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# **When Neil Smith Met Pierre Bourdieu in Nanjing, China: Bringing Cultural Capital into Rent Gap Theory**

Wu Qiyang, East China Normal University  
Zhang Xiaoling, Hong Kong City University  
Paul Waley, University of Leeds

## **1. Introduction**

Nanjing is one of China's foremost centres of education, arguably second only to Beijing. It contains a number of leading universities and is the centre for the publication of school books in central and southern China. As capital of one of China's richest provinces, Jiangsu, and a city that served as national capital on a number of occasions, most recently in the 1930s, it carries a considerable weight and allure within China. Its leading status helps to ensure the size of its middle class, many of whom are intent on sending their children to one of the city's leading, or key, schools. Competition to enter these schools, however, is fierce, and since enrolment is based on residence in a school's catchment zone, there is high demand for apartments. Most key schools are located in city centre and inner city districts, where, ironically, much of the housing is in various states of disrepair, and this gives rise to the strange situation that sees well-off parents buying dilapidated apartments at above market rates solely so that their child can enter a prestigious school. We call this phenomenon *jiaoyufication*, seeing it as a variant form of education-led gentrification (Wu et al., 2015). Nanjing is certainly not the only city in China to experience this pressure on housing exerted by the requirements of school enrolment, but the situation varies somewhat from city to city. Nor is residence within the catchment zone the only means of obtaining admission to a key school, although it remains the principal one in most cities.

It is in recognition of the unusual nature of this gentrification process that we apply in this paper a familiar theory, Neil Smith's rent gap theory, in a new setting. Indeed, we go one step further and relate that theory to a different set of ideas, those of Pierre Bourdieu, in order to create an explanatory framework to help understand some of the specific characteristics of Chinese urbanism, but also in order to demonstrate how apparently discrepant theories can be used alongside each other in alien terrains. We are not trying to merge these theoretical worlds but to harness them in tandem. We do so in order to stimulate discussion, in the hope that others will follow what we recognize to be only a starting point down a rather unconventional path down which we hope others too will venture. We posit here two types of rent gap, the conventional, or Smithian, economic rent gap and a rent gap arising from the exploitation of cultural capital, a concept primarily linked to the work of Pierre Bourdieu. What we call the Bourdellian rent gap in cultural capital is, however, eventually converted back into economic capital, in conformance with Bourdieu's thinking. We should emphasize at the outset that we are involved here in an exploratory exercise of theory-stretching not theory-deepening, an exercise that has clear bounds and limitations given the particular nature of the context for this study.

We trial these ideas in two different terrains. One, our principal area of research, is in the inner city of Nanjing, where 'old' and outdated work unit housing is bought and sold at high prices because of its location near a key school. The other is in the newly developed suburbs of the city; here key schools have set up branch establishments, which, despite charging much higher tuition fees, remain highly sought after for their conveyor-belt capacity to help children on to a top

university and a life of comfort and professional esteem. We also identify two groups of beneficiaries which vary somewhat according to the location. Property developers exploit the economic rent gap, as one would anticipate, but only in the suburban setting. Individual households expect to capitalize on the rent gap in cultural capital whether they live in the inner city or in the suburbs.

These are the bare bones of our approach in this paper, which continues with a brief recapitulation both of Neil Smith's rent gap theory and its more recent adaptations and of Pierre Bourdieu's concept of cultural capital and its relevance to the Chinese context. The institutional history of housing and education in China is central to our argument; we introduce this next, before providing some further background on the spatial setting in which this research was conducted. In the substantive sections of the paper we apply the twin concepts of rent gap and cultural capital to the two geographical settings and 'tell the story' of jiaoyufication through this twin lens.

This paper is based on a larger investigation into the phenomenon of jiaoyufication, as it is occurring both in the inner city of Nanjing and in the new university campus suburb of Xianlin (Wu et al., 2015). This was a mixed method study for which we initially used GIS combined with data on property transactions obtained from estate agents to identify those areas within the catchment zones of key schools where most of the apartments bought for the sole purpose of school enrolment were located (these apartments are known as xuequ fang in Chinese, a term we have translated as edu-apartment). We validated the data through case-by-case checks at an office of the Land and Resource Administration Bureau of Nanjing and supplemented this with housing data for the years from 1996 to 2014 collected from the Statistics Bureau. We interviewed a number of key players, both randomly and strategically selected, primarily in inner city Nanjing but also in Xianlin. These included people in the education field -- a school vice principal and teachers, parents and grandparents living in edu-apartments, government housing officials and estate agents. The interviews were conducted in 2011 and 2012, with follow-up interviews in 2014. In addition, we undertook two questionnaire surveys, in 2011 and 2014, both of parents, one in the inner city and one in the suburbs.

## **2. Smith/ rent gap theory and Bourdieu/ cultural capital and the literature on education-led gentrification.**

We are dealing in this paper with two theoretical approaches that come at least partially from different ideological traditions -- one unapologetically Marxist, the other only partly informed by Marxism -- but both of them issuing from the 'Western academy' and conceived in reference to urban and social change in North America and Europe. However, as we argue in the paragraphs that follow, both separately can be seen to be highly relevant to conditions in China, and it is precisely for this reason that there is mileage to be made in bringing them together. In doing so, we seek not to orientalize them in some way but to reinforce the sense of their relevance in China and therefore by extension elsewhere around the contemporary world.

Neil Smith developed rent-gap theory initially to provide ammunition for his argument that gentrification signified a "back to the city movement ... by capital, not people" (Smith, 1979, p. 547). Later, he extended his argument and contended that, "Gentrification is part of a larger class strategy to restructure the economy" (Smith, 1982, p. 153; Smith, 2002). Smith proposed his theory as a riposte to neo-classical theories of land rent. The theory, stated simply, refers to the gap between actual ground rent and potential ground rent when land is used to its "highest and best"

purpose (Smith, 1979). When this gap is at a maximum, the pressures to develop are at their peak (Clark 1988).

Reactions to rent gap theory and its link to gentrification in the years since it was first proposed have gone through a number of partially concurrent stages. Initially it was criticized for a lack of empirical attestation. David Ley (1987), for example, provided some data from the Canadian census to attack the theory's main premise. This and other criticisms, such as a failure to take into account the impact of speculation on price movements, were firmly rebutted by Smith (1987) and Clark (1995). Meanwhile, Smith argued that the rent gap is only a condition of the gentrification process not a comprehensive explanation, and his work on the rent gap brought the interests of a wider array of interests and actors into the picture to reflect this theoretical fix (Smith, 2013; Smith 1996). Since then, work has moved in two directions. One is to undertake empirical studies to assemble evidence and establish and denominate ground rent. In a path-breaking work, Eric Clark (1988) traced the historical patterns of change in rent prices in Malmö. Like Clark, Dan Hammel (1999) used various proxy data to follow trends of devalorization in downtown Minneapolis land parcels over a long time span, finding evidence of a rent gap present in most of them to various degrees. More recently, Smith's arguments on the nature of shifts in uneven development as reflected in land values have been partially corroborated in data for New York (Porter, 2010).

The other direction has involved a significant spatial and conceptual expansion of rent gap theory, reflecting the planetary spread of globalization and responding to the increasingly aggressive strategies of the state and property developers around the world (Slater, 2015). Concepts such as "planetary rent-gap" (Slater, 2015) and neo-Haussmannization (Merrifield, 2014) have been brought into play to reflect a conviction that gentrification has become a worldwide strategy (Lees et al., 2015). Ernesto López-Morales (2011) has extended and enriched rent gap theory by arguing that local governments have used regulatory controls to devalue neighbourhoods in the Chilean capital Santiago in preparation for corporate 'investment'. A similar process of devalorization through the use of regulation in order to prepare the ground for large-scale reconstruction, involving close cooperation between the state and chaebol corporations, has been identified and described for Seoul and other South Korean cities by Shin Hyun Bang (2009a). These accounts underpin Smith's (2002) argument that gentrification far from being simply an individual-based, urban-rooted set of preferences but is above all a movement or urban strategy of capital reproduction on a global scale. In fact, as we will argue in the following section, the rent gap thesis also has its roots in the special institutional setting of education-led capital in the context of jiaoyufication in urban China.

Perhaps nowhere in the world might rent gap theory be more acutely relevant than in China, yet strangely enough the concept has seldom been used in a Chinese context (but see Wu, 1997, and Yang and Chang, 2007, among exceptions). Even those authors who do use the term refer to it almost as a taken-for-granted aspect of Chinese gentrification mechanisms (Li & Huang, 2006; He, 2007). This is surprising, not least because, at a broad level of political economy, rent creation and rent seeking lie at the centre of the workings of Chinese-style capitalism, and nowhere more so than in issues related to land (Ngo, 2008). As for the more specific context of rent gap theory, Wu Fulong wrote back in 1997 that, "The game of appropriating the rent gap has become a major factor responsible for the transformation of the built environment in the post-reform era" (p. 660; italics in original). This has become all the more so since. Indeed, although one might have difficulty in establishing the capitalized ground rent in China (but, *mutatis mutandae*, the same is true elsewhere), the differential between capitalized and ground rent is fundamental to the Chinese growth model.

Because the acquisition, earmarking and management of land for development is all in the hands of local governments, it is within the power of the state to manipulate the process in such a way as to extract maximum rent. While this may be necessary in order for the local state to fulfil its role as economic leader and growth maximizer, it leads to manifold procedural injustices as a result of the low levels of compensation paid to those whose houses are demolished and whose livelihoods are terminated. In other words, it creates the nationwide conditions for the exploitation of a rent gap.

The conventional reform-era Chinese rent gap operates in two different types of location. The first is in the inner city. Here, typically municipal governments and also on occasion state-owned enterprises dispossess the occupants of devalored 'old' housing (the age might range from several decades to a century or more) and relocate them, generally in distant suburbs; they then prepare the vacated land for leasing at vastly superior rates to property companies for up-market housing. Such a process has marked the face of all major Chinese cities, including Beijing, Shanghai and Nanjing (Shin, 2009; He, 2009; Wu et al, 2014). The second is on the urban edge. Here, city governments expropriate land from villagers in order to develop it and lease it off at a significant profit. The compensation they offer today, even after the passage of various measures designed to sweeten the pill for villagers, tends to be inherently problematic, for example, ignoring considerations of future income earning potential for middle aged and elderly farmers (Lin, 2015; Ong, 2014; Shin, 2016).

The all-encompassing and inherently violent (Sargeson, 2013) process of urbanization in China has produced yawning rent gaps of incalculable size. This has had further reverberations along the property chain. The main beneficiaries have been the new wealth-holding middle classes from the private sector and those managerial and professional members of state organizations who were allowed into the private housing market at highly advantageous rates. The first group has consequently been keen to translate its economic capital into cultural capital; this makes inter-generational transmission possible and an eventual conversion back into a more reliable stash of economic capital (Bourdieu, 1986). For the second group, the issue is more one of the retention of cultural capital across generations. In either case, the conventional understanding is that this is best effected through enrolment at a key school.

Bourdieu's concept of cultural capital is therefore of value here in a number of ways. In the first place it allows for the possibility of intergenerational transmission. It is in particular through the creation of a suitable habitus at home that values can be inculcated enabling the next generation to avail themselves of the cultural capital at their disposition. This is of course not to say that all forms of cultural capital are transmissible; embodied cultural capital, for example, disappears on its bearer's death. Secondly, Bourdieu's theorization recognizes the convertibility of different forms of capital, and in particular of cultural into economic capital, but economic capital is the ultimate currency: "It has to be posited simultaneously that economic capital is at the root of all the other types of capital and that these transformed, disguised forms of economic capital, never entirely reducible to that definition, produce their most specific effects only to the extent that they conceal (not least from their possessors) the fact that economic capital is at their root" (1986, 9).

Wu Xiaoxin has used Bourdieu's twin concepts of cultural and social capital to interrogate the nature of enrolment into China's key schools. In a major study of school enrolment centred on Nanning in southern China but drawing on research in other Chinese cities, Wu examines the tactics employed by parents to find a place for their child in a key school and the policies adopted by schools to derive maximum income from the process (Wu, 2014). Home tutors and extracurricular classes, in Beijing often run by organizations with close ties to key schools, are among the favoured methods used by aspiring parents (2014, p. 45). The desired result of all this expenditure of cultural

capital is a place in a leading university; the academic qualifications to be obtained represent what Bourdieu termed cultural capital in its institutionalized state, transmissible between generations and allowing the child to absorb cultural capital in its embodied state. Alongside cultural capital, however, as Wu (2013a) shows, social capital often needs to be deployed. Personal connections, or, broadly speaking, what the Chinese call *guanxi*, have on occasion to be brought into play to support other ploys adopted to ensure a place in the school of choice. In a similar study evaluating the factors that affect future professional ‘success’, Wu Yuxiao (2013c) argues that cultural capital is one among several impulses that shape the decisions that parents make about their children’s schooling and argues for a more detailed analysis of the factors behind family decision-making.

School enrolment is a prime means of acquiring cultural capital. It is important in an immediate sense to the extent that enrolment in a key school redounds on parents’ current social and cultural capital as reflected in inter-peer esteem, as well as that of their children. It is, however, risky and expensive. This is because the gains occur for the following generation and will not materialize for many years to come, thereby triggering the sort of rent gap in cultural capital on which we elaborate later in this paper. Alongside this, it involves significant expenditure primarily in buying an edu-apartment but also for the other sundry expenses involved. These circumstances are exacerbated by the way in which the commodification of housing interacts with the education system and the various regulations that surround enrolment into schools.

We are therefore faced with a dichotomous situation. On the one hand, tired old buildings are left standing despite the significant gains that could be realized through their removal and the redevelopment of the area. Rent gap theory here falls short in providing an explanation for this state of affairs. This is despite the fact that the Chinese party-state predicates its policy of urbanization on the exploitation of a rent gap that enables it to finance massive relocations of its population and the construction of the infrastructure that this entails (Lin & Zhang, 2015). On the other hand, Bourdieu’s concept of cultural capital is of great value for a number of reasons. It introduces a longer time frame, showing how cultural capital can be transferred from one generation to the next. It posits economic capital as the ultimate frame of reference, a sort of common currency into which cultural capital can be converted. It makes no attempt, however, to explicate changes -- or lack of them -- on the urban terrain. It does not set out to engage with the processes of capital conversion of neighbourhoods nor of the consequent displacement of poorer residents of long standing. All that is outside its purview, but very much within that of Neil Smith and rent gap theory. Synthesizing these two theories in this paper enables us to do a number of things. First, we show how theories can be cross-fertilized and why this can be beneficial; thus, we apply Smith’s rent gap to Bourdieu’s cultural capital to explain strategies pursued by Chinese families and their wider consequence in urban neighbourhoods. Secondly, we play the two theories off each other in three different environments, two in the inner city and one in the urban periphery (see Section 5), showing in the process how particular local contexts enable the interplay between these theoretical worlds to shed light family strategies in different urban settings.

It is to an account of these contextual factors that shape the ways in which parents invest in their family’s future that we turn to now.

### **3. Context of education and housing in China.**

#### **3.1 Key schools and catchment policy in Nanjing, China**

The differentiation between key and common (non-key) schools intensifies residential segregation through the introduction of a distinction between catchment zones for key schools and zones for common schools. In March 1986, the SEC issued its Notice Regarding Reform of Enrolment to Junior Middle Schools, requiring local education bureaus to actively enforce a school catchment zone policy in urban areas, according to which a student's school was to be determined by the location of the parents' registration on their residence permit, or hukou. This was the start of a revolution in school enrolment designed to eliminate what was seen as undue pressure on students caused by the entrance exam to junior middle school. From then on, enrolment was to be through residence in the catchment zone. Subsequent measures have been designed to reinforce this regulation. A decade later, in July 1996, the National People's Congress (NPC) approved the school catchment zone policy as part of its new Compulsory Education Law. This required that "local governments should rationally allocate places in elementary schools and junior middle schools to fulfil the requirements of enrolment in the nearest school". On 14 January 2014, the MOE again ordered that all junior middle schools must recruit students by catchment. Nevertheless, an 'escape clause' referring to exceptional circumstances has allowed local governments to keep the door ajar to other means of enrolment (Li, 2008).

Hukou remain a central feature of life in China and of government attempts to control the movement of the population, the size of its cities and the cost to capital of the urban workforce. Possession of an urban hukou allows residents a whole basket of welfare benefits including access to housing and to key schools. However, the situation is a very fluid one for at least two reasons. In the first place, while hukou were once hard to obtain for those who had no direct personal or professional ties to a city, city-specific reforms -- which are both discretionary and discriminatory -- have meant that it is now much easier for those from elsewhere to acquire a residence permit (Zhang & Tao, 2012; Zhang et al., 2014). For heads of household with adequate professional qualifications, it is often a case of disbursing the required sum of money. Secondly, the competitive nature of contemporary Chinese life and the belief in the benefits to be derived from a certain type of school education are both such that residence in the appropriate catchment zone registered through the hukou is not the only way to enter a key school, even if it is the most effective. As has been shown through extensive research (see for example Wang, 2014) and as the repeated orders from central government suggest, local governments have not towed the line but have raised substantial parts of their education budget through payments from parents in return for having their child accepted in the school of their choice. Thus fees are paid by parents who do not have local hukou registration, by parents who live out of the catchment area but have a local hukou, by parents who may have a local hukou but whose child has a poor school record, and by parents with a local hukou whose child has a good record but who live outside the catchment zone. In all these cases, it is common for parents to pay an entrance fee to the school, which is then divided between the school and the local government. Nevertheless, the principal route into a key school is through the purchase of an edu-apartment in the catchment zone.

There is in addition a further, important differentiation that exists in China's educational system. Some key primary and junior middle schools -- those with the best results -- are allowed by the state to 'convert' to private, or minban, status. Minban schools divide between those that charge the same lower rate as state schools and those that are truly private and charge a lot more, but in fact most converted schools fall into the latter category (for a detailed review, see Wu, 2014). A further layer of complexity is created by the fact that in Nanjing and elsewhere, key schools spawn private schools in the suburbs creating thereby powerful and wealthy education groups (jiaoyu jituan in Chinese) -- for example, the Nanjing Foreign Language School (NFLS) and Jinlin Education groups

-- that prefer to recruit students from their own junior middle or primary schools. For instance, at least 15% of junior middle school students of the NFLS are enrolled directly into its senior middle school, while the average acceptance rate of students from other key junior schools into the NFLS is below 8%. This accelerates the jiaoyufication process considerably by expelling low-income people from the catchment zones of converted schools. In peripheral areas of big cities like Nanjing, local villagers, many of whom have lost their land to urbanization, cannot afford to send their child to the nearby school within whose catchment zone they live if it is a private establishment able to charge high fees and select its own students.

### **3.2 Housing Policy Reform, Housing Market and the Register System**

After the 1995 housing reforms that set the scene for the large-scale commodification of housing in China, at least three types of housing came into existence in urban areas: commodified housing, public housing and illegal housing (Li & Huang, 2006). In this study, we focus on commodified housing. In the inner city, the commodified housing which parents buy as edu-apartments was built as housing for the employees of work units (danwei) and subsequently bought by these employees. In the suburbs, the edu-apartments are all in newly built housing blocks.

Work unit housing was regarded as a part of the material benefits of the low-pay planned economy from the early 1950s to the mid 1990s. In the pre-reform period, work units requested their superior departments for funds and asked the local authority for land. They then hired a construction unit or built by the housing themselves and distributed it according to worker rank and seniority, managing the housing as its property (Lu, 2006). Normally, the housing was located within the unit, with the residents belonging to, and registered on a collective hukou. In the reform era, work units were permitted to collect funds from their workers or in any other way, but that was the only significant change from the pre-reform period. As housing reform was introduced in and around 1995, work units were permitted to develop their property in a commercial way and build new well-appointed housing with gatekeepers. After the housing reform, all these three types of danwei housing were sold to their workers and their hukou gradually registered in their dwelling from the previous collective hukou.

The commodification of the bulk of China's urban housing has made it possible for parents to buy apartments within the catchments of key schools in order to be registered on their hukou as the residents and lawful owners of the property so as to subsequently send their child to a key school. In other words, the Compulsory Education Law of 1996 interacted with the hukou registration system, property registration regulations and the housing market to allow people to "buy their way" into the catchments of prestigious key schools. Therefore, since 2014, each school should recruit students only from its stipulated catchment and only those who have registered their hukou in an apartment physically within the catchment of that school (Fig. 1).

## **4. Characteristics of jiaoyufication area**

Despite the vicissitudes in Nanjing's fortunes, the reputation of its primary and middle school education remains one of the best in China. In 2012, there were 16 key primary and middle schools in the inner city containing a total of 26,000 enrolled students (14.76% of all schoolchildren in Nanjing). All its key schools have their main campuses in the inner city, which is encircled by the Ming wall and Xuanwu Lake in the east, and the Qinhuai River in the south (Fig 2). Over time,



some of these key schools in the inner city have collaborated with the property developers to form affiliated schools on new campuses in newly built suburban neighbourhoods.

(Fig. 1 about here)

Edu-apartments are bought and sold every three, six or nine years, reflecting the length of time spent at each school; students spend six years in primary school and three years in junior middle school. Most edu-apartments had once been work unit housing, generally built in the 1970s and 1980s to house employees of state or collective owned enterprises (Bray, 2005). The external features of these buildings are very old and poorly maintained and their internal layout is outdated. However, these properties still attract an inflated price when compared with nearby non edu-apartments (Fig 3a). They also have a very small floor area. For instance, in contrast to nearby newly built apartments, the layout commonly comprises a toilet without bathroom, tiny kitchen and no living room. The average price per unit of floor area in the catchment of No. 29 Junior Middle School was 25% higher than that of nearby non edu-apartments in old former work unit housing (Fig. 2A). The edu-apartments are also bought and sold more frequently than their non edu counterparts. As real estate agent C remarked, “Around 60% will sell on in three to six years.... Of course, personal connections are important for us. Luckily, I can help the same client buy and sell the same [edu-apartment]”. Living conditions in the catchment zones of key schools varies little compared with those in nearby neighbourhoods. For instance, in the No. 29 Junior Middle School catchment zone, the average size of an apartment in a jiaoyufication housing area is 57 m<sup>2</sup> per household, which is barely higher than the average of 54 m<sup>2</sup> for the inner city.

(Fig. 2 about here)

Many parents buy their edu-apartments with cash; banks will not give mortgages as a rule for apartments over 25 years old. We found that in only 30% of cases were parents able to use a mortgage to buy an edu-apartment. Specialist real estate agencies, one of whose roles is to help overcome such difficulties, are adept at helping minimize the additional legislated custom exchange taxation due when the property is resold within five years. A significant number of parents as a next step buy a ‘normal’ (that is, non-edu) apartment in the suburbs; this will be cheaper, larger, better appointed and more comfortable. They then move there, leaving their child with grandparents in the registered inner city edu-apartment. A visit to the gate of an elementary school at the beginning or end of the school day reveals that at least half of the children are being sent off or picked up by grandparents. Indeed, in our survey we found that 74% of children lived with their grandparents in the edu-apartment in the week moving to the ‘real’ family home in the suburbs in the weekend, while 11% lived there with their parents; 6% of houses were empty having been used exclusively for the purposes of school registration, and 9% had been rented out once the family had been registered as living there.

The edu-apartment is treated as a temporary pied-à-terre even though it is the family’s official domicile. Only rarely do families spend money on improving its internal appearance and refurbishing it in any way. Agent D put it in the following terms in reference to the environment of edu-apartments, “Dirty and messy? Of course. But the main thing is you don’t look to live there for long. [The parents] move out and move in. The vast majority just do simple maintenance work, like a lick of paint here and there and a change of bathroom fittings.” This echoed the findings of our questionnaire, conducted in 2014, where we found that the average ‘renovation’ spend on these apartments was only 57,710 RMB. As parent G admitted when talking about the flat she owned,

“This, my home? ... You know, it’s small and old ... It’s just to get into the elementary school and No. 29 Junior Middle School and that’s all”.

Jiaoyufication families appear to engage little with their neighbours, as we heard on numerous occasions. As for the exterior of the buildings, as most of the occupants are in edu-apartments, there is little perceived need to coordinate on improvements. According to Parent G, whose mother-in-law takes care of his son on school days, “We know little of our neighbours, and the neighbours are the same, I guess”. Finally, when it comes to selling their apartment -- generally after the six years of elementary schooling, sometimes after the three additional years of junior middle school -- there is almost guaranteed to be a willing buyer, and the price differential is normally enough to make a small profit, even after payment of commission to the estate agent. The consequence of these relatively quick transitions is that those fairly extensive parts of the inner city in which edu-apartments are to be found have changed little in terms of visual appearance. While there is some evidence of retail gentrification, in general the neighbourhoods wear the same rather shabby appearance as they did a few decades ago, and the class markers of gentrified quarters such as Xintiandi in Shanghai or Brooklyn in New York are for the main part absent. There is, however, a significant change in their social composition as ever growing numbers of long-standing residents have moved out, with inevitable consequences on school intake (for a fuller exploration of these issues, see Wu et al., 2015).

The conditions that prevail in Nanjing’s cramped inner city could not be more different from those that characterize the University Town in Xianlin, where distances are vast and many buildings are monumental. Xianlin is one of the earliest and biggest of the hundred or more university towns completed since the year 2000 in response to the government’s desire for a more highly trained workforce (Li et al., 2014). The development of the university town has not been a smooth process as a consequence of frequent policy changes (Ye et al., 2014). The problems encountered tend to be familiar ones, including the displacement of low-income former residents of the area before its development and the long distances that lower order service workers need to travel in order to reach Xianlin from their homes (Ye et al., 2014).

## **5. Extension from Economic Capital to Cultural Capital-led Rent-gap in Jiaoyufication**

### **5.1 Where cultural capital leads rent gap**

In this section we move from a broader discussion of the context of our study to introduce the terms and concepts which we deploy in this paper and show how they relate to the way that well-off parents in Nanjing choose their place of residence. To refer to rent gap theory in reference to the rather ramshackle largely privatised housing about which we are writing might appear counter-intuitive. However, as the following pages indicate, it provides an unexpected insight into urban change in Nanjing as well as an extension of rent gap theory into previously uncharted terrain (Slater, 2015).

In the inner city of Nanjing, capitalization of the economic rent gap is deferred because householders choose to forego potential economic profit through rent to gain cultural capital from educational qualifications that can then be converted into economic capital through improved job prospects and the like. The owners of the edu-apartment decide to sell when their child graduates rather than hold onto the dwelling; they are all but guaranteed a small return given the demand for school places, but this is not a rent gap that is being capitalized. There is, however, another kind of rent gap, one that again occupies different territory from the classic Smithian rent gap. This ‘new-

build rent gap' occurs when a key school links up with a property development company in a suburban development project. In this case, a school belonging to the same board as the inner city key school establishes a campus in the city outskirts. It works with the developer to build new green-field housing that will be much more expensive than suburban housing would otherwise be because of its proximity to the school. Here, while the purchasers of the apartments will acquire convertible cultural capital by placing their child in the key school, the economic rent gap is capitalized, at least initially, by the developer. For the parents, this is likely to remain their family home after graduation. There are then, we would argue, two types of rent gap at play, the Smithian economic rent gap and the Bourdelian rent gap in cultural capital, convertible into the economic domain. There are also two beneficiaries, the customary property developers for the Smithian rent gap and the families in the case of the Bourdelian rent gap. In the pages that follow we will bring these rent gaps together and examine them in more detail.

(Table about here)

The central aim of parents pursuing the acquisition of cultural capital is to buy an apartment and register it as their domicile on their hukou in order to place their children in the most prestigious (or key) junior middle schools. The fundamental importance of enrolment in a key school was underlined by a key school deputy principal whom we interviewed in 2014: "Although key schools cannot ensure each student's success, the basic quality is more solid [than in ordinary schools] and success more likely. When you compare the records of alumni, you can easily tell the difference". As we explained above, the easiest route into one of these junior middle schools is through graduation from an elementary school whose catchment zone overlaps with that of the junior middle school. Once in the junior middle school, the student should then have a clear route into a senior middle school as junior and senior middle schools tend to belong to powerful education boards schools as explained above. From these senior middle schools, the path through into a prestigious university should be simpler, thus greatly enhancing job and marriage prospects. This jiaoyufication process is, in other words, primarily about the acquisition of cultural capital, but as Bourdieu argued, this is ultimately convertible into economic capital.

In those central and inner city areas of Nanjing where jiaoyufication plays itself out, there are a number of actors involved. The first are the estate agents who specialize in edu-apartments and whose offices line the roads of these districts. Unlike the property developers whose work Smith had observed in Philadelphia and New York, their role is strictly to work as agents and intermediaries, and they are not in a position themselves to exploit the rent gap, although the jiaoyufication phenomenon has secured them a profitable market niche. Agent G commented in 2012: "The more specialized the [real estate] market, the more profits there are... Ever since the reform of education catchments, we have been aware of what parents have been appealing for... We tried creating some sub-agencies specializing in edu-apartments ... around 2010... Other [companies] followed suit". Agent B put it in these terms: "The price of an edu-apartment will certainly increase; they will always be scarce ... Of course, we live off commissions; the higher the price, the better our income".

The principal players in the story of jiaoyufication are the families themselves. The social and occupational composition of the parents of children in key schools has been the subject of a number of studies. Wu Weixin reports from his research in southern city of Nanning that over half of parents of children enrolled in one of the city's key schools were officials of the state or state organizations (2013b, p. 200). Wu's research is supported by the work of Yang (2005) and Li

(2008), who find that there is an uneven distribution of education resources among people of different social status in ten large and medium-sized cities. Our research showed that those with newly acquired wealth such as private entrepreneurs and middle ranking managers of SOEs, who in the pre-reform era had low status and income, demonstrated a higher capacity to acquire economic capital and a greater willingness than among other groups to invest in the production of cultural capital for their children.

The rent gap is contained in the convertible cultural capital gained by forsaking the possibility of living in less expensive accommodation in order to acquire an edu-apartment with its eventual capital gain through enhanced prospects of a better paid job and, broadly, more auspicious family circumstances. This can be considered a rent gap in cultural capital deferred on a generational basis. However, there is a variant to this. Not all owners of edu-apartments are heedless to the possibilities of taking advantage of a slightly more recognisable form of rent gap in the inner city. Some prefer to hold onto their edu-apartments expecting regeneration to occur and banking on higher compensation from the authorities than they could expect from immediate sale of the property (Hu et al., 2015). In this case, they would receive the economic capital from the capitalized ground rent as well as the convertible cultural capital from the enhanced prospects for their child.

Apartment blocks in the Emeiling neighbourhood of inner city Nanjing provide a good example (Fig 3b). Most of these properties have all the external features and internal layout of the type of edu-apartment described above. They are former danwei work-unit housing built at the time of the planned economy; as such, they are considered too old and dilapidated to satisfy modern accommodation requirements. A number of these blocks in Emeiling are on the edge of an already regenerated neighbourhood (Fig. 2B). According to estate agent H, however, regeneration will happen before long: “These apartments are edu-apartments too. However, their owners won’t sell since they expect a much higher financial compensation with their upcoming demolition and relocation”, higher, that is, than they could obtain if they sold their apartments on the market. The estate agent’s view echoed that of parent P, who told us that with the redevelopment of the next-door block occurring a couple of years ago, “We prefer to rent than sell... We’re just waiting, so we aren’t bothered [with the outside environment]”. Recent precedent meant that parents could be reasonably confident that they would be likely to receive significantly more in compensation than from the sale price -- in itself an interesting reflection on the apparently inequitable nature of compensation paid by municipal authorities for demolition and relocation.

The situation we have pictured in the preceding paragraphs is manifestly surprising, if not unusual in large Chinese cities such as Nanjing. Scruffy courtyards, rough-and-ready stairwells, poorly maintained buildings -- and yet the apartments change hands at a higher price than do those in recently completed buildings in nearby areas. In the first case, the rent gap is deferred and only capitalized once the child has established his or herself through employment, marriage and the like, and the family can then convert their ‘banked’ cultural capital into economic capital. In the second case, the potential gains from the rent gap are deferred for a period whose duration is unforeseeable but likely to be quite short. Those who stand to bank the cultural and economic capital are not the agents that Smith had in mind; here, they are not property developers but individual households. Nevertheless, the rent gap that is capitalized is a conventional economic one, at the point where the apartment block is demolished and compensation paid out, even if this is an unconventional form of ground rent.

## **5.2 New-build jiaoyufication in the Nanjing suburbs**

The geography of school education in China is in flux. As we mentioned earlier, a growing number of key schools have become part of groups of schools -- of which Nanjing Foreign Language School Education Group and the Jinlin Education Group are prime examples. These groups generally have one well-known and respected senior middle school located in a central area of the city and at least one other school in the suburbs. This latter, unlike its inner city sister school, is likely to be a so-called 'converted' school, able to charge much higher tuition fees. Such is the case with the Xianlin school that is part of the NFLS group. Many of these converted schools have been recently constructed by education groups operating in conjunction with property developers who have bought land leases from the local state. Our argument in this section is that developers, who are mandatorily required to include public facilities in their plans, are able to exploit a significant rent gap by selling apartments at high prices because of their vicinity to the top-quality school. It is clearly in the interests of the developer to cooperate with a key school group. The inflated price therefore relies on the alliance with the key school education group and becomes a win-win strategy for property developers with their house sales and the expanding education groups. Thus, this type of suburban new-build jiaoyufication is what Smith (1979) defined as production-led gentrification. As Agent I commented in reference to the activities of one of China's largest property developers, Vanke, in a new-build residential district within the catchment of Jinlin elementary and junior middle schools: "Why can Vanke's Gold Territory sell at a higher price than other property? ... [Because] Vanke is the largest real estate developer in China! ... Vanke collaborating with the Jinlin Education Group. ... They [the owners of apartments in Gold Territory] are sure to be able to send their children directly to the key elementary and junior middle schools."

That the price of newly built edu-apartments exceeds that of newly built apartments outside the catchment zone is determined by accessibility to key schools, which itself is underpinned by a pro-growth coalition comprising the key school group, a property developer affiliated in this case to Nanjing University, both municipal and district governments and their sub-branch bureaucracies (Jiang et al., 2016; Zhang, 2002). This is evidenced by the sudden rise in property prices in a four-year-old residential district, Nanda Heyuan in Xianlin (Fig. 2C). Apartments here had been sold upon completion in 2008 at bargain price to Nanjing University academics but at twice the price to non-academics. By the time remaining apartments were placed on the market in April 2012, prices had risen threefold, but when it was announced by the district government's education bureau that the buildings belonged within the catchment of Jinlin Education Group's elementary and junior middle schools, prices rose fourfold. According to Agent I: "Some older residential areas were also affected by the new key primary school in Xianlin and its newly formed catchment zone. For instance, [the price of edu-apartments in] Nanda Heyuan increased by 5000 RMB [per square meter (36%)] in two months all because it [part of the Jinlin school] catchment zone." An officer of the government agency responsible for the construction of Xianlin University Town further hinted at an institutional collusion between key school and local property developers: "Without the school.. .hm... the key school, [Xianlin] is not attractive... The key school not only brings an increase in population but also pulls along house prices... You know, Xianlin has been developed for over a decade, but it has yet to take off."

In contrast to inner city edu-apartments, the jiaoyufication zones in the suburbs are of recent construction, designed to look modern and be spacious and comfortable to live in, and are consequently regarded as the main residence of the family. Parent K, an academic at Nanjing University, remarked that: "We moved from Gulou [campus]. Our house [in Nanda Heyuan] is

much bigger than [the one in] Gulou ... We mainly live here and I take Metro Line 2 back to Gulou Campus if I have a class.”

It is clear therefore that what we see here is neither the rent gap in cultural capital exploited by parents of children attending the inner city key schools, nor is it the classic economic-capital Smithian rent gap. Instead, reflecting the contemporary complexity of gentrification (Doucet, 2014), it represents an extension of classic rent gap theory not only across territories but also through the absorption of apparently alien concepts. Here, the rent gap arises according to the pattern alluded to in Section 2. When urban government expropriates land from the rural collective, it pays compensation at well below market rates. Developers are then further able to exploit this situation first because of their working relationship with local government that enables them to obtain land leases at favourable rates and secondly because they are able to exploit an economic rent gap by selling apartments at high prices, higher than elsewhere in the locality. However, this rent gap, while economic in nature, exists because of the desire of parents to gain cultural capital by sending their child to a key school. After all, as Jayantha & Lam (2015, 20) argue, the quality of school has a more important impact on the price of an apartment than “high profile issues such as age of the building, floor level of the unit, and accessibility to [metro] stations.”

## **6. Concluding reflections: jiaoyufication, rent gaps and the socio-spatial transformation of Chinese cities**

Our goal in this paper has been to wrestle rent gap theory out of the trap of an excessive dependence on numerical evidence. While we would not want in any way to detract from the contribution of a number of outstanding papers that have given substantive weight to the theory, we have argued in this paper that rent gap theory can be opened up to theoretical approaches that might have appeared antithetical. We have drawn therefore loosely not only on the work of Neil Smith but also crucially on the concept of different forms of capital, and in particular cultural capital, associated primarily with Pierre Bourdieu. Thus, we have talked about a classic Smithian rent gap and a Bourdelian rent gap. We do so in a spirit not of debunking nor of new theory-making, but more modestly and perhaps even playfully of exploration and invitation, invitation to others to follow suit, critique and hopefully refine our approach. We are not claiming that this theoretical synthesis would serve in every context.

These two types of rent gap are exemplified in the two different locations that have been discussed in this paper. In Nanjing’s inner city, parents pay over the odds for a dilapidated edu-apartment in order to enrol their child in a key school (while often imposing the social reproductive burden on the child’s grandparents) in the assumption that the family will reap the rewards at a later date. A variant of this sees the parents holding onto their edu-apartment in order to capitalize on a rent gap when their apartment block is demolished and compensation is paid out in addition to later gains. In outer Nanjing, parents buy an apartment in an expensive suburb so as to secure a place for their child in what is effectively a school affiliated to the inner city key school, but one that charges much higher tuition fees. There are clearly many departures here from Neil Smith’s conception of rent gap theory, not the least of which is the fact that the beneficiaries of this jiaoyufied rent gap are the families that cash in on gains in cultural capital as well as, more predictably, property developers who work alongside rent-seeking governments and exploit the rent gap between land lease purchase and sale of apartments in the catchment of a key school. Applying the concept of cultural capital in this way enables us to bring individual families into the rent-gap equation, to

extend rent-gap theory by including the strategic calculations of specific agents and to make sense of the apparent contradiction according to which, despite being property owners, some families nevertheless defer the possibility of capitalizing on rent gaps.

The idea of the jiaoyufied rent gap plays its part in bringing together the two original diverse starting points in the gentrification literature which have since been brought together and thrown apart on numerous occasions. Thus the dynamics of the jiaoyufied rent gap can be deconstructed into a pair of interweaving but opposing dual forces -- exogenous and endogenous factors -- which can be loosely mapped onto production and consumption orientations respectively. The production-inclined exogenous factors include institutional arrangements, the scarcity of edu-apartments on the market and the pro-growth strategies pursued by schools and developers. The consumption-inclined endogenous factors include the complexity of both the personal need for middle class self-identification through the acquisition of cultural capital (Bourdieu,1984) and individual investment strategies to exploit economic rent gaps where possible. Since cultural as well as economic capital is devalued if it cannot be reproduced efficiently due to the fear of status decline, middle class parents are more eager to preserve and accumulate capital whether economic or cultural, in their social (re)production (Bourdieu, 1998). The crucial point for our argument is that, following both Smith and Bourdieu, we consider the endogenous forces to be derived from, and submissive to, exogenous or structural factors. In other words, we agree both with Bourdieu and the current thinking that animates gentrification studies in giving due evidential weight to the acquisition of both economic and cultural capital but also in insisting that cultural capital converts into economic capital

The social consequences of jiaoyufication go far beyond the results from which these arguments are drawn. The emergence of a jiaoyufied rent gap can be viewed as one part of a larger transition to a society built around the superior power of economic over political capital. This transformation adds further weight to the view that the accumulation of economic capital counts for more than the acquisition of cultural capital, for example through educational qualifications. Cultural capital is therefore a dependent resource in social reproduction or class remake, notwithstanding the fact that these two categories of capital can be reinforced or mutually transformed through a shifting of habitus (Bourdieu, 1984; Bourdieu & Passeron, 1990).

This social transformation has important spatial ramifications. City centre and inner city areas increasingly become the preserve of well-off sections of the middle classes, not only through the violent processes of gentrification witnessed in Shanghai and other major cities, but also as a consequence of the more subtle penetrations occasioned by jiaoyufication. The continued presence of key schools in the inner city merely intensifies gentrification processes. At the same time, the urban periphery is also being transformed. With city governments like those of Nanjing, Shanghai and Guangzhou establishing university towns and science parks on converted rural land at the edge of the city, the establishment of key schools in the area plays a crucial role in encouraging highly qualified people to relocate, further destabilizing the lives of peri-urban farmers.

## References

Bourdieu, P. (1984) *Distinction: A Social Critique of the Judgment of Taste* (Cambridge, Mass.: Harvard University Press).

- Bourdieu, P. (1986) The forms of capital, in: J. Richardson (Ed.) *Handbook of Theory and Research for the Sociology of Education* (New York: Greenwood), pp. 241–258.
- Bourdieu, P. (1998) *The State Nobility: Elite Schools in the Field of Power* (Stanford, CA: Stanford University Press).
- Bourdieu, P. & Passeron, J. C. (1990) *Reproduction in Education, Society and Culture* (London: Sage).
- Bray, D. (2005) *Social Space and Governance in Urban China: The Danwei System from Origins to Reform* (Stanford, CA: Stanford University Press).
- Clark, E. (1988) The rent gap and transformation of the built environment: Case studies in Malmö 1860–1985, *Geografiska Annaler. Series B. Human Geography*, 70(2), pp.241–254.
- Clark, E. (1995) The rent gap re-examined, *Urban Studies*, 32(9), pp. 1489–1503.
- Doucet, B. (2014) A process of change and a changing process: Introduction to the special issue on gentrification, *Tijdschrift voor Economische en Sociale Geografie*, 105(2), pp. 125–139.
- Hammel, D. J. (1999) Gentrification and land rent: A historical view of the rent gap in Minneapolis, *Urban Geography*, 20(2), pp.116–145.
- He, S. (2007) State-sponsored gentrification under market transition: The case of Shanghai, *Urban Affairs Review*, 43:2, 171–198.
- He, S. (2010) New-build gentrification in central Shanghai: Demographic changes and socioeconomic implications, *Population, Space and Place*, 16(5), pp. 345–361.
- Hu, Y., Hooimeijer, P., Bolt, G. & Sun, D. (2015) Uneven compensation and relocation for displaced residents: The case of Nanjing, *Habitat International*, 47, pp. 83–92.
- Jayantha, W. M. & Lam, S. O. (2015) Capitalization of secondary school education into property values: A case study in Hong Kong, *Habitat International*, 50, pp. 12–22.
- Jiang, Y., Waley, P. & Gonzalez, S. (2016) Shifting land-based coalitions in Shanghai’s second hub, *Cities*, 52, pp. 30–38.
- Lees, L., Shin, H. B. & López-Morales, E. (2015) Conclusion: global gentrifications, in: L. Lees, H. B. Shin & E. Lopez-Morales (Eds) *Global Gentrifications: Uneven Development and Displacement* (Bristol: Policy Press), pp. 441–452.
- Ley, D. (1986) Alternative explanations for inner-city gentrification: A Canadian assessment, *Annals of the Association of American Geographers*, 76(4), pp. 521–35.
- Li, F. (2008) An analysis of the present school choice situation in compulsory education in Beijing [北京市义务教育阶段择校的现状分析], *Educational Science Research* 2, pp. 26–30.
- Li, S. & Huang, Y. (2006) Urban housing in China: Market transition, housing mobility and neighbourhood change, *Housing Studies*, 21(5), pp. 613–623.
- Li, Z., Li, X., & Wang, L. (2014) Speculative urbanism and the making of university towns in China: A case of Guangzhou University Town, *Habitat International*, 44, pp. 422–431.
- Lin, G. C. S. (2015) The redevelopment of China’s construction land: Practising land property rights in cities through renewals, *The China Quarterly*, 224, pp. 865–887.
- Lin, G. C. S., & Zhang, A. (2015) Emerging spaces of neoliberal urbanism in China: Land commodification, municipal finance and local economic growth in prefecture-level cities, *Urban Studies*, 52(15) pp. 2774–2798.
- López-Morales, E. (2011) Gentrification by ground rent dispossession: The shadows cast by large scale urban renewal in Santiago de Chile, *International Journal of Urban and Regional Research*, 35(2), pp. 330–357.
- Lu, D. (2006) *Remaking Chinese Urban Form: Modernity, Scarcity and Space, 1949-2005* (London: Routledge).



- Merrifield, A. (2013) The urban question under planetary urbanization, *International Journal of Urban and Regional Research*, 37(3), pp. 909–922.
- Ngo, T-W. (2008) Rent-seeking and economic governance in the structural nexus of corruption in China, *Crime, Law, and Social Change*, 49(1), pp. 27–44.
- Ong, L. H. (2014) State-led urbanization in China: Skyscrapers, land revenue and ‘concentrated villages’, *The China Quarterly* 217, pp. 162–179.
- Porter, M. (2010) The rent gap at the metropolitan scale: New York City’s land-value valleys, 1990–2006, *Urban Geography*, 31(3), pp. 385–405.
- Sargeson, S. (2013) Violence as development: Land expropriation and China’s urbanization, *The Journal of Peasant Studies*, 40(6), pp. 1063–1085.
- Shin, H. B. (2009) Residential redevelopment and the entrepreneurial local state: The implications of Beijing’s shifting emphasis on urban redevelopment policies, *Urban Studies*, 46(13), pp. 2815–2839.
- Shin, H.B. (2016) Economic transition and speculative urbanisation in China: Gentrification versus dispossession, *Urban Studies* 53(3), pp. 471–489.
- Slater, T. (2015) Planetary rent gaps, *Antipode*, DOI: 10.1111/anti.12185.
- Smith, N. (1979) Toward a theory of gentrification: A back to the city movement by capital, not people, *Journal of the American Planning Association*, 45(4), pp. 538–548.
- Smith, N. (1982) Gentrification and uneven development, *Economic Geography*, 58(1), pp. 139–155.
- Smith, N. (1987) Gentrification and the rent gap, *Annals of the Association of American Geographers*, 77(3), pp. 462–465.
- Smith, N. & Williams, P. (Eds) (1986) *Gentrification of the City* (Boston: Allen & Unwin).
- Smith, N. (1996) *The New Urban Frontier: Gentrification and the Revanchist City* (London: Routledge).
- Smith, N. (2002) New globalism, new urbanism: Gentrification as a global urban strategy. *Antipode* 34(3), pp. 427–451.
- Smith, N. (2011) Uneven development redux, *New Political Economy*, 16(2), pp. 261–265.
- Waley, P. (2016) Speaking gentrification in the languages of the Global East, *Urban Studies*, 53(3), pp. 615–625.
- Wu, F. (1997) Urban restructuring in China’s emerging market economy: Towards a framework for analysis, *International Journal of Urban and Regional Research*, 21(4), pp. 640–663.
- Wu, Q., Cheng, J., Chen, G., Hammel, D. & Wu, X. (2014) Socio-spatial differentiation and residential segregation in the Chinese city based on the 2000 community-level census data: A case study of the inner city of Nanjing, *Cities*, 39, pp. 109–119.
- Wu, Q., Zhang, X. & Waley, P. (2015) Jiaoyufication: When gentrification goes to school in the Chinese inner city, *Urban Studies*, doi:10.1177/0042098015613234.
- Wu, X. (2013a) The power of social capital in school choice in a Chinese city, *Australian Journal of Education*, 57(1), pp. 48–59.
- Wu, X. (2013b) The school choice market in China: A case study, *Educational Research*, 55(2), pp. 195–218.
- Wu, Y. (2013c) Educational opportunities for rural and urban residents in China, 1978-2008 Inequality and evolution, *Social Sciences in China* , 34(3), pp. 58–75.
- Wu, X. (2014) *School Choice in China: A Different Tale?* (London: Routledge).

- Yang, D. P. (2005) A research into the senior high school students' social class stratification and education acquisition [高中阶段的社会分层和教育机会获得], *Tsinghua Journal of Education*, 26(3), pp. 53–59.
- Yang, Y-R. & Chang, C-H. (2007) An urban regeneration regime in China: A case study of urban redevelopment in Shanghai's Taipingqiao Area, *Urban Studies*, 44(9), pp. 1809–1826.
- Ye, C., Chen, M., Chen, R. & Guo, Z. (2014) Multi-scalar separations: Land use and production of space in Xianlin, a university town in Nanjing, China, *Habitat International*, 42, pp. 264–272.
- Zhang, L., & Tao, L. (2012) Barriers to the acquisition of urban hukou in Chinese cities, *Environment and Planning A*, 44(12), pp. 2883–2900.
- Zhang, M., Zhu, C.J., & Nyland, C. (2014) The institution of hukou-based social exclusion: A unique institution reshaping the characteristics of contemporary urban China, *International Journal of Urban and Regional Research*, 38( 4), pp. 1437–1457.
- Zhang, T. (2002) Urban development and a socialist pro-growth coalition in Shanghai, *Urban Affairs Review*, 37(4), 475–499.