Ethnic and class clustering through the ages: a transdisciplinary approach to urban neighborhood social patterns

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For [cities] are each one of them many cities, not a city, as it goes in the game. There are two at the least at enmity with one another, the city of the rich and the city of the poor. Plato, The Republic, Book IV (Plato, 1937)

Since the time of Plato at least, writers on human society have been concerned with the phenomenon of social clustering in cities. The existence of neighborhoods or districts with concentrated ethnic, class, occupational, or religious groups has been repeatedly observed by a range of authors, from Plato to the analyst of modern census tracts. In some eras writers praise such social clustering. For example, the Han Dynasty Chinese philosophical aphorisms recorded in the Guanzi annals include this statement:

The scholar-official, the peasant, the draftsman and the merchant ... should not mix with one another, for it would inevitably lead to conflict and divergence of opinions and thus complicate things unnecessarily ... Let the scholar-official reside near school areas, the peasants near fields, the craftsmen in the constructions workshops near the officials' palace, and the merchants in the *shia* [commercial wards]. quoted in (Kostof, 1992: 102)

On the other hand, many planners today condemn segregation and social clustering in cities, instead promoting diverse and mixed neighborhoods as healthy and desired goals (Fainstein, 2005; Jacobs, 1961; Talen, 2006)

The historical and archaeological records are replete with examples of cities with socially homogeneous neighborhoods as well as cities whose residential zones are socially heterogeneous. Many of the earliest cities with good data—in southern Mesopotamia—had mixed neighborhoods, whereas some cities in the same region exhibited marked clustering by wealth (see discussion below). These processes of segregation and mixing are far from uniform with individual historical and regional contexts. Both Medieval Europe and Aztec Mexico, for example, were settings in which some cities exhibited social clustering while others did not. What accounts for this variation? Some writers claim that social clustering is always imposed by the state (Marcuse, 2002), while others endeavor to show that extensive clustering can result from the uncoordinated and unintentional actions of individuals (Schelling, 1963).

In this paper we describe the initial stage of an ongoing transdisciplinary research project that attempts to forge a new approach to questions of the existence, variation, social context, and causes of social clustering within urban settings. We take a broad perspective by looking at cities from the present back to their beginnings in the Urban Revolution. Our point of departure is the notion that all cities share a set of basic social dynamics that permits comparative analysis of urban life using a wide perspective. We agree with recent calls for greater comparison in urban studies (Nijman, 2007; Sellers, 2005; Ward, 2008) but most works do not go far enough because they largely fail to push for inclusion of historic and ancient cities. In order for comparative urbanism to address underlying processes such as social clustering, comparison cannot be limited to the modern period. Our understanding of "urban" must incorporate pre-industrial, non-western and interdisciplinary perspectives (M. E. Smith, 2009).

We argue in this paper that there is value in comparing neighborhood structure and dynamics across the ages. However, some may question our drive to include ancient and nonwestern urban experiences because capitalism has fundamentally changed land markets, or because transportation and other technologies have altered human interaction, or because democratic institutions change our relationships within the city context. We do not propose a single experience or trajectory of historical development; rather we suggest that urban processes may persist under a variety of conditions throughout time. One of the goals of our project is to identify and analyze such processes through comparative analysis.

We are certainly not the first to make empirical comparisons among diverse kinds of cities (e.g., ancient and modern, western and non-western, or preindustrial and industrial), and our work builds on the insight of a number of scholars. Besim Hakim, for example, has analyzed historical data on generative urban principles in ancient Islamic cities in order to aid planning in modern cities (Hakim, 1986; Hakim, 2007). Jill Grant has similarly used insights from historical and ancient cities to illuminate issues of modern urban sustainability (Grant, 2004) and grid planning (Grant, 2001). Closest to our own project in theme and goals is a study by Xavier de Souza Briggs that compares Imperial Rome, Medieval Córdoba, and contemporary Los Angeles in the ways that cultural and ethnic are organized in large cities (Briggs, 2004)and Ralph Grillo's (Grillo, 1998) analysis of cities across four time periods with contrastive governmental and economic institutions.

The research described in this paper derives from a multi-year project titled "Urban Organization Through the Ages: Neighborhoods, Open Spaces, and Urban Life." The project began in fall 2008 and is funded through 2012 from the President's Strategic Fund at Arizona State University. It is one of a series of related transdisciplinary projects based in the recently created School of Human Evolution and Social Change; these projects are linked together under the heading "Late Lessons from Early History." Authors Boone, Cowgill, Harlan, Smith, Stark, and York, all faculty in the School, are the co-principal investigators of the project; and authors Novic and Stanley are graduate student participants.

At this stage in the project, we are refining our research questions and methods, but the project participants are fundamentally interested in the form and formation of neighborhoods and open spaces. This paper focuses on the first theme of neighborhoods. We spent the academic year 2008-2009 reviewing several bodies of literature on ancient, historical, and modern cities,

and one topic that surfaces repeatedly, in both theoretical and empirical works, is that of residential clustering. Related to our first theme concerning neighborhood form and formation, this paper examines residential clustering through the ages. We begin by describing briefly our methodological approach, then introduce three propositions regarding the existence, type and degree of clustering and its causes, using examples from different time periods and regions. We conclude with thoughts about the future of comparative urbanism and our ongoing project.

METHODOLOGICAL HURDLES

The challenge to a transdisciplinary effort to understand neighborhood configuration and social heterogeneity is twofold. First, the training in theory and methods differs greatly among the social sciences. Four of the authors (Cowgill, Novic, Smith and Stark) are archaeologists, whose training focuses on interpretation of material objects and physical configurations of objects at sites and within regions. Archaeologists use the built environment and other material remains to make inferences about social conditions and processes in ancient societies. In contrast, most social scientists use information from living human groups to analyze society and more directly assess the physical world. Boone and Stanley are human geographers, Harlan is a sociologist, and York a political scientist. In order to overcome the obstacles of disciplinary training and thinking we must work on a common language, as well as explore the concepts in each other's fields. Transdisciplinary research that transcends the boundaries of disciplines, bodies of theory, and types of data is always difficult, but the potential rewards are great. As noted by John Polimeni, transdisciplinary research is necessary because "many, if not all, of the traditional approaches, as well as many heterodox tactics, fail to answer the most pressing issues plaguing the world" (Polimeni, 2006: 2). Similarly, Immanuel Wallerstein has suggested that the

traditional boundaries of modern social science disciplines are artificial constructs that get in the way of understanding the social world (Wallerstein, 2003).

Second, the types of data are quite different in archaeology and other social sciences. The common data and language of spatial analysis is one means by which we can connect the diverse data and literature, and consequently much of our analysis will focus on the urban built environment. Describing, analyzing, and interpreting the spatial arrangement of urban environments is a common goal of all of the disciplines represented on this team.

Approach to Comparative Analysis

Our project is explicitly comparative in nature, but we have yet to resolve a number of serious issues that face rigorous comparative analysis in the historical and social sciences. There is considerable variation in approaches to comparison among (and within) scholarly disciplines (Ember & Ember, 2001; Gingrich & Fox, 2002; Grew; Mahoney & Rueschemeyer, 2003; Ragin; Ward, 2008). This variation is often discussed in terms of a contrast or continuum between what can be called systematic and intensive comparative methods. The most systematic approach would be a large-n random sampling strategy, which in practice is an extremely difficult and costly enterprise, while the most intensive comparison is a two-case study.

Within the social sciences *large-n samples*, sometimes known as a large-n comparative study, use many cases drawn from meta-analysis of existing literature, surveys, or archival work and allow researchers to draw statistical inferences. There are at least two well-developed bodies of research relevant to our project, but neither bridges the gap between preindustrial and modern cities. Large-n studies in sociology and political science (Mahoney & Rueschemeyer, 2003; Ragin) include some work on contemporary urban issues. The most relevant model would be the cross-cultural analyses carried out by Richard Blanton on collective action in pre-modern states

(Blanton & Fargher, 2008). We are currently in the process of building a database from a metaanalysis of case studies from existing literature. This database will allow investigation of emergent processes over time going beyond simpler comparisons of types and forms of social organization.

The strategy of *typological comparisons* permits consideration of a larger and broader sample of cases. Cities (or other phenomena) are divided into types, and the problem of interest is analyzed separately for each type. A good example is Ralph Grillo's (2000) study of "plural cities," which uses urban types as representatives of four epochs defined on the basis of history and political economy: Preindustrial-Patrimonal Cities, Colonial Cities, Modern-Industrial Cities, and Neoliberal-Postmodern Cities. Grillo identifies characteristic patterns in the politicaleconomic role and significance of ethnicity and multi-ethnic populations in each of his types. In Preindustrial-Patrimonial Cities, Grillo (2000:959) concludes that, "Rulers were concerned less with the ethnicity of subordinate minority populations than with their ability to render tribute, taxes and labour. Difference was handled predominantly through accommodative incorporation, for example, through the co-option of elites, or separation into distinct settlement as in the ghetto." In Colonial cities, the economic and political order "was grounded in the differentiation of the population in terms of supposed 'racial' distinctions (p.967)." In Modern-industrial cities, authorities are "keenly interested in the form and content of social relations and identities, and sought homogeneity through assimilation, or, where certain groups (specifically 'races') were thought inassimilable, through exclusion (p.____)," and now multiculturalism is embraced in Neoliberal postmodern global cities.

In this paper, we use a combination of *informal* and *exemplary comparison*. Informal comparison uses a sample of cities, but with a lower level of standardization or statistical control

than in Blanton's approach. The exemplary approach uses carefully selected examples to illuminate key variables and processes. Xavier de Souza Briggs's (Briggs, 2004) study of ethnic diversity in imperial Rome, medieval Córdoba, and contemporary Los Angeles is an *exemplary comparison* (Briggs calls his cases "revelatory cases"). In this intensive approach to comparison, the analysis of a few carefully selected examples can illuminate key variables and processes that have broader application. Such studies are particularly valuable early in the trajectory of research on a problem, and our project benefits from the insights of Briggs's and other exemplary studies. Nevertheless, we prefer to address a much larger sample of cities from a wider range of temporal and regional settings. We selected a small-n sample that includes cities from different time periods and locations. For this initial study we used the principles of exemplary comparison to focus on cities with existing, rich data about neighborhood clustering. We also incorporated a number of archaeological cases. Because our research project is still in its initial stages, we have yet to settle on the forms of comparison we will employ in our planned analyses of a large number of cases and phenomena.

SOCIAL CLUSTERING

Since the early twentieth century, social clustering has been an issue of heated academic and social commentary within urban scholarship. The oft-referenced Chicago School of Sociology first highlighted the topic by presenting a human ecology model hypothesizing that American ethnic groups and neighborhoods proceed through a series of cultural stages, from concentration to assimilation (Park, 1926). Subsequent researchers, both supportive and critical of this approach, focused on the existence of clustering and measurements issues (i.e., Duncan & Duncan, 1955; Goldsmith & Stockwell, 1969; Hawley & Duncan, 1957), the impact of clustering on populations (e.g., Marschall & Stolle, 2004) the causes of clustering (e.g., Bruch & Mare, 2006), and finally policy prescriptions (e.g., Nelson, Sanchez, & Dawkins, 2004). Other authors have focused on theoretical issues related to clustering; one influential justice theory, for example, endorses a vision of "city life" in which "group differentiation is both an inevitable and a desirable aspect of modern social processes" (Young, 1990: 47). In this view, spatial clustering at the neighborhood level is legally encouraged to avoid the injustices of assimilation to a dominant culture, while heterogeneous mixing occurs at larger spatial scales through the proximity of different groups. Most of the scholarship in this vein, however, has focused exclusively on American, and sometimes European, cities (van Kempen & sule Ozuekren, 1998), especially when considering the underlying social processes.

There is great concern about creation and maintenance of heterogeneous neighborhoods (Fainstein, 2005) despite the fact that homogeneity appears to be a more consistently observed pattern in a variety of modern day cities (Putnam, 2007; Rapoport, 1980/81)and can be theoretically supported under certain perspectives (Young, 1990). Some planners seek to increase interaction among different groups within a city (Talen, 2006), and heterogeneous residential places are seen as one means to maximize interaction (Sarkissian, 1976), reduce the ignorance of cloistered groups and perhaps increase cohesion or "social capital". In fact, in the Charter of the New Urbanism – a prescriptive document produced by a coalition of planners and architects concerned with promoting walkable urban environments – Principle 13 specifically endorses the planning of diverse neighborhoods that "bring people of diverse ages, races, and incomes into daily interaction" (Congress for the New Urbanism, 1996). One of the goals of our project is to document the extent of social clustering and inter-group mixing within and between regions and time periods, in part to assess the feasibility of truly heterogeneous places.

history, and efforts to either ratify or change this social paradigm would be better equipped with a comprehensive look at urban social history throughout time.

In our project's preliminary attempt to understand clustering, we focus in this paper on class and ethnicity, two of the most richly studied types of clustering, although at times we remark on occupational clustering. In our broader project we are also considering residential clustering based on other demographic variables such as occupations, religion affiliation and age. We recognize that these categories are complex and not mutually exclusive. In some societies, for example within India, there is a complex social hierarchy in which aspects of class and ethnicity are bound up with religion, occupation, and educational level. We believe that pursuing an understanding of clustering through the ages is a valid endeavor, even with these daunting challenges both in methodology and research design. We explore three propositions regarding clustering as an observed social phenomenon:

Proposition 1. Social clustering is a common but not universal phenomenon in cities throughout the ages

Proposition 2. Social clustering is variable in space and time, both within and among regions and urban traditions.

Proposition 3. Social clustering is typically generated, maintained, and broken down by both top-down and bottom-up processes.

With each proposition, we provide evidence from empirical cases, exploring the theoretical underpinnings, drivers, and relevance for our future comparative work.

Proposition 1. Social clustering is a common but not universal phenomenon in cities throughout the ages

Clustering is one aspect of social organization that has been observed throughout time in diverse places. Our topic is not new – from Plato, to the Chicago School, to modern day municipal planning departments, many throughout history have noticed that residential clustering can have significant social, cultural and economic ramifications for cities. Ethnic clustering is a common feature of some societies, but it is certainly not a universal feature of cities (Greenshields, 1980), even cities with great ethnic diversity - as Briggs (2004) has noted, enclaves and clustering were not a dominant feature in diverse ancient Rome. In contrast, within American cities, racial clustering has been described as hyper-segregation (Massey & Denton, 1993). Ethnic clustering is sometimes imposed, as in the cases of apartheid, racially restrictive covenants, and municipal decrees forcing particular racial and ethnic groups into physically demarcated spaces or prohibiting certain types of integration. In recent decades, concern regarding ethnic clustering has mostly focused on the lack of access to jobs, education, and other public services in minority communities, as well as larger processes of ghetto formation and urban decline. This concern has generally been centered on issues of inequity despite an undercurrent of literature describing how ethnic enclaves can offer important opportunities for mutual benefit. For example, Jacobs (1961) aptly described how Sicilian immigrants in the North End of Boston were able to develop informal loan and work relationships within the neighborhood. Likewise van Kempen and Özüekren (1998), argue that some ethnic groups may be unable to find labor and capital for entrepreneurial opportunities in heterogeneous neighborhoods, but are better able to access these resources among co-ethnics. This type of support for ethnic enclaves has been repeatedly echoed in literature addressing the concept of social capital, as many researchers have found that clustered groups are both empowered and constrained by tightly bonding in-community relationships (Halpern, 2005).

Class clustering has been a feature of cities through the ages as advantaged or privileged groups seek to escape the masses (van Kempen & sule Ozuekren, 1998). In some cities this takes the form of walled enclaves ("citadels") of wealthy or elite families, and in other cases it is the lower classes who are more strongly spatially clustered. We comment on three case studies that illustrate diverse forms of clustering pertinent to Proposition 1.

Teotihuacan

Teotihuacan was a large metropolis of 100,000 residents that flourished in central Mexico between A.D. 1 and 650. Among the prehispanic cities of Mesoamerica, Teotihuacan stands out for its large size, its pervasive orthogonal planning, and the intensity of archaeological fieldwork at the site (Cowgill, 2008). Several discrete neighborhoods of foreigners have been identified, suggesting that ethnic groups were strongly clustered at Teotihuacan. On the western edge of the city, the "Oaxaca barrio" is a neighborhood-sized locale. A small proportion of the pottery vessels used by its occupants were in a style derived from the Zapotec-speaking Valley of Oaxaca, nearly 400 km away. They buried some of their dead in Zapotec style tombs, and most scholars believe that they were an enclave of Zapotec speakers, perhaps part of a broader Zapotec commercial diaspora network (Spence, 2005). New methods in the analysis of human bone and tooth chemistry have identified some of the residents of this zone as foreigners, but they do not match samples from the Zapotec capital of Monte Albán (Spence, White, Rattray, & Longstaffe, 2005). Another enclave with concentrations of imported ceramics and unusual architectural forms is the so-called "Merchants' barrio," a likely enclave of merchants from the lowland Gulf Coast and perhaps the distant Maya area. In sum, several discrete ethnic enclaves existed at Teotihuacan, whose residents maintained the customs of foreign areas. In at least one

case they also maintained commercial contacts with foreign areas, apparently over a period of several centuries.

Algiers

Halfway across the globe, many residential areas in North African cities share a style of physical and social layout strongly influenced by rural, migratory tribal cultures and the dictates of Islamic law. Neighborhoods, consisting of compounds centered on gated, dead-end alleys, were frequently dominated by specific ethnic groups originating in distinct rural areas of the Middle East (Bianca, 2000). Algeria, Algiers provides a well-documented example of this sort of Arab-Islamic ethnic clustering. In the 16th century, Algiers contained over 50 separate neighborhoods and a number of diverse ethnic groups clustered in individual neighborhoods, such as Andalusians, Moors, Kabyles, Jews, Saharans, and Europeans (Celik, 1997). At the eve of French colonialism in the 1820s, clustering was especially prominent, perhaps in part because Islamic law forged "a coherent whole where space, functioning, law, and demography and social divisions corresponded with each other" (Miege, 1985: 173). European colonialism drastically affected the social makeup of Algiers, however, as the French government razed neighborhoods and built a new European style urban district that soon became home to French, Italian, Spanish and Maltese immigrants (Celik, 1997). An acceleration of rural-to-urban migration transformed Algiers into "essentially a Berber-European city" by the twentieth century (Miege 1985: 176). Nevertheless, both colonial planning practices and traditional tribal clustering worked to reinforce historical trends towards ethnic segmentation (Celik 1997).

Nairobi

In the twentieth century, it appears that class-based stratification is a common phenomenon on every continent, especially in cities with high rates of economic growth and

rural-to-urban migration. Shanty towns and inner-city slums have grown and densified in many places as economic globalization has generated working-class and lower-class employment opportunities (Martine, 2008). Nairobi, Kenya is chosen here simply as an example of this trend. In Nairobi, continued urban migration since World War II has led to the growth of large, sprawling squatter settlements on the fringes of the city which differ in historical origin and physical layout from the older residential areas (Nevanlinna, 1996). These settlements have been considered some of the densest settlements in sub-Saharan Africa (United Nations Centre for Human Settlements HABITAT, 1982). While areas such as the famous Mathare Valley settlement are notorious for their extremely impoverished conditions, some authors note that class-based solidarities prompted by shared experience have led to healthy mutual support networks (Lloyd, 1979). Either way, it is clear that residents of these types of slums and settlements around the world are separated from wealthier city dwellers in physical, social and class-based ways.

Proposition 2. Social clustering is variable in space and time, both within and among regions and urban traditions.

One of the things that has become very clear in our literature reviews is that social clustering varies greatly through time and space. Within a given city, some social attributes such as wealth may be strongly clustered while others such as ethnicity, are more spatially dispersed. Cities within a single region and cultural tradition may differ widely in the nature and extent of social clustering. Spatial and social patterns of clustering within a city, or within an urban tradition, may change radically over time. We think it is risky to speak of "typical" patterns until more rigorous comparative analyses are carried out. We expect that our project will shed light on

such stereotypes such as the high clustering of ethnicity in Islamic cities, or the concentrations of crafts in quarters in Medieval European cities, or the universality of ghettos and enclaves in modern cities. We present here several case studies that illustrate some of the temporal and spatial variation in urban social clustering, and the ways in which the contingency of history can produce unique mixtures of social groups.

Mesopotamian Cities in the Old Babylonian Period

There are still insufficient data to evaluate social clustering in the very earliest cities to develop: Uruk in southern Mesopotamia and Tell Brak in northern Mesopotamia (ca. 4,000-3,000 BC). The presence of spatial clusters of surface artifacts in the outlying areas of the latter site (Ur, Karsgaard, & Oates, 2007) may suggest residential clusters, but it is too soon to identify their social composition. By the Old Babylonian period (2,000 – 1,600 BC), urbanism was firmly established in southern Mesopotamia and numerous cities from this interval have been extensively excavated. Neighborhoods can be identified in both archaeological plans and cuneiform documents, and at cities such as Nippur and Ur neighborhoods were socially heterogeneous. They included wealth aristocratic families alongside commoners, and craft specialists were spread among diverse neighborhoods (Keith, 2003). Yet at least one city—Larsa—does exhibit wealth-based clustering at this time. Archaeologist Yves Calvet excavated a large residential zone comprised solely of large houses (Calvet, 1996). Thus the cities of the Old Babylonian period in Mesopotamia show variation in the nature and extent of social clustering.

Aztec Cities

Central Mexican cities of the Aztec period (AD 1100-1520) also exhibit variation in the nature and extent of social clustering. At some cities (most notably the imperial capital Tenochtitlan and the city-state capital Otumba), craft workers were concentrated in different

neighborhoods, whereas in other city-state capitals (e.g., Huexotla and Yautepec), craft activities were dispersed throughout the city (M. E. Smith, 2008) . Some historical data suggest the possible clustering of some foreigners in separate zones at Tenochtitlan (Calnek, 1976) but in smaller cities with detailed census enumerations foreigners were dispersed throughout urban neighborhoods, none of which exhibited clustering by class, occupation, or place of origin (Friedman, 2009). This variation in social clustering at Aztec cities does not map neatly onto obvious dimensions such as the imperial capital versus city-state centers, and neither does it follow patterns of regional variation in Aztec society. There is certainly no typical Aztec pattern of urban social clustering, and these distribution patterns have yet to be explained.

Early Colonial Sydney

The challenge of categorizing and assessing clustering can best be illustrated by a particularly complicated example. Colonial Sydney in the early 19th century provides an interesting case, in that neighborhoods exhibited multiple types of clustering closely intertwined with the physical, cultural, and historical evolution of the city. Davison (Davison, 2006) notes that Australia's history of both convict and free settlers led to an urban geography divided by peculiar definitions of class. Lower-class, socially stigmatized convicts tended to settle in the west-side "Rocks" neighborhood while more wealthy free settlers dwelled in the nicer downtown district to the east. The small, walkable scale of the city, combined with a physical layout of narrow, crooked and densely populated streets, directly led to a large degree of social interaction, and social tension, between free settlers and ex-convicts in street and private space. This conflict was heightened by the fact that many convicts traveled to work as servants within free households and mixed daily with upper classes. In addition, the city was equally clustered in terms of occupation, since many working class residents worked and lived near the docks.

Perhaps the most striking type of clustering in Sydney was that influenced by both the "moral" lines of convictism and the economic status of individuals, since often emancipated ex-convicts became successful and wealthy businessmen but were still excluded from free settler neighborhoods. Thus multiple, overlapping clustering patterns occurred in early colonial Sydney, creating a difficult task for social scientists seeking to understand the underlying micro and macro social processes.

Kingston

The history of Kingston, Jamaica provides an interesting contrast with the Sydney example since each city was part of a British colony in a similar time period, yet emerged with different patterns of clustering. Unlike Sydney's preoccupation with convictism, Kingston's patterns were fully shaped by colonial definitions of race and social class. Clarke (Clarke, 1985) notes that in the 18th century, whites, free coloreds (mixed white and black), and black slaves mixed together in downtown Kingston, and the degree to which one's skin was white became a marker of social status. While some clustering based on race began to occur in this period runaway slaves and free blacks living in huts on the city's periphery, and Jewish families grouping together on the west side – there was a large degree of social mixing since white mansions, the "Negro market", and a mixed race neighborhood all lay in close to downtown. After slave emancipation in 1834, the trend towards racial and class clustering accelerated as wealthy whites moved en masse to suburban districts, now seeking status in their place of residence instead of through skin color, while blacks and coloreds concentrated more in downtown districts and in peripheral slums. By the twentieth century, immigrant groups like Chinese, Syrian, and South Asian Hindu had also established small commercial and residential

enclaves in the city, enhancing the ethnic complexity and ethnic cleavage that increasingly characterized Kingston after the 18th century.

English Cities

English cities provide textured examples of class-based clustering, with evidence both before and after the Industrial Revolution. Although many cities displayed evidence of class mixing in the pre-modern era, by the 17th century some districts – such as London's northern and eastern areas – had become "more uniformly poor" (Harding, 2004: 446). Class-based population concentrations resulted from the rapid economic and spatial growth of London in the sixteenth and seventeenth centuries, due to high rates of urban migration to these newly settled neighborhoods (Harding, 2002). In the Industrial Era, such patterns of stratification were augmented by further economic growth. For example, as the population of Birmingham exploded from 35,000 in 1780 to 260,000 in 1850, functional separation of workplace and residence, as well as rich from poor, grew in tandem (Davidoff & Hall, 1983). By the late nineteenth century, there were very distinct working-class neighborhoods in the city, and class-based cultures largely grew from shared experience in neighborhood public spaces (Daunton, 1983). Interaction within tenement courtyards and public parks helped reinforce social "difference" in the eyes of rich and poor alike (Bramwell, 1991). Today, modern English cities as well as many others in the developed world continue to maintain neighborhoods based on wealth and social status.

Proposition 3. Social clustering is typically generated, maintained, and broken down by both top-down and bottom-up processes.

Arguments about top-down versus bottom-up drivers are common within the social sciences. Peach (2003) has described several archetypes of clustering present within the American and Canadian urban experience, which reflect both top-down and bottom-up pressures.

Knox (1994) argues that clustering is a function of degree of social interaction and residential propinquity, which are driven in part by degree of social distance. Social distance relate to one group's attitudes and perceptions of another, and the willingness to interact with others in relationships varying from marriage to friends, neighbors, fellow citizens, and visitors. Class, race, age, ethnicity, and lifestyle are important contributors to social distance. Residential clusters are also driven by notions of territoriality, defined spaces over which groups attempt to establish control, dominance, and exclusion of others.

The renowned sociologist Gerald Suttles (1968) drew from his experience living in the multi-ethnic districts of Chicago's new west side to suggest that residential clustering persisted for three reasons: 1. To minimize conflict between different groups; 2. To maximize political voice through such functions as block voting; and 3. To establish greater self-control and selfpolicing made possible in homogeneous groups. For ethnic groups, Knox (2000) notes that clustering provides support functions for individuals, especially immigrants, in vulnerable and marginal groups, helps to preserve culture, provides security, and strengthens political representation. In the following section, we briefly lay out the major types of top-down and bottom-up theories and concepts that are relevant to social clustering. We take it as obvious that both kinds of processes are usually at work. The issues concern the relative importance of both kinds of processes in specific cases and the varied ways in which they may interact. We also note that, except in the smallest-scale societies, "top-down" and "bottom-up" are oversimplifications. The actions driving clustering may originate at various intermediate levels, as well as top and bottom. Nevertheless, the bottom-up versus top-down perspectives remain important because the recognition of bottom-up processes highlights the potential roles of poor or disenfranchised

social segments and corrects the tendency to assume that privileged classes always determine social change.

The topic of top-down and bottom-up forces is one where we expect to find major differences between preindustrial and modern urban dynamics, largely because of the great differences between modern nation-states and their ancient forbears. We have yet to make formal comparisons, however, and at this stage of our research we find it most convenient to discuss causal forces for modern and preindustrial cities separately.

At the most macro-level in modern cities, structural processes such as a shift to capitalism or globalization affect residential patterns. Harvey (1989) uses a similar structural argument with a focus on control of property within capitalist societies to understand class clustering. Both Harvey (1989) and Sennett (1990) argue that capitalism has changed the relationships between individuals and their environment, particularly their relationships to real property, which causes class clustering. Globalization is also used to explain clustering by class (Sassen, 1991) caused by loss of industries leading to unemployment and immobility. In contrast, Florida (2005) has argued that globalization has altered preferences in Western cities creating demand for artistic, creative outlets and value in some types of diversity within the local environment, which may reduce some types of clustering. Within the urban affairs literature, the most visible structural arguments focus on capitalism versus pre-capitalist society, which has lead us to wonder about the relationship of larger structures in historic and ancient contexts. We seek to understand how patterns and relationships are generalizable to other times and place, as the twentieth and twenty-first centuries literature has focused primarily on industrial and postindustrial contexts.

The nation-state or state polity also creates institutions that may lead to residential clustering at the neighborhood level. In the modern European context, state policies regarding assimilation (France) versus multi-cultural or pluralist approach (Netherlands) influence ethnic settlement patterns (Musterd, 2005). In the American context, Supreme Court cases were extremely important in opening the housing market to blacks, yet persistent discrimination by the public and private sector in loans and insurance reduced the ability of minorities to purchase homes in white neighborhoods (Gotham, 2002). Welfare policies, such as housing and employment, also affect opportunities for different racial and ethnic groups. In mid-twentieth century America, urban renewal efforts supported by federal governments further fueled clustering (Anderson, 1964). Education policy may increase or decrease the opportunities for lower class households to access employment and in turn reduce mobility. More explicit state policies about citizenship and rights also affect class and ethnic clustering. Finally, state economic policies may influence occupational clustering.

Cities commonly restrict land uses through institutions such as zoning in the modern era, but also though ownership of land in other periods. Decisions about building, transportation, demolition, and renewal often occur at the city level. In the western context, notorious institutions such as racial zoning lead to neighborhood clustering. Euclidian zoning based on the separation of single-family homes, multi-family residential, commercial and industrial led to separation of use, which can lead to social segregation (Young, 1990). Within the American context, growth politics often leads to development oriented policies (Peterson, 1981), which may fuel clustering. City government policy and institutions are important contributors to clustering at a neighborhood level.

For preindustrial urban systems, Carol Smith (1976) discusses relationships between the spatial distribution of elites and the nature of regional exchange systems. Where exchange is administered by the state, elites tend to live in urban contexts, while in commercialized exchange systems elites are distributed more widely across regions, in both rural and urban settings (see Smith 2004 on distinctions between commercialized and state-controlled ancient economies). Although she does not address the degree of elite clustering within cities, we believe her models can be adapted to our purposes. It appears that macro factors, such as economic structure and control of markets, are causing much of the class clustering observed in our cases. The patterns of class-based clustering differ dramatically; in the Kingston example above, the wealthy migrated out of the city, in China poor people are often forced out of central city properties, and in Nairobi the process is driven by in-migration of rural poor to the outskirts of cities. Major structural shifts, such as the Chinese reforms, globalization, and industrialization affect class clustering. Neighborhoods themselves also appear to create emergent class-based clustering, which becomes stabilized through norms of social interaction, as in the case of many European cities.

The neighborhood itself may abet clustering by ethnicity, occupation, or class. Empirical work has demonstrated that neighborhoods "self-regulate" leading to stable indicators such as fairly constant crime rates (Galster, Cutsinger, & Lim, 2007). This process of stabilization might occur through formal or informal governance arrangements. For instance, neighborhoods may self-govern, providing public goods leading to Tiebout-like sorting where individuals move to neighborhoods providing preferred amenities within a resource constraint. Likewise, we would expect norm creation within neighborhoods that leads to clustering by ethnicity, occupation, or class. Religious, trade, and social organizations may be created at the neighborhood level, which

would help maintain neighborhood clustering. For instance, neighborhoods were the typical unit of racially restrictive covenant creation in the United States in the early twentieth century (Plotkin, 1999). The neighborhood itself may foster social clustering processes via norms, provision of public goods, or regulations.

Bottom-up theory for modern cities has focused on individual choice and preference, i.e., selection of neighborhoods with a majority of residents with similar characteristics. Schelling's (1963) argument about individual preference for people with similar characteristics caused quite a stir in some circles during the 1970s with a computer simulation exploring how simple threshold rules, preference for a majority of similar neighbors, caused neighborhoods to hypersegregate. More recently, Bruch and Mare (2006) demonstrate that smoothing the preference functions of individual agents leads to less segregation, yet patterns of segregation still persist. Both of these studies were based on empirical work indicating that both black and white Americans preferred to be in neighborhoods with more blacks and whites respectively, although the stated thresholds varied by race (Bruch & Mare, 2006). Economists use arguments based on individual choice to explain the "white flight" during the 1950s and 1960s (Gotham, 2002). Individual choice explanations illustrate how individuals can cause emergence of macro-social processes at the neighborhood level. Nijman (2010) has argued that slums might be seen as evidence of some individual choice, arguing that slum-dwellers enter voluntarily into these settlements, yet it is clear that numerous state and city institutions affect residential land markets sometimes inflating land prices and reducing market access for poor residents.

For preindustrial and modern cities in third-world contexts, rural-to-urban migration is probably the most important bottom-up force in creating social clustering, although at times forced resettlement and flight from state governments were also an important factor. Mid-

twentieth century urban ethnographers identified numerous cases in which immigrants from individual rural areas settled in distinct urban neighborhoods. The resultant clustering by place of origin often translated into ethnic and social-class homogeneity, and the spatial patterns were perpetuated by continued interaction of new urbanites with their villages and regions of origin (Mangin, 1970). T.H. Greenshields discusses this situation for historical and recent Near Eastern cities, concluding that the major process creating and maintaining social clustering is that of chain migration - the help given by established migrants in finding homes for immigrant relatives and friends near their own dwellings, and the use of ethnic solidarity as a form of migrant adaptation to urban life (Greenshields, 1980: 133). Many other authors have observed this same process of chain migration in a variety of cities and times. Grillo (1998) also suggests that ethnic clustering in preindustrial cities arises from bottom-up forces internal to specific groups and settings. We will use two particularly striking examples, Indian cities and modern Chinese cities, to illustrate the complex set of bottom-up, intermediate, and top-down processes that contribute to social clustering.

Indian Cities

Patterns of clustering in India are complex – not only because religion, caste, occupation, and place of origin combine to form very specific cultural identities – but also because Indian cities were subjected to top-down foreign control for almost five centuries. In Indian cities that pre-date mercantile colonialism, like Delhi, ethnic and caste-based clustering emerged before and during British Imperialism, independently of colonial policies enforcing spatial segregation (King, 1976). In nascent 18th century Calcutta, segregation was apparent from the earliest days of colonial influence, not only mandated between white colonial and indigenous, but within the "native" area as well based on ethnicity, caste, and occupation (Marshall, 1985). Bombay in the

19th century was a fast growing colonial port city home to a "multicolored mosaic" of ethnic- and caste-based neighborhoods stretching north from the European sector downtown, including clustered populations of Parsis, Gujaratis, Jews, Jains, Brahmins, and Muslim Arabs that formed relatively "naturally" (Kooiman, 1985). While many non-European neighborhoods were densely populated, thus fostering some degree of contact between different groups, the colonial population was more socially and physically separate (Marshall, 1985). The balance between top-down and bottom-up forces swung toward greater clustering in the twentieth century construction of New Delhi, Britain's new colonial capital, where segregation between white and Indian, as well as between different, officially designated social classes within the colonizing society, was explicitly built into the urban planning and residential layout of the city (King, 1976).

Modern Chinese Cities

Modern Chinese cities provide an interesting case because the long history of top-down social control in the country has produced patterns of clustering quite distinct from more liberal societies. In the socialist era of the mid twentieth century, standardized housing based around state work-units (*danwei*) explicitly prohibited significant class-based differences in residential space, and clustering was based more on occupation than class or ethnicity (Ma & Wu, 2005). Following the demise of full state socialism and concurrent market reforms instituted by the Chinese government since the late 1970s, class-based stratification has emerged. The government has increasingly focused upon the intense redevelopment of urban areas to stimulate economic growth, and many older and poorer residents have been evicted and relocated to accommodate new office, commercial, and residential projects (Shin, 2007). Very often, previous residents are forced to move to cheaper neighborhoods on the outskirts of Shanghai, Beijing, and other Chinese cities. Combined with the massive amounts of rural to urban migration generated by post-reform industrialization policies, new class-based populations are quickly growing in these fringe neighborhoods (He & Wu, 2007). Often such neighborhoods expand out and engulf old agricultural villages, and these "villages in the city" quickly became "quasi-slum" areas in which the built infrastructure is ill-equipped to house a dense urban population (Zhang, 2005). These clusters clearly reflect a mix of both top-down and bottom-up forces because, although rural migration is an informally permitted freedom in recent years, migrants are spatially confined to fringe cities due to the urban residency restrictions mandated by the government's *hukou* citizenship laws.

CONCLUSION

The exemplary cases described above represent a small sample of the very large set of spatial configurations that ethnic and class-based residential clustering has taken over the ages. Our continuing research will involve the examination of many additional cases within an explicitly comparative framework. At this point we limit ourselves to pointing out a few of the dynamics that may be responsible for the variation in our sample. The most basic (and unremarkable) finding of our research so far is that there is no single driver of social clustering according to ethnicity or class. The variation in these parameters extends quite deeply into whatever context we examine. To start with, there is no single preindustrial pattern of urban spatial or social dynamics. Many nineteenth and twentieth century social theorists wrote as if there was a basic (even primordial) premodern social pattern that was then destroyed in the processes of the industrial revolution and modernization (Nisbet). Although this notion was thoroughly shredded by a century of anthropological fieldwork (Goody, 2006), social scientists who rarely think about ancient and nonwestern societies may need to be reminded about the

extent of social variation that exists outside of modern western society. Just as there are many types of non-capitalist economies and polities, so too are there many types of preindustrial cities with much variation in the extent of ethnic, social class, and other kinds of clustering. The breadth of our project is fairly daunting; we recognize that many social scientists will not see the value in comparisons across time and regions because of the individual historical and unique qualities of all cities. We suggest that even these specialists may find value in "theorizing backward" (van der Leeuw, 2004; Ward, 2008) whereby generalization of social organization can be used to more thoroughly understand the individual urban experience.

One of the potential advantages of the broad comparative approach we advocate lies in the ability to sort commonly accepted concepts and explanations into those that have broad applicability (across time and space) and those whose usefulness is confined to the modern world. For example, Peter Marcuse has described a classification of forms of urban social clustering that distinguishes ghettos (involuntary clustering of subordinated groups that are discriminated against), enclaves (voluntary clustering by ethnicity, nationality, or culture), and exclusionary enclaves (voluntary clustering by wealthy or powerful groups) (Marcuse, 1997; Marcuse, 2001). More recently, Marcuse has extended his typology into the past (Marcuse, 2002), arguing that social clustering ("social divisions" or "partitions" in Marcuse's terms) has considerable historical depth, and that the state is always heavily involved in the creation and maintenance of such clusters or divisions (Marcuse, 2001). In the words of Ronald van Kempen, "Cities are not 'naturally' divided: they are actively partitioned. There are those that do the portioning and those that are subject to it" (Van Kempen, 2002).

To us, however, the historical situation seems more complex than described by Marcuse or van Kempen, and it is likely that the explanation of past social clustering will be more

complicated than they suggests. To mention just one example, modern slums do not fit well within Marcuse's typology. In a study of the Dharavi slum in Mumbai, geographer Jan Nijman shows that the social and spatial structure is far too complex to be accommodated by Marcuse's concepts (Nijman, 2010). For example, individual spatial communities (neighborhoods) within Dharavi are often exclusionary enclaves, but their residents are far from the wealthy and powerful inhabitants of gated enclaves in western cities. Nijman's purpose is less to critique Marcuse's models than to "show that some key notions in the Anglo-Saxon literature on urban studies do not apply to the context of India's urban slums" (Nijman 2010:note 6). We would go even further and suggest that many current concepts in urban studies may not apply well to preindustrial, ancient or nonwestern cities. Our exemplary cases show how important bottom up processes can be, as opposed to the powerful-powerless dichotomy that Van Kempen (2002) proposes. In a parallel fashion, ethnic studies reveal a key role for self-ascription as well as treatment by others that creates a mutual dynamic, not a one-sided one (Stark & Chance, 2008). Although some modern generalizations may not hold up well comparatively, it is likely that other modern urban concepts will be very relevant and useful for understanding a broad range of cities. One of the goals of our project is to try to sort out some of these issues.

We have laid out three propositions that will direct our future research using a large-n sample. As our diverse exemplary cases illustrate, clustering has been observed in many nonwestern, historic, and ancient urban environments. The type and degree shifts over time with changing top-down and bottom-up drivers. This variation clearly exists within historical and cultural settings. The Mesopotamian and Aztec cases show some of this complexity as identified from archaeological and historical records for these ancient urban traditions. Our case studies (including others not described here) suggest strongly that characteristic Islamic, Mesopotamian

Aztec, African or Medieval patterns of urban clustering simply do not exist. We must examine social processes on a much finer scale to understand patterns of urban social clustering and its significance. Likewise, we find preliminary support for Peach's (2003) concern about deterministic ideas about assimilation, which we would extend beyond the American urban experience. There is simply no single trajectory with movement of a particular group from clustering to assimilation or integration.

We face a daunting challenge in exploration of neighborhoods across time in space. This paper sets the stage for testing our hypotheses about the multiple causes of clustering. In upcoming work, we will use a much larger set of cases, extend coverage to other neighborhood social dynamics, and integrate these issues with a comparative analysis of urban open spaces. To summarize, we have found evidence of clustering along ethnic and class lines in numerous western and non-western cities throughout the ages. Among our small-n sample the types of clustering were affected by numerous micro and macro conditions, none of which explained all the clustering observed. We advocate use of multiple perspectives on the causes of clustering in future research. Group differentiation is common, maybe even universal, yet we argue that its manifestation and causes are complex and multi-faceted.

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