihood, the traditional planning model offers reformminded, yet ultimately conservative, prescriptions. Beyond simply being unhelpful in addressing contemporary needs of the urban poor in many cities, traditional urban planning has been more often part of the problem because it tends to reinforce and entrench urban inequalities and exclusion (Watson, 2007). For example, the rigid application of incompatible first world zoning in developing countries forces many urban poor to step outside the law of the formal city and find shelter in informal and peri-urban environments laden with risk and insecurity.9

The challenges of slums and the informal city require a different set of city-building techniques and, indeed, a fundamental reconceptualisation of, and thus challenge to, traditional town planning. A new approach is needed that (1) integrates traditional spatial planning with social and economic planning so that development is treated as human-centered, complex and holistic rather then solely spatial and one-dimensional in character; and (2) includes a participatory process that is aimed at empowering the poor and marginalised, and counteracts the root issue of political exclusion. Such a reconceptualisation of urban planning practice was undertaken as part of the transition to post-apartheid urban policymaking in South Africa, and considered perspectives rooted in anti-apartheid community mobilisation and linked to a more expansive definition of development (Bollens, 1999). In hemorrhaging cities where informal growth is explosive and basic needs are not being met, an additional challenge is the difficult balancing between the meeting of short-term, emergency needs for water, sewer, and shelter and the longer-term goals of spatial development for the metropolis as a whole. For instance, providing emergency relief to households in informal settlements and slums may unintentionally have the effect of keeping them in places of significant vulnerability and exposure to risk, a possibility at odds with a responsible longer-term plan for the urban area. One such strategy that addresses this balancing challenge is an 'urban trialogues' approach (UNHSP, 2004).

Urban Policy Principles

I depict several city-building and urban design principles that can advance human security by mitigating socio-economic and political tensions.¹⁰

Engage in 'pro-poor' equity planning that addresses underlying root issues

Urban strategies and interventions should in the first place be targeted in ways that address the local manifestations of long-term structural causes of conflict and tension. Development and planning priorities involving the allocation of basic infrastructure, services, and employment assistance should be redirected toward low-income individuals and communities and to the most vulnerable groups. The satisfaction of basic human needs will promote security for the most vulnerable groups or those who have been historically discriminated against. With the end of apartheid in South Africa, urban policymakers in Johannesburg redirected urban policy toward empowerment and material upliftment goals for the black poor (although the sheer size of such needs, budgetary limits, and market-based obstacles have been powerful constraints) (Bollens, 1999). The 'equity planning' approach was developed by Davidoff (1965) and Krumholtz and Forester (1990) in the United States and is based on social justice criteria. Progressive planning efforts are employed to lessen urban inequalities in efforts to create a more just city and society. Urban development and planning policy would directly address the meeting of basic human needs—public services, human rights, employment opportunities, food and shelter, and participation in decision-making.¹¹

Investment in both physical and social capital in a city's informal settlements and slums is an essential part of an urban equity approach. Slum upgrading should not take place in isolation, but be part of a broad program of poverty alleviation and a citywide plan that seeks to functionally and spatially integrate these districts with the formal city. Specific interventions into slums include provision of basic water and sanitation services to urban poor, granting of some type of security of tenure, protection from forcible and market-based evictions, cleaning and maintaining of residential or commercial areas, and creation of neighborhood watch, community policing, and tenant management programs. With growing recognition that there exists a diverse range of land tenure and housing rights, local and other governments are increasingly innovating in their efforts to provide shelter rights and protection from forced eviction to the urban and peri-urban poor (UNHSP, 2007; Payne, 1997). The 2001 Brazilian Federal Law on Urban Development, for instance, establishes a 'right to the city' as a key foundation of citizenship, recognises informal settlements as part of the city, simplifies the 'regularisation' process regarding informal land occupations, and seeks to regulate the use of land for social purposes (Instituto Polis, 2002).

Planners can endeavour to develop collective space and projects in order to further community identity and pride of place. In the Columbian cities of Medellin and Bogota, there has been the purposeful and progressive use of public investment to enhance quality of life and opportunities in poorer areas and this is associated with lessened crime rates (Romero, 2007; Kraul, 2006). In many cases, material improvement in urban life is absolutely essential to enhancing human security, but will not be sufficient if processes of political inclusion, acknowledgement and reconciliation are absent. It is crucial that policymaking that attends to the urban symptoms of poverty be linked with policies that confront more directly the structural inequalities and power imbalances that are at the root of much conflict and violence. Development interventions should not only address physical urban inequalities, but seek to counter individual and group-based feelings of historic grievance, marginality, disempowerment, and discrimination whenever possible.

Use the planning process to empower poor communities and build civil society

People who will be affected by the project, who will suffer from it or enjoy it, should participate in the planning process from the first beginning of the plan. Particularly related to the upgrading of poor neighborhoods and informal settlements, the planning process should be positioned not as a technical exercise, but as a social, political, and organisational mechanism that can increase feelings of inclusion, recognition, and group self-worth. Resident participation in planning or project deliberations is of vital significance because it demonstrates how the democratic process works and addresses the core issue of political exclusion. Democratic inclusion of marginalised or disadvantaged groups is critical to ameliorating inter-group violence, especially in the developing world's slum communities (Sisk, 2006). In Bolivia, a national law (1999 Law of the Municipalities) requires all municipalities to use a strategic participatory method when formulating their urban plans (Watson, 2007). The participatory budgeting process in the Brazilian city of Porto Alegre, where residents and elected delegates identify and vote on spending priorities, has led to increased participation and improvements for the poor, including better sewer and water access and more schools (World Bank, 2003). Participatory planning and project design can create and enhance social capital in heretofore marginalised urban districts and help develop a set of community based and nongovernmental organisations ('civil society') that focus on education, health, human services, and human rights and security concerns. Such a civil society can act both as conduit for the articulation of individual and community needs and as a defense mechanism against excessive governmental power or the intrusion into the local area of crime syndicates or drug loads.

Create flexibility and porosity of urban form

Urban planning and policy should maintain as much flexibility of urban form as possible, choosing spatial development options that maximise future options. Except in conditions of extreme need, walls, urban buffers, and other urban forms that delineate physical segregation of groups or facilitate psychological separation should be discouraged. Instead, this strategy allows for greater mixing and freedom of choice of populations in the future, if and when inter-group conflict abates and there can be some normalisation of urban living. This does not constitute an integration or coercive assimilation strategy, but rather seeks to create

an urban porosity that allows normal, healthier urban processes to occur. Creation of urban porosity must take place, however, simultaneous with or after significant investment in poor neighborhoods and individuals. Absent such pro-equity investments, interventions such as permeable street layouts that encourage travel across different parts of the urban fabric may enhance crime opportunities since more potential offenders will see more potential targets (UNHSP, 2007). This points again to the critical importance of addressing core issues of urban deprivation and inequality prior to, or concurrent with, manipulation of urban built form. With core issues included as part of the strategy, more permeable street patterns can increasingly knit different parts of the city together and enhance urban human security by bringing heretofore impoverished areas into the functional grid of the urban area.

Increase sensitivity of policies to urban ethnic homelands and frontiers

In cities where ethnic and religious identity are primary drivers of political action, local authorities should, through their regulatory powers, locate sensitive land uses having cultural and historic salience (churches, mosques, private schools, cultural community centers) within urban neighborhoods identified with those specific cultural groups. They should encourage in interface, or boundary, areas between cultural neighborhoods those types of land uses that encourage mixing of different groups in a supportive environment. Joint and mixed land uses (public space, residential, commercial) can be intentionally placed at hard interface areas between competing (potentially conflicting) groups of an ethnic or other identifiable nature. Planners should prepare systematic assessments of cultural effects for proposed land uses of certain types (those having cultural importance) and in certain spatial areas (areas of interface and mixing). Ethnic impact assessments can explicitly account for potential social-psychological impacts of that land use on the respective cultural communities of the city, and should be used in the decision-making process regarding development proposals. In Belfast (Northern Ireland), amidst the consolidation of national political progress, planners in housing and development agencies are debating the tactics and timing of interventions aimed at normalising the extreme sectarian landscape of the city. Such potentially volatile interventions need to be informed by sensitive analysis of on-the-ground sectarian interests and dynamics.

Protect and promote the collective public sphere

For the seed of urban human security to grow, the public sphere in both physical and institutional forms should encompass and respond to all competing identity groups in the city. Physically, planners should revitalise and redevelop public spaces, neighbourhoods, historic areas, and other urban public assets as places of democracy and neutrality that promote healthy inter-group and interpersonal life. The creation of public spaces, as part of an overall pro-poor municipal program addressing root issues of conflict, can permit and contribute to cohesion and social equality and encourage activities that are the grounds for remaking an urban citizenship that is cross ethnic in nature. In Barcelona (Spain), in the early democratic years after Franco, architects and designers employed small scale and context-sensitive improvements in numerous public spaces throughout working-class neighbourhoods as a way to illuminate the benefits of the new democracy (Bollens, 2007). The quality of public and civic space can be of great importance to neighborhoods-public areas can facilitate mix and contact among a heretofore fragmented populous, facilitate and provide avenues for collective expression, and can contribute to cohesion and social equality (Borja, 2003; Borja & Muzi, 2003). D. Davis (2007) brings to our attention an important caveat regarding the redevelopment of public spaces. She notes that many of the recent urban renewal projects in the older central areas of Latin American cities have gained political support and have been supported by the wider populous because of outrage over crime and violence in those districts. However, she projects that many of these new urban environments will be constructed in ways that tightly restrict what was formerly public space. Institutionally, social and ethnic fragmentation of local public authorities should be avoided because it obstructs opportunities for fostering inter-group co-existence and urban human security. A negative example is Mostar, Bosnia (former Yugoslavia), where an ethnically fragmented local government structure in place during the first ten postwar years hardened antagonisms between the two sides, stimulating and cementing greater inter-group economic, religious, and psychological differences (Bollens, 2007).

Encourage the diffusion of grassroots human security initiatives

In order to extend the impact and enhance the sustainability of innovative and progressive urban strategies, institutional linkages should be developed that diffuse urban human security practices both horizontally (to other urban areas in a country) and vertically (to national governments and international organizations). Local government administrators and non-governmental organisations (NGOs) should engage with national government officials and seek to incorporate local grassroots lessons and partnerships into national urban programs. Local government organisations and NGOs that operate at the international level, meanwhile, can be repositories of information about how municipal governments can facilitate and promote urban human security. With advocacy by local governments and nongovernmental organisations, the chances will increase that economic and social initiatives at national and international levels will recognise urban policy and local governance as key assets for addressing human security.

CONCLUSION

Urban policy interventions can inform and educate a city's residents about the physical and social-psychological characteristics of an open and more equal society. Cities are privileged places for democratic innovation (Borja & Castells, 1997), and urban planning interventions can constitute the most visible and meaningful edge of more progressive and pro-poor policies. Planning and development interventions can establish bridges and links between rich and poor, between competing ethnic communities, or they can build boundaries and figurative walls that separate and subjugate. It is not just the case of breaking down barriers where they exist, or of not putting up new barriers between ethnic groups. Rather, the challenge is to build urban environments that transform our minds to recognise, as Sen (2006) points out, the complex set of multiple identities we all have and to some sense we construct. Whether policymakers strengthen urban connectivity or separation will send emotive symbols to current and future generations about what the city either aspires to in hope or accepts in resignation.

NOTES

- 1 Ethnic groups are composed of people who share a distinctive and enduring collective identity based on shared experiences or cultural traits (Gurr & Harff, 1994). Such group awareness can be crystallised through such factors as shared struggle, territorial identity, or religion (Smith, 1993).
- 2 Nationalism is a doctrine wherein nationality is the most important line of cleavage for establishing membership in societal groups, and overrides or subsumes alternative criteria such as social class, economic class, or patronage networks (Snyder, 1993).
- 3 Urban human security has also gained currency in the US military due to its experiences in Iraq. In fighting insurgencies, Army/Marine counterinsurgency doctrine now emphasises the importance of addressing, often in urban areas, civilian needs for basic goods and services, social identity, and personal and communal security. Such a human security focus is seen as having instrumental value in maintaining and increasing the legitimacy of the occupation (US Department of the Army, 2006).
- 4 These characteristics compose the operational definition of slums used by UNHSP (2003). I use slums and informal settlements interchangeably.
- 5 Roy (2005) points out that 'informality' is created by the state itself through its ability to proclaim a 'state of exception' to the application of its planning and legal apparatuses.
- 6 This observation is derived from Ron (2003), who found that the magnitude and form of state violence differ across geographic space.
- 7 Source: www.unicri.it. This data is for cities over 100,000 population.
- 8 These categories of violence are not mutually exclusive and one type of violence can stimulate another. However, political and criminal violence do not always follow in step, witness the case of Belfast where criminal violence during the years of active paramilitary violence was minimal due to strong intra-group regulation and/or the positive effects of within-group solidarity.
- 9 Caution should also be exercised in the use of place-based crime prevention techniques largely developed in the United States and Britain (Schneider & Kitchen, 2007). Incorporating these crime and violence prevention considerations into planning and project design decisions will likely focus on the protection of the planned city at the expense of addressing core issues of substandard shelter and services in the city's poor and marginalised sections.
- 10 These principles are based on my research on contested cities, including the carrying out of more than 220 interviews with urban professionals, politicians, and community advocates (see Bollens, 2007, 2000, 1999).
- 11 The international community uses the label 'pro-poor' to describe such redistributive urban policy; a recent manifestation of the approach is the 'inclusive city' strategy advocated in UNHSP (2003).

REFERENCES

- Boal, F. W. (2001). Ethnic conflict (geography). In N. Smelser & P. Baltes (Eds.), International erncyclopedia of the social and behavioral sciences, Oxford: Pergamon, 4802–4806.
- Bollens, S. A. (2007). Cities, nationalism, and democratization. New York: Routledge.
- Bollens, S. A. (2000). On narrow ground: Urban policy and conflict in Jerusalem and Belfast. Albany, NY: State University of New York Press.
- Bollens, S. A. (1999). Urban peace-building in divided societies: Belfast and Johannesburg. Boulder, CO: Westview Press.
- Borja, J. (2003). *Interview*. Head, Urban Technology Consultant. Deputy Mayor, City of Barcelona, 1983-1995. Interview in Barcelona, April 30
- Borja, J. & Castells, M. (1997). *Local and global: The management of cities in the information age.* London: Earthscan.
- Borja, J. & Muxi, Z. (2003). El espacio publico: Ciudad y ciudadanía. Barcelona: Electa.
- Burton, J. W. (Ed.). (1990). Conflict: Human needs theory. New York: St. Martins Press.
- Canada Department of Foreign Affairs. (2006a). Freedom from fear in urban spaces: Discussion paper (internal). Human Security Research and Outreach Program. Ottawa: Canada Department of Foreign Affairs.
- Canada Department of Foreign Affairs. (2006b). *Human security for an urban century: Local challenges, global perspectives*. Ottawa: Canada Department of Foreign Affairs.

- Davidoff, P. (1965). Advocacy and pluralism in planning. Journal of the American Institute of Planners, 31, 596-615.
- Davis, D. (2007). Urban violence, quality of life, and the future of Latin American cities: The dismal record so far and the search for new analytical frameworks to sustain the bias towards hope. In A. Garland, M. Massoumi & B. A. Ruble (Eds.), *Global urban poverty: Setting the agenda*, Washington DC: Woodrow Wilson International Center for Scholars, 57–87.
- Davis, M. (2006). Planet of slums. New York: Verso.
- Demarest, G. (1995). Geopolitics and urban armed conflict in Latin America. *Small Wars and Insurgencies*, *6*(1), 44–67.
- Devas, N. (2001). Does city governance matter for the urban poor? *International Planning Studies*, *6*(4), 393–408.
- Eversole, R., Routh, R. & Ridgeway, L. (2004). Crime and violence prevention in an urban indigenous community. *Environment and Urbanization*, *16*(4), 73–82.
- Fajnzylber, P., Lederman, D. & Loayza, N. (2002). Inequality and violent crime. *Journal of Law and Economics*, 45, 1–40.
- Friedmann, J. (1987). *Planning and the public domain: From knowledge to action*. Princeton, NJ: Princeton University Press.
- Galtung, J. (1969). Violence, peace, and peace research. Journal of Peace Research, 6(3), 167–191.
- Gartner, R. (1990). The victims of homicide: A temporal and cross-national comparison. *American Sociological Review*, *55*, 92–106.
- Gizewski, P. & Homer-Dixon, T. (1995). Urban growth and violence: Will the future resemble the past? Washington, DC: American Association for the Advancement of Science.
- Gurr, T. R. (1993). Why minorities rebel: A global analysis of communal mobilization and conflict since 1945. *International Political Science Review*, *14*(1), 161–201.
- Gurr, T. R. & Harff, B. (1994). Ethnic conflict in world politics. Boulder, CO: Westview.
- Iadicola, P. & Shupe, A. (2003). *Violence, inequality, and human freedom*. Lanham, MD: Rowman and Littlefield.
- Instituto Polis. (2002). *The statute of the city: New tools for assuring the right to the city in Brazil.* Sao Paulo: Instituto.
- Keith, M. (2005). After the cosmopolitan? Multicultural cities and the future of racism. London: Routledge.
- Klein, N. (2007). The shock doctrine: The rise of disaster capitalism. New York: Metropolitan.
- Kraul, C. (2006, October 28). Columbia City makes a u-turn. Los Angeles Times, A11.
- Krumholz, N. & Forester, J. (1990). *Making equity planning work: Leadership in the public sector*. Philadelphia: Temple University Press.
- Moser, C. O. N. (2004). Urban violence and insecurity: An introductory roadmap. *Environment* and Urbanization, 16(2), 3–16.
- Murphy, A. B. (1989). Territorial policies in multiethnic states. Geographical Review, 79, 410-421.
- Paris, R. (2004). At war's end: Building peace after civil conflict. Cambridge: Cambridge University Press.
- Payne, G. (1997). Urban land tenure and property rights in developing countries: A review. London: Intermediate Technology Publications/ODA.
- Perlman, J. (2004). Marginality—from myth to reality in the favelas of Rio de Janeiro, 1969–2002. In A. Roy & N. Al-Sayyad (Eds.), Urban informality: Transnational perspectives from the Middle East, South Asia and Latin America, Lanham, MD: Lexington, 105–146.
- Romero, S. (2007, July 15). Medellin's nonconformist mayor turns blight to beauty. New York Times.
- Ron, J. (2003). Frontiers and ghettos: State violence in Serbia and Israel. Berkeley, CA: University of California Press.
- Roy, A. (2005). Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association*, *71*(2), 141–158.

- Sack, R. (1986). *Human territoriality: Its theory and history.* Cambridge: Cambridge University Press.
- Satterthwaite, D. (2005). The scale of urban change worldwide 1950-2000 and its underpinnings. Human Settlements Discussion Paper. London: International Institute for Environment and Development.
- Schneider, R. H. & Kitchen, T. (2007). Crime and the built environment. London: Routledge.
- Sen, A. (2006). Identity and violence: The illusion of destiny. New York: W.W. Norton.
- Sisk, T. (2006). Realizing the cosmopolitan ideal. In Canada Department of Foreign Affairs (Ed.), Human security for an urban century: Local challenges, global perspectives, Ottawa: Canada Department of Foreign Affairs, 66–67.
- Smith, A. D. (1993). The ethnic sources of nationalism. In M. E. Brown (Ed.), *Ethnic conflict and international security*, Princeton, NJ: Princeton University Press, 27–42.
- Snyder, J. (1993). Nationalism and the crisis of the post-Soviet state. In Brown (Ed.), *Ethnic conflict and international security*, Princeton, NJ: Princeton University Press, 79–102.
- Soares, L. E. (2008). On writing and governing in Rio de Janeiro. Presentation at University of California, Irvine. February 5.
- Stanovcic, V. (1992). Problems and options in institutionalizing ethnic relations. *International Political Science Review*, 13(4), 359–79.
- Tadjbakhsh, S. & Chenoy, A. (2007). Human Security, Concepts and Implications. London: Routledge.
- United Nations Development Programme (UNDP). (1994). *Human development report*. New York: Oxford University Press.
- United Nations Human Settlements Programme (UNHSP). (2008). Consequences of urban crime. Safer Cities Programme. Retrieved 6 February 2008 from http://www.unhsp.org/content.asp?typeid=19&catid=375&cid=1439&activeid=1436.
- United Nations Human Settlements Programme. (2007). Enhancing urban safety and security: Global report on human settlements 2007. London: Earthscan.
- United Nations Human Settlements Programme. (2006). *The state of the world's cities report 2006-2007*. London: Earthscan.
- United Nations Human Settlements Programme. (2004). Urban trialogues: Visions, projects, coproductions. Brussels: Localizing Agenda 21 Programme.
- United Nations Human Settlements Programme. (2003). The challenge of slums: Global report on human settlements 2003. London: Earthscan.
- US Department of the Army. (2006). US Army/Marine counterinsurgency field manual. Old Saybrook, CT: Konecky and Konecky.
- Watson, V. (2007). Urban planning and twenty-first century cities: Can it meet the challenge? In A. Garland, M. Massoumi & B. A. Ruble (Eds.), *Global urban poverty: Setting the agenda*, Washington DC: Woodrow Wilson International Center for Scholars, 205–236.
- World Bank. (2003). Case study 2—Porto Alegre, Brazil: Participatory approaches in budgeting and public expenditure management. Social Development Notes. Environmentally and Socially Sustainable Development Network, World Bank. Note no. 71.
- Worldwatch Institute. (2005). *State of the world 2005: Redefining global security*. New York: W.W. Norton.
- Yiftachel, O. & Yakobi, H. (2003). Control, resistance, and informality: Urban ethnocracy in Beer-Sheva, Israel. In A. Roy & N. Al-Sayyad (Eds.), Urban informality: Transnational perspectives from the Middle East, Latin America, and South Asia, Boulder, CO: Lexington Books, 209–242.
- Ziegler, D. J. et al. (Eds). (2003). *Cities of the world: World regional urban development*. Lanham, MD: Rowman and Littlefield.

ABOUT THE AUTHOR

Scott A. Bollens is Professor of Urban Planning, and Warmington Endowed Professor of Peace and International Cooperation, University of California, Irvine. He studies urban policymaking and intergroup conflict. He is author of *Cities, Nationalism, and Democratization* (Routledge, 2007), *On Narrow Ground* (State University of New York Press, 2000) and Urban Peace-Building in Divided Societies (Westview, 1999).

Email: bollens@uci.edu