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The landscape of gentrification: exploring the diversity of “upgrading” processes in Hong Kong, 1986–2006

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In the late twentieth century, Hong Kong experienced a transformation from an industrial to a specialized services and high-tech economy. Accompanying this shift, extensive local redevelopment has fundamentally altered the physical and social characteristics of the city. This analysis explores the physical and social transformation of Hong Kong from 1986 to 2006, examining the diversity of gentrification processes. The specific questions focus on: (1) How extensive are gentrification processes operating within Hong Kong? and (2) What is the role of new-builds in facilitating displacement? Principal component analysis and K-means clustering are used to identify areas within Hong Kong that are experiencing physical and social upgrading. From the quantitative analysis, three neighborhoods—Kennedy Town, Tiu Keng Leng, and Yuen Long—are selected for a qualitative study into the complexity and the diversity of capital reinvestment, social conflict, and displacement.

Keywords: displacement; gentrification; Hong Kong

Introduction

Gentrification is restructuring the geography of cities all over the world (Clark, 2005; Lees, 2000). The topic of gentrification has received increasing attention in academic and popular media globally; however, gentrification research continues to mainly focus on North American and European cities. In particular in the context of rapid (re)development processes, there has been considerable recent interest in exploring gentrification more systematically in an Asian context, and China in particular (Lees, 2012; Ley & Teo, 2013). The literature on redevelopment in China has been extensive but has typically neglected analysis into social conflict and displacement, a fundamental component of gentrification (Cheng, 2012; Yang & Chang, 2007; Zhu, 2002).

This has been effectively documented by the work of Ley and Teo (2013, p. 14), who note that “in Hong Kong the term ‘gentrification’ is rarely used to organize knowledge about neighborhood change, either in the academic literature or in public culture as revealed through media analysis and supported by local expert opinion.” The interest in redevelopment in Hong Kong has generally focused on reinvestment in the built environment and not the social impacts, including displacement. Upgrading processes in China are rapid, and yet still insufficient attention is given to the displacement of populations that have traditionally occupied older neighborhoods in Chinese cities, including Hong Kong.

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A number of issues will be examined in this article. One of the criticisms of gentrification research has been focused on what is assumed by some to be a limited urban redevelopment process. Some view gentrification as being highly localized to a few specific areas of the urban core, and within the context of broader (re)development processes within cities, the impacts are considered trivial (Berry, 1985; Bourne, 1993). Brian Berry’s (1985) notion of “islands of renewal in seas of decay” effectively captures this argument criticizing the significance of gentrification in urban development. Another line of criticisms of gentrification research has focused on the degree of displacement that actually takes place after redevelopment. Researchers such as Freeman, Braconi, and Vigdor have argued that there is little evidence of widespread displacement associated with gentrification (Freeman, 2005; Freeman & Braconi, 2004; Vigdor, Massey, & Rivlin, 2002).

An added recent debate has been focused on new-build redevelopment and whether it should be viewed as a form of gentrification (Boddy, 2007; Butler, 2007; Davidson & Lees, 2010). The particular interest here on new-builds is related to the shorter lifecycle of Hong Kong buildings and the extensive role of new-builds as a dominant redevelopment typology in Hong Kong. Within this context, we focus on exploring how extensive gentrification processes are within Hong Kong, the role of new-builds in facilitating displacement, and the degree of displacement that Hong Kong has experienced from gentrification.

Reflecting on the recent debates and existing research gaps, this study focuses on an analysis of Hong Kong, based on rarely compiled citywide, fine-scale census data covering two decades (1986–2006). Only a handful of studies have explored gentrification across a whole city, and none in an Asian context (Hedin, Clark, Lundholm, & Malmberg, 2012). It should be recognized that with Hong Kong’s unification with China in 1997 this study covers a period of the city’s history under both British and Chinese sovereignty. While this article will explore gentrification in a Chinese context—or at least within Hong Kong’s unique “one country two systems” status—it will focus on redevelopment processes and socioeconomic pressures common to global cities.

As a global city, Hong Kong’s rapid economic restructuring makes it an ideal case for the analysis of gentrification. In the late twentieth century, Hong Kong experienced a transformation from an industrial-based economy to a specialized services and high-tech economy. Accompanying this shift, there has been a notable drive for urban redevelopment that has fundamentally altered the physical and social characteristics of Hong Kong’s neighborhoods. As the industrial and working-class areas of the city are torn down and replaced by dwellings for those associated with the growing service economy, a class transformation is evident across Hong Kong, and it is seen with changes in household incomes, occupations, and education levels.

Following the literature review, the article will provide an introduction to Hong Kong and an exploration of different redevelopment initiatives that have facilitated local physical and “social” upgrading. Based on demographic, socioeconomic, and housing characteristics in Hong Kong, a principal component analysis (PCA) and a K-means clustering are performed to group together territory planning units (TPUs) experiencing similar scales of upgrading, revealing the scale of gentrification and displacement.

Three neighborhoods are then selected for a qualitative analysis to show the more detailed and diverse nature of gentrification. The three case studies also demonstrate three trajectories driven by different agents. The first case study of Kennedy Town shows the importance of public–private joint redevelopment ventures in driving gentrification. The second case of Tiu Keng Leng illustrates the extraordinary impacts of government in land
acquisition, community clearance, and redevelopment. The third case of Yuen Long demonstrates how large private development firms are increasingly involved in large-scale redevelopment at the periphery, with extensive displacement of the original residents.

This Hong Kong study reveals a unique velocity in capital reinvestment and scale of redevelopment, driven by rapid population increase—with over 1.5 million Hong Kong residents added between 1986 and 2006—and short building life cycles, as structures generally deteriorate within 50 years of construction. Within this context, and a more open approach to public intervention, government involvement in redevelopment and “upgrading,” and particularly compared to the North American context, is far more extensive. In addition, with Hong Kong’s immense housing demand, the impacts of large private firms in driving redevelopment have been increasingly challenging the extraordinary impacts of government itself.

Recognizing diverse gentrification processes

The term “gentrification” was first coined by Ruth Glass and referred to the refurbishment of old working-class housing in urban London by risk-taking, middle-class investors (Glass, 1964). Since then, the gentrification discourse has permeated urban studies (Lees, 2000). Despite the fact that gentrification is now globally recognized, the definition of gentrification remains a controversial issue (Clark, 2005). As Beauregard (1986, 1990) and Rose (1984) maintain, gentrification is “chaotic.” Recent research has supported the diverse nature of gentrification and has suggested the need for a broader definition (Clark, 2005). Various upgrading processes have been embraced, each with its own distinct characteristic. However, all typologies have two common traits (Clark, 2005). First, gentrification involves capital reinvestment in the built environment. By renovating, refurbishing, or rebuilding, the built environment is physically upgraded. Second, coupled with the capital reinvestment, there are extensive social changes in the makeup of the neighborhood, involving “social upgrading,” as the original residents are displaced and residents of higher socioeconomic status move into the neighborhood.

The diverse nature of capital reinvestment and displacement

The literature has recognized diverse capital reinvestment and displacement processes that define gentrification. They include the refurbishment of existing housing; individual teardowns or community blockbusting by development firms; and/or urban renewal projects initiated by government. In addition, it is also recognized that gentrification is not solely an urban phenomenon, being also evident in suburbs and rural areas.

Refurbishment

Capital reinvestment can take the form of renovating the existing housing stock. As originally identified by Glass (1964), gentrification can refer to a class-based process of neighborhood transition in which the middle class moves into and upgrades deteriorating housing in working-class neighborhoods, primarily through refurbishment. The gentrifiers place preference on architecturally unique homes located in close proximity to concentrations of employment and rich cultural amenities (Ley, 1986). The displacement of original residents and “neighborhood upgrading” accompanies this reinvestment process.
New-builds and private sector blockbusting

It should not be assumed that gentrification is restricted to just the reestablishment of “an elegant history in the quaint mews and alleys of old cities” (Smith, 1996, p. 39). “New-build gentrification” refers to demolition-rebuild development (Davidson & Lees, 2005, 2010). In addition to individual teardowns, private sector blockbusting is another upgrading process (Podagrosi & Vojnovic, 2008). In order to acquire large tracts of property for redevelopment, developers use various techniques to pressure owners to sell their property, in many instances at below-market prices (Orser, 1994).

New-build redevelopment has become a focus of recent debates since some have questioned the degree of displacement from new-builds (Boddy, 2007; Butler, 2007). Davidson and Lees (2010) and Marcuse (1985) recognize that a range of displacement typologies are evident—from direct to indirect displacement processes—and ultimately it is the transformation of the class structure within neighborhoods, following capital reinvestment, which defines gentrification. The analysis of Hong Kong will provide insight into the role of new-builds in driving displacement, and particularly through Hong Kong’s state-led redevelopment initiatives, which have extensively altered the class composition of neighborhoods.

Urban renewal

Urban renewal refers primarily to public efforts to revitalize aging and decaying inner cities, although some suburban communities also undertook such projects. In the United States, while the sporadic federal urban renewal programs ended in the 1960s, municipal and state urban renewal initiatives, which have been evident since the late 1970s, are still ongoing (Hackworth & Smith, 2001). Similar to federal urban renewal, under local initiatives, public funds are used to redevelop low-income neighborhoods.

Rural and suburban gentrification

Gentrification processes have also been recognized in rural areas and suburbs (Lees, 2012). While the geography of gentrification has generally been urban in focus, increasingly researchers have gone beyond this concentrated spatiality. There is a growing literature on exploring why, how, and where rural and suburban gentrification occurs (Nelson & Nelson, 2011; Phillips, 1993, 2004). Consistent with existing literature on gentrification, asymmetries in class composition of gentrifiers and displacees are found in rural gentrification, generating fundamental class transformations in the countryside (Phillips, 1993).

The diverse nature of actors in gentrification

While members of the new middle class are generally assumed to be the gentrifiers and members of the working class are generally considered the displaced, research has shown that agents involved in gentrification vary. Gentrification can involve middle-income groups replacing lower-income groups. It is also evident with lower-income groups being displaced by other lower-income groups, but of a better standing. It can involve the rich being displaced by the super-rich (Butler & Lees, 2006; Hedin et al., 2012; Lees, 2003). Gentrification can also be initiated by gay populations (Lauria & Knopp, 1985),...
artists (Ley, 2003), and higher education institutions, their students, and staff (Smith, 2005).

As the neighborhoods are converted and “upscaled,” the original socioeconomic group often cannot afford to pay the higher rents. In addition, renters may be evicted by landlords trying to sell their properties. Meanwhile, local businesses that catered to the needs of original residents may have to relocate or close. Thus, due to the diverse nature of gentrification, displaced populations can vary significantly, from the poor to the rich. No income group is secure in maintaining its neighborhood class composition in a redevelopment process. What is consistent, however, is the displacement.

While in the West some five decades of literature have illustrated the social impacts of gentrification, in Hong Kong—and China more broadly—empirical analysis of redevelopment and displacement is limited, largely remaining at a descriptive level. There is clearly extensive interest in redevelopment processes in Hong Kong; however, aspects of social conflict and displacement have generally been absent in both the academic literature and media. As Ley and Teo (2013, p. 8) note, regarding redevelopment literature in Hong Kong, “But in all of this valuable scholarship, the naming of gentrification is rarely found. One local housing expert told us there has been ‘no serious research’ on gentrification in Hong Kong.”

**Gentrification in Hong Kong and the wider-Chinese context**

Over the last three decades, Hong Kong has confronted extensive redevelopment pressures as it has transitioned from an industrial to a specialized services economy. Hong Kong is unique in many aspects. Hong Kong can be best described as a foundation that began with China, but was then aligned with the West for much of the twentieth century under constructive British colonialism. Hong Kong represents a case with both Western neoliberal and Chinese influences. As a global city with an adamant city-state government, Hong Kong emerges as an important case illustrating gentrification and its socio-political ramifications within the Chinese urban context.

The explicit use of the term “gentrification” has been just recently introduced in the redevelopment literature in China (He, 2007; Jou, Clark, & Chen, 2014; Leaf, 1995; Zhang, 2002). As He (2010) argues, the term gentrification has generally been substituted with unpoluticized terms such as “urban renewal,” “urban regeneration,” and “urban redevelopment” in order to avoid the political implications of displacement. Class transformation and displacement are rarely associated with redevelopment processes in Chinese cities (He, 2007; He & Wu, 2007; Wu, 2004). Similar to the Western experience, however, increasingly links have been made between residential displacement and intensified inequities in housing and socioeconomic conditions, and particularly since it has involved extensive housing demolition and residential relocation throughout urban China. Residential displacement and housing demolishment have become sensitive issues in China (Wu, 2004; Zhang, 2002).

The term gentrification is also generally absent in the urban literature on Hong Kong. Terms such as “urban redevelopment,” “slum clearance,” and “urban revitalization” are commonly used to refer to gentrification (Chan & Lee, 2008). Ley and Teo (2013), through an analysis of academic research and newspapers, find that although urban redevelopment receives abundant coverage, gentrification is rarely applied as a term in Hong Kong. In their research, Ley and Teo (2013, p. 8) note that “the massive presence of urban (re)development and its pervasive hold on public culture were fully reflected in the
press.” Even urban renewal and demolition was recognized, but “the human dimension of land use change did not feature as prominently” (Ley & Teo, 2013, p. 8).

In Hong Kong, the interest in urban (re)development has been directed to its institutional structure, and especially the two quasi-governmental agencies, the Land Development Corporation (LDC) and the Urban Renewal Authority (URA) (Adams & Hastings, 2001; Drakakis-Smith, 1976; Ng, 1998). Public–private partnerships have played an important role in capital reinvestment in Hong Kong since first spearheaded by the Land Development Policy Committee in 1984 (Jessop & Sum, 2000).

Despite institutional differences between Hong Kong and other Western cities, there are some similarities. Ng (2002) points out that the general public has been excluded from planning processes involving redevelopment. Lai (1993) questioned whether the displaced receive fair compensation. Some studies have focused on how residents’ quality of life has been affected by urban redevelopment (Kam, Ng, & Ho, 2004; Ng, Pong, Kam, & Ho, 2004). However, a systematic analysis of gentrification across Hong Kong, at a citywide scale, and the assessment of different outcomes associated with diverse redevelopment processes require more comprehensive investigation.

Hong Kong

Hong Kong is located beyond the southeastern tip of Guangdong Province and consists of three parts: Hong Kong Island, Kowloon, and the New Territories. With an area of about 1,104 km$^2$, Hong Kong had 6,864,346 residents in 2006. Hong Kong Island and Kowloon are generally considered the urban core, a dense urban area mostly located along Victoria Harbor, at the northern tip of Hong Kong Island and the southern tip of the Kowloon Peninsula. Hong Kong was a crown colony of the United Kingdom from 1841 until the transfer of its sovereignty to China in 1997.

In recent decades, Hong Kong has undergone a tremendous socioeconomic transformation, similar to many other global cities. Hong Kong emerged as a major manufacturing center during the 1950s. However, taking advantage of low land and labor costs in China, many local industrialists began to relocate across the border since the “open door” policy in the late 1970s. Hong Kong entered a new phase of development after unification with China, facilitating Hong Kong’s rapid transformation to a service-based economy. The manufacturing share of GDP declined from 23.6% in 1980 to only 2.5% in 2007. During the same time period, the services share increased from 67.3% to 92.3% (Yang, 2006). Emerging as a global center of banking and finance, Hong Kong has become a significant node in the global economy (Skeldon, 1997). Its industrial and employment restructuring has also facilitated increased social polarization (Chiu & Lui, 2009). This shift in economic activity, from manufacturing to services, and growing social polarization, makes Hong Kong an ideal case for exploring gentrification.

Urban redevelopment initiatives and policies in Hong Kong

Despite its renowned skyline, urban decline continues to characterize large segments of Hong Kong (Figure 1). Old dilapidated buildings—characterized by extreme densities and insufficient services—make up large areas of the city’s older districts (Yeh, 1990). With a favorable urban location, these “pockets of decay” have been targeted for redevelopment by government and developers (Tang, 2008).

During the 1960s, Hong Kong first attempted small-scale redevelopment schemes, but with limited impact and slow progress (Yeh, 1990). It was later in the twentieth century
that the state in Hong Kong became more active in shaping local redevelopment initiatives. Since 1988, the government has set up statutory bodies to initiate and facilitate redevelopment through public–private partnerships (Ng, 2002). In 1988, the LDC was established to undertake, promote, and facilitate urban renewal (Adams & Hastings, 2001). Replacing the LDC, the URA was set up in 2001 as a dedicated agency to redevelop dilapidated and rehabilitate poorly maintained buildings. Both bodies received finances from the state as well as land premium waivers for redevelopment under Hong Kong’s leasehold system of land tenure.

In addition, the state facilitated capital reinvestment by passing more flexible redevelopment options for dealing with fragmented property rights. The URA can apply for government resumption under the Land Resumption Ordinance to resume the property interests in a redevelopment. The Land (Compulsory Sale for Redevelopment) Ordinance was also enacted in 1998 to accelerate urban renewal by overcoming difficulties encountered by the private sector in assembling land, including in the case of defective titles and untraceable owners (Hui, Wong, & Wan, 2008). In the case of a compulsory sale, the original residents lose the power of negotiation.

While most redevelopment is proposed by the state, private developers are the principal investors in Hong Kong’s redevelopment projects. In addition, there is a clear preference for higher-end properties targeting higher-income groups rather than the original low-income residents, even though most redevelopment projects are launched in the name of wider public interest (Ng, 2002). The redeveloped inner city, in particular, has experienced sharply increasing housing prices, which are hardly affordable for average income earners. This analysis will show that low-income residents are increasingly settling in new towns, where public housing is being concentrated, or in a few select old dilapidated urban areas, while large areas of urban Hong Kong are being gentrified.
There is an important aspect to capital reinvestment in Hong Kong, associated with the lifecycle of buildings. As argued by Abbas (1997, p. 64), “property speculation means that every building in Hong Kong, however new or monumental, faces imminent ruin, on the premise of here today, gone tomorrow—a logistic that, by contracting time, dispenses even with the pathos of decay.” In a similar spirit, Ley and Teo (2013) maintain that buildings in Hong Kong are designed for a 50-year life, but in many cases—due to poor construction and management—they in fact deteriorate faster. There is very little interest in refurbishing and preserving older buildings, rather capital reinvestment is generally characterized by demolition and rebuilding. As Abbas (1997, p. 80) notes, “[t]he building and rebuilding suggests that space is almost like a kind of very expensive magnetic tape that could be erased and reused.” This basic Hong Kong redevelopment characteristic—ongoing and rapid new-build redevelopment—not only adds to the relevance of studying gentrification in this city, but also provides an ideal case for exploring displacement associated with new-builds.

**Exploring the scale of gentrification in Hong Kong**

Fifty-five variables for assessing physical and social change are used in the quantitative analysis, covering the years 1986 to 2006 (Table 1). Data selection is guided by the existing gentrification literature, data availability, and Hong Kong’s unique characteristics. Since the focus of the research is to capture the diversity in redevelopment and displacement processes, a larger number of census variables are preferred in exploring differences in gentrification between neighborhoods.

The Hong Kong Census has been published for decades, with census boundaries changing over time. Changes in boundaries require standardization of data for analysis between decades (Gregory & Ell, 2005). However, normalization is not conventionally done in the existing literature in China. In Hong Kong, as a result of land reclamation and TPU boundary changes, the number of TPUs increased from 247 in 1986 to 287 in 2006, a 16.2% increase. TPU boundaries also have been altered between decades. In order to compare changes between decades, TPU tracts were normalized.

The areal weighting interpolation method was used to reallocate data to resolve boundary changes. TPU 2006 boundaries are the target zones, and TPU 1986 boundaries are the source zones. In order to distinguish redevelopment from new development or suburbanization, and given the extensive nondeveloped land in the city—the mountainous terrain—building area is used instead of total area in calculating the areal weighting.

**Principal component and clustering analyses**

Developing upon methods presented in Podagrosi, Vojnovic, and Pigozzi (2011), a PCA is performed on census data in order to reduce 55 variables into a smaller number of generalized components that underlie the demographic, socioeconomic, and housing dynamics in Hong Kong. The PCA is followed by a K-means clustering process to group together TPUs experiencing similar characteristics of change. This quantitative analysis enables us to determine the areas within Hong Kong that are experiencing similar upgrading outcomes.

In the PCA, nine dimensions were extracted, accounting for 83.6% of the total variance. Varimax rotation is conducted to obtain independent factors. Based on the rotation results, the nine dimensions are interpreted as follows. The first dimension portrays the turnover of housing stock and residents. The second dimension depicts the
Table 1. Description of the variables.

<table>
<thead>
<tr>
<th>Description</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population variables (13)</strong></td>
<td></td>
</tr>
<tr>
<td>% change in total population</td>
<td>PPOP</td>
</tr>
<tr>
<td>Change of median age between 2006 and 1986</td>
<td>CMAGE</td>
</tr>
<tr>
<td>% change in population 15 years old and over</td>
<td>PAGE15</td>
</tr>
<tr>
<td>% change in population 0–24 years old</td>
<td>PAGE024</td>
</tr>
<tr>
<td>% change in population 25–54 years old</td>
<td>PAGE2554</td>
</tr>
<tr>
<td>% change in population 55 years old and over</td>
<td>PAGE55</td>
</tr>
<tr>
<td>% change in male</td>
<td>PMALE</td>
</tr>
<tr>
<td>% change in female</td>
<td>PFEMALE</td>
</tr>
<tr>
<td>% of change of never-married male</td>
<td>PNMALE</td>
</tr>
<tr>
<td>Change in the % of never-married male</td>
<td>CNMMALE</td>
</tr>
<tr>
<td>% of change of never-married female</td>
<td>PNMFEMALE</td>
</tr>
<tr>
<td>Change in the % of never-married female</td>
<td>CNMFEMALE</td>
</tr>
<tr>
<td>% change in the number of households</td>
<td>PSH</td>
</tr>
<tr>
<td><strong>Socioeconomic variables (25)</strong></td>
<td></td>
</tr>
<tr>
<td>% change of population aged 15 and over having upper secondary education</td>
<td>PSECONDARY</td>
</tr>
<tr>
<td>Change in the % of TPU that have secondary education</td>
<td>CSECONDARY</td>
</tr>
<tr>
<td>% change of population aged 15 and over having post-secondary—degree course</td>
<td>PDEGREE</td>
</tr>
<tr>
<td>Change in the % of TPU that have post-secondary—degree course</td>
<td>CDEGREE</td>
</tr>
<tr>
<td>Change in % of HH that are female-headed</td>
<td>CFHEADED</td>
</tr>
<tr>
<td>% change in female-headed households</td>
<td>PFHEADED</td>
</tr>
<tr>
<td>% change in median gross rent—adjusted</td>
<td>PRENT</td>
</tr>
<tr>
<td>% change in median household income—adjusted</td>
<td>PHSHINCOME</td>
</tr>
<tr>
<td>% change in personal income for main employment</td>
<td>PEMPINCOME</td>
</tr>
<tr>
<td>% change in employed civilian population 16 years and over: total</td>
<td>PEMPLOYED</td>
</tr>
<tr>
<td>% change in professional</td>
<td>PROF</td>
</tr>
<tr>
<td>Change in the % of TPU in professional</td>
<td>CPROF</td>
</tr>
<tr>
<td>% change in craft and related workers</td>
<td>PCRAFT</td>
</tr>
<tr>
<td>Change in the % of TPU craft and related workers</td>
<td>CRAFT</td>
</tr>
<tr>
<td>% change in clerical and related workers</td>
<td>PCLERICAL</td>
</tr>
<tr>
<td>Change in the % of TPU in clerical and related workers</td>
<td>CCLERICAL</td>
</tr>
<tr>
<td>% change in administrative and managerial workers</td>
<td>PADMIN</td>
</tr>
<tr>
<td>Change in the % of TPU in administrative and managerial workers</td>
<td>CADMIN</td>
</tr>
<tr>
<td>% change in manufacturing</td>
<td>PMANUF</td>
</tr>
<tr>
<td>Change in the % of TPU in manufacturing</td>
<td>CMANUF</td>
</tr>
<tr>
<td>% change in FIRE (financing, insurance, real estate and business services)</td>
<td>PFIRE</td>
</tr>
<tr>
<td>Change in the % of TPU in FIRE</td>
<td>CFIRE</td>
</tr>
<tr>
<td>% change in WRIR (Wholesale, retail and import/export trades, restaurants and hotels)</td>
<td>PWIR</td>
</tr>
<tr>
<td>Change in the % of TPU in WRIR</td>
<td>CWRIR</td>
</tr>
<tr>
<td>% change in traditional sectors (agriculture and fishing, mining and quarrying, manufacturing, and unclassifiable)</td>
<td>PTRADTIONAL</td>
</tr>
<tr>
<td><strong>Housing variables (17)</strong></td>
<td></td>
</tr>
<tr>
<td>% change in total housing units</td>
<td>PHOUSING</td>
</tr>
<tr>
<td>% change in owner-occupied housing units</td>
<td>POWNER</td>
</tr>
<tr>
<td>Change in the % of owner-occupied housing units</td>
<td>COWNER</td>
</tr>
<tr>
<td>% change in renter-occupied housing units</td>
<td>PRENTER</td>
</tr>
<tr>
<td>Change in the % of renter-occupied housing unit</td>
<td>CRENTER</td>
</tr>
<tr>
<td>% change in subsided public housing</td>
<td>PPUBLIC</td>
</tr>
<tr>
<td>Change in the % of household live in subsided public housing</td>
<td>CPUBLIC</td>
</tr>
<tr>
<td>% change in private housing</td>
<td>PPRIVATE</td>
</tr>
<tr>
<td>Change in the % of household live in private housing</td>
<td>CPRIVATE</td>
</tr>
<tr>
<td>% of change in TPU with more than 2 households in one housing unit</td>
<td>P2PLUS</td>
</tr>
</tbody>
</table>

(Continued)
The K-means clustering process, based upon the factor scores from the PCA, is used to group together TPUs that are experiencing similar trajectories of change. The Cubic Clustering Criterion was used to identify the number of clusters, with 12 clusters being identified. Three clusters of TPUs—Groups 2, 4, and 7—show upgrading (Figure 2), yet reflect a diversity of upgrading agents and processes creating a differentiated landscape of gentrification. The increase rate for gross rent, median household income, and median employment income are all greater than the Hong Kong average within these clusters. Other groups have also experienced upgrading in some of the census variables, but in more limiting ways. In addition, not every TPU experienced upgrading in Hong Kong, as evident with TPUs experiencing declining incomes, rent and population concentrations, and all accompanied with lower education levels.

While Groups 2, 4, and 7 all show similar characteristics of physical and social upgrading, they are indeed different. TPUs in Group 2 are mainly established neighborhoods in the urban core, located along Victoria Harbor on Hong Kong Island. This grouping is driven by a high increase rate in high-order occupations, especially professionals and managers. There is a drop in the lower end of the occupations within the service economy. In terms of agents of gentrification, the TPUs in this cluster are heavily influenced by public–private partnerships, with private firms leading the redevelopment. In this cluster, rent increased from 1.865 times the Hong Kong average in 1986 to 2.278 times the average in 2006. Household income and employment income also both increased, from 1.145 times to 1.228 times, and from 1.191 to 1.199 times the Hong Kong average, respectively.

TPUs in Group 4 are not the traditionally densely populated urban areas, but rather, suburban and rural neighborhoods in the New Territories. Defining characteristics of this group include the fast turnover in housing stock and residents, the decline of the traditional economic sector and social upgrading, with new residents increasingly living in

<table>
<thead>
<tr>
<th>Description</th>
<th>Name</th>
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<tbody>
<tr>
<td>Change in the % TPU with more than 2 households in housing units</td>
<td>C2PLUSSHSH</td>
</tr>
<tr>
<td>% of change in TPU with more than 6 occupants in housing units (6 and over)</td>
<td>POCCUP6PLUS</td>
</tr>
<tr>
<td>Change in the % of TPU with more than 6 occupants in housing units (6 and over)</td>
<td>COCCUP6PLUS</td>
</tr>
<tr>
<td>% of change in household size with 1 or 2</td>
<td>PSIZE1OR2</td>
</tr>
<tr>
<td>Change in the % of TPU with household size 1 or 2</td>
<td>CSIZE1OR2</td>
</tr>
<tr>
<td>% of change in TPU with one-person family</td>
<td>PPERSON1</td>
</tr>
<tr>
<td>Change in the % of TPU with one-person family</td>
<td>CPERSON1</td>
</tr>
</tbody>
</table>

Notes: It should be noted that while median housing value is one of the most frequently used variables in the analysis of gentrification, housing value is not available in the Hong Kong Census. However, median gross rents are available and are used in the analysis as a proxy to housing values.
private housing. This is also a cluster where gentrification is heavily shaped by large-scale (re)development processes initiated by large private development firms. Rent, household income, and employment income were all below the Hong Kong average in 1986, with the ratios being 0.658, 0.787, and 0.841 times the Hong Kong average. However, as Hong Kong decentralized, population and housing increased dramatically in these areas. As of 2006, all monetary indicators are clearly above the Hong Kong average. Rent, household income, and employment income are now 1.102, 1.143, and 1.113 times the Hong Kong average, respectively.

TPUs in Group 7 are mainly older, well-established neighborhoods scattered across Hong Kong. This grouping seems to be driven by the dramatic increase in owner-occupied housing and higher-order occupations. As there is considerable variability in the actors involved, it is more difficult to generalize about the agents driving gentrification within this cluster. From 1986 to 2006, all monetary indicators have increased slightly. Rent has increased from 1.342 times to 1.385 times the Hong Kong average. Household income and employment income have increased from 1.031 to 1.053 times and 1.055 to 1.057 times the Hong Kong average, respectively.

As recognized by Wyly and Hammel (1999), quantitative analysis itself is insufficient in identifying gentrification. Following the PCA and K-means cluster analysis, ground surveying and a historical analysis was carried out in the neighborhoods that were grouped into the three clusters showing upgrading. This allowed verification that capital reinvestment and displacement did occur within these TPUs. There were, in fact, large areas—some 92 km$^2$—that were captured in the quantitative analysis showing upgrading, but that involved development on natural/agricultural lands, or the redevelopment of former industrial sites. Adopting a more conservative definition of displacement, these

![Figure 2. Map of K-means clustering showing “social” upgrading in Hong Kong (1986–2006) and the location of the three case study sites.](image)
TPUs were removed from the upgrading clusters as they involved capital (re)investment but not direct spatial displacement.

Redevelopment in Hong Kong and the complexity and diversity of gentrification

From the quantitative analysis, the three upgrading clusters all revealed similar socio-economic trajectories. All monetary indicators—including rent, household income, and personal income from main employment—experienced dramatic increases. These areas also experienced a rise in educational attainment. The percentage of population within the clusters that received a college education increased by 441%, from 47,499 (1986) to 256,891 (2006).

The population in upper-occupation groupings, professionals and managers, has also increased. In contrast, lower-occupation groupings, including craft workers and manufacturers, have decreased. In the three upgrading clusters, there has been a 58.5% decrease among those employed in the traditional sector—from 177,917 (1986) to 73,870 (2006)—while the increase in residents employed in finance, insurance, real estate, and business services has increased by over 205%—from 49,276 (1986) to 150,237 (2006). Owner-occupied housing has also increased within the clusters, from 45.5% (1986) to 64.2% (2006). In addition, while gentrification is generally focused within the urban core, upgrading is also evident in the suburbs and rural areas.

After the removal of TPUs not showing direct displacement, the three clusters capture 377 km$^2$ of social and physical upgrading in Hong Kong, some 34.0% of Hong Kong’s territory.$^5$ Gentrification in Hong Kong has thus been extensive. In addition, the scale of displacement parallels the spatial extent of upgrading. In the three clusters revealing gentrification, a total of 104,047 residents employed in just the traditional sector (mainly manufacturing) were erased from these TPUs. The quantitative analysis showing this large-scale displacement is supported by the qualitative analysis; three neighborhood case studies revealing in more detail the diverse redevelopment and displacement processes (Table 2).

Table 2. Change in gross rent, median household income, and major employment income and their ratios (three case studies), 1986–2006.

<table>
<thead>
<tr>
<th>Area</th>
<th>Median gross rent (HK$)</th>
<th>Change</th>
<th>Median household income (HK$)</th>
<th>Change</th>
<th>Median employment income (HK$)</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1986        2006 (%)</td>
<td></td>
<td>1986           2006 (%)</td>
<td></td>
<td>1986             2006 (%)</td>
<td></td>
</tr>
<tr>
<td>Kennedy Town</td>
<td>1,775       6,261 252.68</td>
<td></td>
<td>16,465          28,113 70.74</td>
<td></td>
<td>8,486           17,092 101.42</td>
<td></td>
</tr>
<tr>
<td>Tiu Keng Leng</td>
<td>889         2,397 169.52</td>
<td></td>
<td>11,293          23,459 107.74</td>
<td></td>
<td>6,588           15,259 131.62</td>
<td></td>
</tr>
<tr>
<td>Yuen Long</td>
<td>1,166       3,480 198.31</td>
<td></td>
<td>11,964          20,464 71.05</td>
<td></td>
<td>7,017           13,778 96.35</td>
<td></td>
</tr>
<tr>
<td>HK average</td>
<td>1,418       3,124 120.29</td>
<td></td>
<td>15,582          22,617 45.15</td>
<td></td>
<td>7,956           13,882 74.48</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area</th>
<th>Median gross rent ratio</th>
<th></th>
<th>Median household income ratio</th>
<th></th>
<th>Median employment income ratio</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kennedy Town</td>
<td>1.252 2.005</td>
<td></td>
<td>1.057 1.243</td>
<td></td>
<td>1.067 1.231</td>
<td></td>
</tr>
<tr>
<td>Tiu Keng Leng</td>
<td>0.627 0.767</td>
<td></td>
<td>0.725 1.037</td>
<td></td>
<td>0.828 1.099</td>
<td></td>
</tr>
<tr>
<td>Yuen Long</td>
<td>0.823 1.114</td>
<td></td>
<td>0.768 0.905</td>
<td></td>
<td>0.882 0.992</td>
<td></td>
</tr>
</tbody>
</table>

Note: Hong Kong dollar values adjusted for inflation; 1HK$ equals 0.13US$.
Kennedy Town

Kennedy Town in some ways represents a classic case of gentrification, with the original lower-income working-class populations displaced by the new middle class of the high-tech and specialized services economy. Kennedy Town is located on the northwest coast of Hong Kong Island. It has traditionally been a lower-income residential neighborhood, especially for migrants from Chiu Chow, a poorer region in Mainland China. The neighborhood’s nickname used to be “Little Chiu Chow.” Kennedy Town was once a concentration of noxious facilities as manufacturing flourished in the neighborhood (Leung, 1999). Public housing was also built in Kennedy Town to alleviate housing shortages among Hong Kong’s poor. While some of this public housing is still evident, projects are also being slowly demolished.

Kung Man Village, one of the oldest Cottage Resettlement Areas in Hong Kong, once accommodated about 1,800 residents (Lam, 2010). This early public housing project was demolished in 2001, displacing 221 housing units and 184 families (LegCo, 1999). Some 70 hectares of land where the Kung Man Village was located has been rezoned as green space and is now sitting adjacent to newly built luxury high-rises. This former site of low-income housing in Kennedy Town will soon be just a green amenity for the wealthy. This is also not the only example of such an initiative to upgrade this once industrial, working-class neighborhood.

Currently in Kennedy Town, there are five other parcels of vacant land that are a result of the demolition of “undesirable” or noxious facilities (Apple Daily, 2013). Despite local pressures associated with inadequate affordable housing provision in Hong Kong—perhaps the worst condition among high-income cities in the world—there are no plans to develop these parcels. While these Kennedy Town sites remain vacant, approximately 350,000 people are on a waiting list for public housing in Hong Kong and 100,000 people in the city are living in what is considered “inadequate housing,” including cage apartments and wood cubicles (SoCO, 2014).

Since the 1980s, the built environment of Kennedy Town has changed dramatically. The redevelopment process is driven by new-builds. A large number of redevelopment projects have altered both neighborhood housing and socioeconomic characteristics (Figures 3 and 4). In 1986, gross rent, income, and education levels in Kennedy Town paralleled Hong Kong’s average. However, the neighborhood’s location, close to the central business district and along the harbor front, encouraged capital reinvestment and “social upgrading.” Kennedy Town’s new luxury buildings have attracted professionals and expats. Chiu Chow are no longer the dominant community.

With capital reinvestment, median gross rent has increased 253% between 1986 and 2006. It is now over two times Hong Kong’s average. Median household income and median employment income have both increased faster than the Hong Kong average. The percentage of college graduates increased from about 4% in 1986 to 26% in 2006; it is now significantly above the Hong Kong average of 15%. Between 1986 and 2006, professionals in Kennedy Town have increased from about 10% to 30%, while managers and administrators have increased from 3% to 17%.

The built environment of Kennedy Town has been extensively upgraded, with many of the noxious facilities being removed and manufacturing plants being demolished (Planning Department, 1993; Town Planning Board, 2004). The traditional two-to-three-storey tenements built in the 1950s were gradually replaced by multistorey structures, and then by the newly built high-rises. A mixture of old and new buildings is seen throughout the neighborhood. Tong Lau, the tenement buildings built from the late 1800s to the 1960s in Hong Kong, can still be found along Catchick Street in Kennedy Town.
However, surrounded by new development, these old buildings will soon likely be replaced by upscale high-rises. The public and private sectors have both engaged in the redevelopment of Kennedy Town. While private development firms head the majority of the redevelopment projects in Kennedy Town, there are a handful of joint ventures involving the Urban Redevelopment Authority and private developers. These projects are almost exclusively new-builds—providing luxury units to higher-income earners—but the transformation of this neighborhood is a piecemeal redevelopment process. The capital reinvestment generally involves the construction of one or two high-rises at a time, and hence there is still a clear inter-dispersal of the old and new throughout the neighborhood. With a large number of smaller-scale redevelopment projects, Kennedy Town is being slowly transformed from a lower-middle-income neighborhood, with a strong manufacturing presence, to an upper-middle-income neighborhood for Hong Kong professionals and expats.

**Tiu Keng Leng**

In contrast to Kennedy Town, Tiu Keng Leng was a core-poor neighborhood that was transformed into a lower to middle-lower-income neighborhood. This is a case of the
core-poor being displaced by a better-off poor population. Tiu Keng Leng is a neighborhood that is now adjacent to Hong Kong’s expanding urban core. It was originally a refugee camp but was transformed—after decades of redevelopment—into a formal residential neighborhood, with extensive public housing investment and upscale private residences.

After China’s civil war in the 1940s, about 6,800 former Nationalist soldiers and Kuomintang supporters arrived into Hong Kong (Lan, 2006). In 1950, the Hong Kong government resettled these refugees to Tiu Keng Leng and encouraged them to build their community on what was isolated land (Wang, 1960). The settlement was designed to be temporary. It was assumed that the refugees would be repatriated to Taiwan or would return back to Mainland China. During the early years, the Hong Kong government played only a marginal role in Tiu Keng Leng’s development, while two charities closely affiliated with Taiwan contributed extensive resources (Lan, 2006). With little aid from Hong Kong and significant financial contributions from Taiwan, most residents intensified their loyalty to the Kuomintang (Figure 5).

In 1961, the government decided to convert Tiu Keng Leng into a resettlement estate in order to take the refugee camp under direct control (Chen, 2010). The government revoked the privilege of residents constructing new houses freely, but promised the
original residents the right to reside permanently in the neighborhood (FCRA, 1993). Since the “camp” was officially transformed into a “resettlement area,” the Hong Kong government started providing public services. With new public investment, commercial investment followed. The increasing commercial activity spurred capital reinvestment, and the wooden structures gradually began to be replaced by brick cottages (Lan, 2006).

With socioeconomic improvements and imposed restrictions on new housing construction, many original residents voluntarily relocated, and Hong Kong’s government facilitated this process by offering the residents an opportunity to sell their properties to new settlers. Many people vacated their properties and made it possible for outsiders to move in (Lan, 2006). The population makeup was changing and the neighborhood was becoming less associated with the Kuomintang regime, although Kuomintang loyalty still existed and nationalist festivities were still celebrated.

During the 1990s, the government decided to demolish the whole neighborhood to make room for the development of Tseung Kwan O New Town (Figure 6). Whether the clearance of the “Kuomintang enclave” was due to the new town development strategy or wider political reasons is still debated (Chen, 2010). One argument advanced for the clearance was the approaching handover of Hong Kong to China in 1997. Although Tiu Keng Leng had changed substantially by then, and the pro-Nationalist fervor had diminished, the neighborhood was still perceived as “Little Taiwan” (Lan, 2006).

Tiu Keng Leng residents were brought into a new round of conflict over land with the government when the clearance was announced in 1992. The residents initiated a legal battle against the government. The court agreed that the government had violated the pledge ensuring the residents’ right to stay in the neighborhood permanently (FCRA, 1993). The court’s judgment, however, did not change the fate of Tiu Keng Leng, but brought the government into a negotiation process with the residents to develop a compensation arrangement. Eventually, a compensation agreement was reached of US...
$900 (HK$7,000) per square meter for each of the dwellings (Sunday Morning Post Magazine, 1996). While many felt that the final compensation was reasonable—at least for those who received it—the residents were forcibly displaced from their community and the social network uprooted. Tiu Keng Leng was cleared on April 1996 and demolished in 1997. A total of 1,661 squatting houses were demolished while 2,179 families and 6,000 residents were displaced (Tam, 2001). With the tearing down of the neighborhood, the unique identity and history of Tiu Keng Leng has been erased.

Given the large-scale redevelopment, and particularly with the new public housing projects, the total population of Tiu Keng Leng has increased by 948% between 1986 and 2006. Over the same period, median gross rent has increased 170%, but it still remains below the city average. This can be expected given the public housing concentration. In 2006, 67% of the dwellings in the neighborhood were public housing units. The neighborhood also experienced a high increase in educational attainment and high-end occupations. Median household income and median employment income have also increased substantially, +108% and +132%, respectively, now being at about the city average.

This once refugee camp now has a metro station. Directly above the station sits a large residential high-rise development called Metro Town. It consists of nine private high-rise towers with 3,772 upscale residential units (Centadata, 2013). Across the street from Metro Town stands the Hong Kong Design Institute. It was designed by the French architecture firm Coldefy and Associates. Completed in 2010, it cost US $155 million (HK$1.2 billion) to build. To the south of Metro Town sits another large-scale private development, Ocean Shores. The site was previously used by Shui Wing Ship demolition for its steelworks. With a total investment of US$3.2 billion (HK$25 billion), the site was rebuilt into nineteen 50-story luxury buildings (Apple Daily, 2006).
Tiu Keng Leng began as a refugee camp housing the core-poor and was slowly transformed into a lower-income neighborhood, then to a middle-lower-income neighborhood dominated by public housing and a growing number of workers employed in Hong Kong’s service economy. Unlike Kennedy Town, this was a large-scale urban redevelopment initiative facilitated by the extraordinary impacts of government. Large-scale capital reinvestment enabled a dramatic transformation of the community. As Hong Kong grew and expanded, the neighborhood found itself in relatively good proximity to the urban core, a position further improved by its subway connection. The original physical environment and residents of this community were completely erased by the large-scale construction of new high-rises, and particularly the large-scale public housing that erased the last imprints of the “Kuomintang enclave” (see Supplemental Figure). The only remnant of the original neighborhood is a bronze sculpture—located in Hau Tak Estate—depicting the former refugee camp.

Yuen Long

Yuen Long was also a lower-income neighborhood that was transformed into a middle-lower-income neighborhood. Yuen Long, however, represents a case of gentrification at the urban periphery. It has undergone a rapid transformation from its rural township status—consisting of ancient, seventeenth-century Chinese villages, farms, and more recently, industrial suburbs—into a new town increasingly characterized by high-rises and a growing population of clerks, administrators, and professionals of the new service economy. Yuen Long, a case of gentrification in the suburbs, strengthens the importance of understanding gentrification as a diverse and complex process.

Located in the Northwest New Territories, Yuen Long was once a market-town serving as a trading center for surrounding farming villages. Yuen Long is the name given to a number of different jurisdictions, including Yuen Long District, Yuen Long plain, Yuen Long New Town, and Yuen Long Town. In this article, Yuen Long refers to Yuen Long Town, unless otherwise stated. The qualitative study focuses on TPU 524, which was identified from the cluster analysis as experiencing gentrification. TPU 524 covers a major portion—including the town center—of Yuen Long Town, an area that was already extensively developed by 1986 (Figure 7). TPU 524 alone had a population of 44,903 in 1986, which increased to 55,572 by 2006 with the intensified high-rise redevelopment (Figure 8). By 1986, this was a well-established industrial suburb, with some 30% of those employed in Yuen Long working in manufacturing. By 2006, after the extensive capital reinvestment and social upgrading, this figure stood at less than 8%.

A large influx of immigrants from Mainland China came into Yuen Long during the 1940s. The majority made a living working in local factories, which began to emerge in the area during the 1960s, or farming land rented from local villagers (Wong, 1996). This area of Hong Kong was opened up by the government’s new town developments in 1978 (New Territories North Development Office, 2003). In the initial years, Yuen Long’s (re)development was heavily facilitated through public investment. Large-scale industries were set up in the early 1980s to provide industrial space for the then-thriving manufacturing sector. Accessibility to Yuen Long was also improved with public transportation infrastructure investments—a light-rail service, Highway Route 3, and the West Rail Line (Ho, 2009).

Three public housing estates were built in the region during the 1960s and 1970s, followed by a subsidized-sale public housing development in 2001 (Ho, 2009). Yuen
Long Estate, the first public housing project in Yuen Long, was built in 1968 but demolished by 2001. The original redevelopment plan of constructing 2,000 public housing units was cut back early in the project. Part of the site, some 1.23 hectares, was sold to Cheung Kong Holdings at a price of US$310 million (HK$2.41 billion) for the construction of private housing (Hong Kong Business, 2013). The other two public housing projects, Shui Pin Wai Estate and Long Ping Estate, are still in use, providing 2,300 and 4,500 units, respectively, to lower-income populations. Fung Ting Court, completed in 2001, offered 312 dwelling units for purchase, with the project being heavily subsidized by the government.

Over the recent decades, large private firms have been primarily involved with residential development in Yuen Long. Four development firms—Cheung Kong (Holdings) Limited, Henderson Land Development Company Limited, Sun Hung Kai Properties Limited, and New World Development Limited—drive much of the (re)development in this new town (Nissim, 1998). This increasing interest among private developers for suburbs and rural areas has created dramatic impacts on the region’s spatial structure.

Industrial lands, ancient villages, and farmlands are being erased in Yuen Long in order to allow for new high-rise residential redevelopments, including a growing
segment of upscale construction, that is fundamentally transforming its built environment and class composition. Under existing redevelopment pressures, there is a whole village being displaced by a coalition of firms, with Cheung Kong being the major developer in this initiative. Despite widespread resistance and protest to the displacement by local residents and the wider public, Tai Kiu Tsuen village will be relocated farther out into Hong Kong’s periphery to make room for a new private development project marketed to upper-income earners, involving billions of HK dollars of investment (Singtao, 2010; Wenweipo, 2011).

Large-scale redevelopment projects are transforming century-old villages and farming communities into concentration nodes of high-rise commercial and residential developments. Thousands of factory workers, farmers, and villagers who once lived in the Hong Kong outskirts have been displaced by administrators, managers, and professionals of the new service economy in this physical and social transformation of Hong Kong’s periphery.

Complementing the large-scale redevelopment projects, small-scale and piece-meal village housing refurbishments are also evident, further altering the built environment and social composition of Yuen Long Town and adjacent neighborhoods. This is the only significant building refurbishment recognized in this study, and it is evident in the quaint rural villages (Figures 9–11). Some of the older buildings are being renovated, and in some instances even torn down and replaced with larger, but still small-scale new-builds for the new middle class who are commuting into the core. While village houses continue to be built due to the Small House Policy (SHP), they are increasingly targeting city dwellers. The new and much larger village houses are often divided into three flats for rental or sale to nonvillagers, who are attracted to the area because of the “village-feel” of the community, at least where the “village-feel” still remains.
It is also common to see villagers sell their homes, or the rights to build houses on particular lands, to private developers who then build multistory buildings or villa-type developments to attract upper-income earners (Hopkinson & Lao, 2003; Nissim, 1998).

Figure 9. Remaining traditional, lower-income village houses.

Figure 10. Village houses after upgrading.
Despite the original intention of the SHP to meet the genuine housing need of the indigenous villagers, the policy has been turned into a tool for the privileged and local developers to financially benefit through capital (re)investment and “upgrading.” Villages, especially those closest to Hong Kong’s core, have increasingly become residential suburbs occupied by a whole new social composition, the new middle-class Hong Kong commuters.

“Social upgrading” is extensive across Yuen Long Town and surrounding neighborhoods, with farmers, low-income renters, and manufacturing workers being displaced, and with new residents increasingly consisting of professionals and administrators (Ho, 2009; Ng, 1996). While the population in high-end occupations has increased from 9% in 1986 to 35% in 2006, the population employed in manufacturing has dropped significantly, from 30% to 8%. The population employed in agriculture has also dropped; it now consists of less than 1% of the TPU.

In 1986, income, education levels, and other socioeconomic variables were all below the Hong Kong average. As of 2006, the gaps have narrowed. Rent has increased by 236% between 1986 and 2006. Median household income and median employment income have both increased faster than the Hong Kong average, 71% and 96%, respectively. The area also now consists of more owner-occupied housing units—increasing from 55% in 1986 to 73% in 2006—showing the precarious status of renters in Yuen Long.

With new high-rise developments and the influx of administrators and professionals, the original rural village character of Yuen Long has been lost. The initial and large-scale state involvement has enabled the transformation of these traditional villages and farmlands into highly desirable commuter suburbs. The capital reinvestment and displacement of the original farming population, and the later factory workers, are clearly visible in Yuen Long’s landscape, which is now a growing hub of Hong Kong’s service economy.
As seventeenth-century farming villages are replaced by high-rises, ancient communities and their history are being erased, an increasingly common phenomenon throughout China (China Daily, 2012).

**Commentary and conclusion**

This research tests the use of PCA and cluster analysis, across Hong Kong, in exploring gentrification, which, when combined with ground surveying, identified neighborhoods experiencing upgrading. The quantitative analysis reveals that Hong Kong is experiencing a widespread upgrading process covering large areas of the city. It captured three clusters, representing 34.0% of the spatial area of Hong Kong that is being gentrified. In these upgrading clusters, 104,047 residents employed in just the traditional sector (mainly manufacturing) were erased. The loss of these subpopulations, evident from the quantitative analysis, is also supported by the qualitative analysis revealing the history of large-scale, particularly state-led displacement initially, which over time has increasingly become large-scale, private sector-driven.

The qualitative analysis shows considerable variability in reinvestment and displacement. This includes the erasure of a neighborhood containing “undesirable” concentrations of a political subgroup in Tiu Keng Leng, to the removal of ancient villages in Yuen Long, or the more piecemeal redevelopment and displacement processes, including tearing down public housing, experienced in Kennedy Town. These are important findings since gentrification critics argue that physical and social upgrading is a highly limited process or that the numbers composing the displaced are so small that they remain inconsequential. This research shows that gentrification can be extensive, covering large areas of a city, and with the numbers of displaced being considerable.

There has been a fundamental alteration of the class structure in the neighborhoods captured in the three upgrading clusters. It should also be recognized that the 2007 “Great Recession” has not affected the Asian housing market like it has markets in the West. While property values in Hong Kong initially declined, values have bounced back and have increased substantially since 2009, surpassing the 2008 market highs (Monkkonen, Wong, & Begley, 2012). Gentrification should thus be assumed as ongoing.

The qualitative analysis enabled a detailed exploration into the diversity of Hong Kong’s gentrification processes. Kennedy Town was a traditional lower-income, working-class neighborhood. Through targeted capital reinvestment, this neighborhood was transformed into a residential, upper-middle-income enclave, increasingly consisting of younger, single professionals and a growing number of expats. This upgrading involved a larger number of smaller-scale redevelopments, generally the construction of one or two high-rises, coupled with the removal of public housing, factories, and other noxious facilities from the neighborhood.

The changes in Tiu Keng Leng were physically the most dramatic. This neighborhood transformed from a refugee camp, to a pro-Kuomintang enclave, to an increasingly stable residential area known for its public housing. The original character of this neighborhood, as a refugee camp and as a concentration of the core-poor, necessitated large-scale government intervention to facilitate redevelopment. With growing interest in new town development, and with political unification with China, the government simply erased the whole community. Erasing “Little Taiwan” parallels Knapp and Vojnovic (2013), Podagrosi and Vojnovic (2008) and Vojnovic’s (2003a, 2003b) analyses of cleansing Black and other “threatening” ethnic neighborhoods in the United
States. When residents of a community are well-organized and pose a threat, small-scale reinvestment is too risky, necessitating the state—the extraordinary impacts of government—to become involved in large-scale displacement and the redevelopment of the whole neighborhood.

The case of Yuen Long Town illustrates another type of upgrading. This redevelopment and displacement process involves suburbs and villages in Hong Kong’s periphery. The redevelopment of Yuen Long represents a unique case of class struggles rarely discussed in the gentrification literature. This analysis of redevelopment at the urban periphery, acknowledged by only limited studies to date, adds a further dimension to the diversity of Hong Kong’s gentrification. The erasure of villages in Yuen Long by private developers—with a few large firms dominating the process—also illustrates the growing importance, and the emerging shift, to the private sector initiating large-scale displacement. This case also sheds light on the disinterest placed on preserving history within the context of China’s new development pressures. As noted in China Daily (2012), there are about 80–100 villages erased every day in the (re)development of China’s cities.

These three case studies also illustrate the diversity of agents in a gentrification process. Kennedy Town shows the importance of public–private joint redevelopment ventures, largely headed by private firms, in gentrification. Added to the joint ventures with the public sector in Hong Kong’s core, the private sector is also responsible for the rapid transformation, built- and class-upgrading, in the New Territories. The case of Yuen Long demonstrates how the private sector is involved in redeveloping large segments of the suburbs and displacing, on a large scale, the traditional residents. The case of Tiu Keng Leng illustrates the extraordinary impacts of government in land acquisition, community clearance, and redevelopment.

While the majority of the attention in the existing redevelopment literature in Hong Kong has been focused on government-led reinvestment, the impact of the private sector has been generally overlooked. This research in Hong Kong shows the complexity, and broad spectrum, in terms of agents and the nature of reinvestment and displacement, including the growing role of a few large firms driving extensive physical and social upgrading.

Reflecting more broadly on Hong Kong’s differentiated landscape of gentrification, it should be recognized that some aspects in the diversity of agents and displacement have been actually captured by the cluster analysis. Group 2, the upgrading cluster characterized by piecemeal and small-scale redevelopment in already established urban core neighborhoods, tends to be shaped by public–private partnerships, with private firms leading the displacement and redevelopment. TPUs captured in Cluster 4 are neighborhoods largely located in the New Territories; neighborhoods where upgrading is being heavily shaped by large-scale (re)development processes headed by large private firms. The group of TPUs in Cluster 7 consists of neighborhoods where it is more difficult to generalize about displacement, with considerable variability in the agents of gentrification involved.

This study also provides insight into the role of new-build redevelopments across Hong Kong in erasing residents and particularly the poor. New-builds in Hong Kong are very much a type of gentrification, as evident in all three case studies. New-builds dominate reinvestment and redevelopment processes in this city, and even with our conservative definition of displacement, direct spatial displacement, the scale of erasure is extensive.

In addition, new-builds on sites that contain large areas of lower-income housing, in neighborhoods like Tiu Keng Leng or in Yuen Long, are typically achievable only
through the complete and large-scale displacement of the original population. Ultimately, with such a highly intensified built environment, any redevelopment effort—and especially in the context of large-scale reinvestment projects—will involve extreme displacement, and be highly obstructive and daunting to the residents, and particularly given that it involves something as emotionally and sentimentally personal as one’s home and neighborhood.

Research has increasingly recognized the diverse nature of gentrification; a complex process involving various forms of capital reinvestment and varying gentrifying and displaced populations. Hong Kong reveals these diverse redevelopment processes but within its unique context of high-velocity capital reinvestment and large-scale redevelopment shaped extensively by government and large private development firms that are rapidly transforming the built environment. The change in urban form has been so swift and transformative that in some cases, as with Tiu Keng Leng, these neighborhoods are unrecognizable within a decade.

While there are some similarities with the West, gentrification in Hong Kong is shaped by the region’s geography, history, demographic patterns, insatiable housing demand, and resulting redevelopment; with the constant and rapid erasure and rebuilding of the urban landscape providing an important element of this distinction. In reflecting on the uniqueness of rapid change in Hong Kong’s built environment, Abbas (1997, p. 80) notes the ongoing relevance of an old joke about the “colony,” “A nice city—once it is finished.”

The short life cycle of buildings emerges as an important dimension to the pace of capital reinvestment in Hong Kong and the unique scale and speed of physical and “social” upgrading. Ley and Teo (2013, p. 14) recognize that

Demolition and eviction seem to be naturalized as an inevitable part of urban life in an environment where residential property deteriorates to a point where it requires replacement after 50 years or less. Eviction for publicly initiated urban renewal opens up opportunities for negotiations that can lead to improved public housing accommodation in a broader local culture where residential upgrading is a major preoccupation.

We do see validity in this argument, but this research also reveals the need for caution, combined with ongoing recognition that class conflict over space is still fundamentally transforming Hong Kong. In addition, in the case of Tiu Keng Leng, the Hong Kong government erased not only a cultural community, but a sociopolitical entity that would reasonably be considered “undesirable” and a “threat.” “Little Taiwan,” which had survived for some five decades, was erased as Hong Kong unified with China. To many original residents, the political identity of this community was sacred and paramount.

It also becomes evident that in a large-scale redevelopment and displacement process—as in Tiu Keng Leng—as these communities are torn down, their traditional social networks are erased. The lower-income residents are generally scattered to new peripheral developments or concentrated into urban slums. While it can be assumed that some of the displaced receive higher-quality housing, there is also a growing concentration of lower-income groups throughout pockets of Hong Kong where overall neighborhood quality is rapidly deteriorating.

In general, there has been a move to shift the poor to Hong Kong’s periphery, where new public housing projects are concentrating, but these are also areas distant from urban amenities, including jobs. Peripheral neighborhoods with rapid increases in lower-income populations include Tin Shui Wai and Tuen Mun. However, the poor are also concentrating in urban slums, such as Kwun Tong and Sham Shui Po, where increasing rents are
forcing residents to live in small, overcrowded spaces, including “cage apartments,” wooden cubicles, and rooftop huts (Figure 12).

The deteriorating living conditions among lower-income groups in Hong Kong have received extensive recent international media coverage, and particularly in the context of rapidly increasing property values. In an ABC News story covering the housing conditions among Hong Kong’s poor, De La Torre (2013) notes:

> American cities recently have proposed 300-square-foot or smaller “micro” apartments, but 40 square feet already is the norm for some of the poorest residents in Hong Kong. ...The smallest apartment ...visited was 28 square feet.

The affordable housing—including public housing—shortage in Hong Kong is considered severe and growing. The Society for Community Organization (SoCO), an NGO in Hong Kong focused on the underprivileged, notes that in 2012 there were some 100,000 people in the city living in “inadequate housing,” including cage apartments, cubicles, and rooftop huts (SoCO, 2014).

Stresses associated with Hong Kong’s housing conditions are further exacerbated by local patterns of income distribution. Hong Kong is a city that Business Insider considers...
to maintain the “greatest income inequality in the developed world” (Lubin, 2012). A similar sentiment was also supported by the Hong Kong government, which revealed that in 2012, 19.6% of the city’s population was living in poverty (Economic Analysis Division, 2013).

According to Demographia’s *International Housing Affordability Survey* (2014), the combination of relatively low household incomes and sky-rocketing housing prices has made Hong Kong the most unaffordable housing market in the world, a title it has held for four consecutive years. In addition, Demographia (2014) shows that Hong Kong also holds the title as the housing market with the smallest dwellings in the world. It can thus be argued that the living condition for the displaced poor—given their removal from their traditional neighborhoods, the breakdown of their community networks, the shortage in public housing provision, and the local poverty stresses—should not by default be viewed as an upgrade, and even in cases where for some the physical quality of their dwellings might be improved.

There is also a clear spatial dimension to the class conflict over space and place within Hong Kong. This is particularly evident on Hong Kong Island, where the property value increases and scale of displacement reveal a fundamental class transformation. It can be reasonably expected that Hong Kong Island will eventually emerge as a fully upper-class domain, with lower-income groups largely erased. For instance, in 2011 across Hong Kong, while median monthly domestic household income was HK $20,500 (US$2,645 monthly or US$31,740 annually), the average price of a 93 m² (1,000 ft²) dwelling on Hong Kong Island was US$1,636,442 (HK$12,588,015) and by 2013 the average price increased to US$1,928,113 (HK$14,831,640) (Rating and Valuation Department, 2014).

In exploring local capital reinvestment, Hong Kong reveals a unique scale of government intervention in redevelopment, and particularly when compared to the US context. Government intervention in Hong Kong also focuses—at least somewhat more broadly—in meeting the needs of lower-income groups. This is seen with the large-scale public housing provision, which in 2006 consisted of about 50% of dwellings in Hong Kong; yet public housing is still recognized as underprovided.

Importantly, within this context, Hong Kong shows that even when housing policy and associated redevelopment initiatives do, at least partly, consider the needs of the wider population, the extensive disruptions associated with redevelopment are monumental and daunting. Marginalized populations in particular face the greatest burdens from redevelopment and there is little interest in the populations displaced; conditions of gentrification that appear universal. Ultimately, there is no way to address the large-scale obstruction and breakdown in the provision of something as fundamental as housing, the neighborhood, and associated community networks and social support systems. The extensive profits of these upgrading processes to some subgroups, almost exclusively the wealthier—even when greater care is taken to the needs of the broader population, as seen in Hong Kong—come at grave personal, emotional, and physical costs to the more marginalized, and hence the social injustice.

With Hong Kong’s large-scale economic transformation, seen with the city becoming predominantly service-oriented, a question that emerges is whether the “social” upgrading in these neighborhoods is a reflection of “displacement” or “replacement”? In studying Randstad (1994) and London (2003), Chris Hamnett advanced the professionalization thesis, arguing that in large cities with a strong service economy, such as financial services, there is a slow increase in professional and managerial workers (the middle
class), combined with a slow reduction in the working-class population. In reflecting on London, Hamnett (2003, p. 2419) argues:

the slow reduction of the working class population in many inner-city areas is, in part, a result of a long-term reduction in the size of the working-class population of London as a whole (by a combination of retirement, death, out-migration or upward social mobility) and its replacement by a larger middle-class population. In other words, the key process may be one of replacement rather than displacement per se.

Hamnett’s study examines the transformation of London’s economic base through an analysis of London’s employment structure from the census and links it to changes in housing prices by borough. Hamnett’s critics, however, note that in the study of changing occupational structure it is not possible with existing data—including aggregated data from the UK census—to show either displacement or replacement (Davidson & Lees, 2010; Slater, 2009).

This study reinforces this critique. The Hong Kong census data, while important in our understanding of gentrification, cannot in itself show displacement. It is the qualitative analysis into (re)development processes that reveals this. Displacement becomes evident in the more detailed historical exploration of the neighborhoods. The removal of public housing from the neighborhoods, and the conversion of the former public housing land to green space for the wealthy, particularly given the severe pressures associated with affordable housing provision; the history of the protests, court battles, and erasure of Tiu Keng Leng by the government; and the supplanting of low-income tenements and ancient villages by large private development firms, despite extensive local protests—as with Tai Kiu Tsuen village—reveals the qualitative analysis needed to expose displacement.

Ultimately, gentrification in Hong Kong is linked to wider economic and urban restructuring processes—capital accumulation in a globalizing world, with the reorganization of labor markets and class conflict over space and place—and Hong Kong parallels other Western global cities in this regard. Despite Hong Kong’s rapid (re)development, the study of gentrification is scarce. There is extensive work that recognizes redevelopment, but it hardly ever addresses class conflict and displacement, topics that seem particularly necessary given the unique and extreme nature of local stresses associated with affordable and adequate housing provision. The negative social consequences of urban redevelopment are not a focus of discussion in Hong Kong, or in wider China, although it has been increasingly gaining public attention given growing housing pressures and resulting local protests.

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Notes
1. The TPU in Hong Kong is a similar concept to the census tract in the United States. They are both roughly the same spatial area; however, TPUs contain a larger population than typical US census tracts due to the higher population densities in Hong Kong.
2. In Hong Kong, all land is owned by the government. A premium is charged for land transactions under this land tenure system.
3. The research covers the years 1986–2006 because of Hong Kong’s tremendous urban restructuring during this period. These urban redevelopment processes, in part, reflect Hong Kong’s transition from an industrial-based economy to a specialized services and high-tech economy.
4. In the clustering process, instead of using randomly select initial seeds, we use a pre-defined initial seeds based on the status of the initial year (1986). One reason for this approach is to try and reveal further diversity of gentrification among the clusters, which would allow us to identify groupings in Hong Kong that have experienced different gentrification typologies.
5. TPUs that have been captured in these three clusters but that do not show gentrification are excluded from this calculation, after field surveys and historical analysis.
6. The Small Housing Policy was introduced in 1972. It entitles “an indigenous villager to apply for permission to erect for himself during his lifetime a small house on a suitable site within his own village.” The small house is designed for the occupancy by the indigenous villager himself or his family and should not exceed 700 ft² (65 m²) in the building footprint and it cannot be any more than three stories in height. It can be built either on privately owned land with premiums waived or on government land at a concessionary premium. The indigenous villagers refer to male descendants of villagers who were inhabitants of the village when the British took over the New Territories (Nissim, 1998).

While it does not explain all of the redevelopment in Yuen Long, there are two common practices used by developers in abusing the SHP to facilitate physical and social upgrading in the neighborhood. Developers might purchase the small houses from indigenous villagers after Certificates of Compliance are issued. Developers might even recruit qualified indigenous villagers to apply for the building license to develop a piece of land that is already owned by the developer (Hopkinson & Lao, 2003; Nissim, 1998). The relatively cheap land cost gives developers incentives to buy small houses and/or small house rights. If buildings exist on the parcel of land, multistorey buildings or extensive villa-type developments can then be built to attract upper-income earners. Due to the land scarcity and increasing housing demand, profits are extensive with these small house lot projects.

References


Ng, Mee Kam. (2002). Property-led urban renewal in Hong Kong: Any place for the community? *Sustainable Development, 10*(3), 140–146.

Ng, S. H., Pong, Raymond W., Kam, P. K., & Ho, Charles. (2004). The quality of life of residents in five urban renewal districts. In Andrew Leung & C. Y. Yiu (Eds.), *Building dilapidation and rejuvenation in Hong Kong* (pp. 79–95). Hong Kong: City University of Hong Kong.


Planning Department. (1993). Schedule of amendments to the draft plan entitled Kennedy Town and Mount Davis outline zoning plan no. S/H1/3 (re-numbered from S/H1/2) made by the Town Planning Board under the Town Planning Ordinance.


Rating and Valuation Department. (2014). *Private domestic—Average prices by class (from 1982)*. Hong Kong: Rating and Valuation Department.


