

Li, Xin; Kleinhans, Reinout; van Ham, Maarten

Working Paper

Ambivalence in Place Attachment: The Lived Experiences of Residents in Declining Neighbourhoods Facing Demolition in Shenyang, China

IZA Discussion Papers, No. 10515

Provided in Cooperation with:

IZA – Institute of Labor Economics

Suggested Citation: Li, Xin; Kleinhans, Reinout; van Ham, Maarten (2017) : Ambivalence in Place Attachment: The Lived Experiences of Residents in Declining Neighbourhoods Facing Demolition in Shenyang, China, IZA Discussion Papers, No. 10515, Institute of Labor Economics (IZA), Bonn

This Version is available at:

<https://hdl.handle.net/10419/161138>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

DISCUSSION PAPER SERIES

IZA DP No. 10515

**Ambivalence in Place Attachment:
The Lived Experiences of Residents in
Declining Neighbourhoods Facing Demolition
in Shenyang, China**

Xin Li
Reinout Kleinhans
Maarten van Ham

JANUARY 2017

DISCUSSION PAPER SERIES

IZA DP No. 10515

Ambivalence in Place Attachment: The Lived Experiences of Residents in Declining Neighbourhoods Facing Demolition in Shenyang, China

Xin Li

*Delft University of Technology and
Chinese Academy of Sciences*

Maarten van Ham

Delft University of Technology and IZA

Reinout Kleinhans

Delft University of Technology

JANUARY 2017

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ABSTRACT

Ambivalence in Place Attachment: The Lived Experiences of Residents in Declining Neighbourhoods Facing Demolition in Shenyang, China

This paper investigates the place attachment of residents in declining neighbourhoods that are facing demolition in Shenyang, China. Through in-depth interviews with homeowners living in *danwei* communities, or urban villages, at the pre-demolition phase, this paper reveals the strong connection between place attachment and both positive and negative lived experiences. The homeowners cleverly mobilise stable neighbourhood features and the challenges brought by neighbourhood changes to relieve their life constraints, such as the form of dwellings, low living costs and the place identity, which contributes to the development of place attachment. However, various forms of neighbourhood decline have negative effects on their place attachment. Urban redevelopment, therefore, confronts residents with a dilemma concerning the relative importance of their sense of rootedness in the neighbourhood and the desire to relocate to achieve better living conditions. By exploring this ambivalence, this paper displays how neighbourhood decline, and the impending demolition, affect residents' lived experiences and how residents in turn reconstruct their place attachment.

JEL Classification: O18, R23

Keywords: place attachment, ambivalence, lived experiences,
declining neighbourhoods, urban redevelopment, China

Corresponding author:

Xin Li
OTB - Research for the Built Environment
Faculty of Architecture and the Built Environment
Delft University of Technology
P.O. Box 5043
2600 GA Delft
The Netherlands
E-mail: X.Li-6@tudelft.nl

1. Introduction

Neighbourhood redevelopment projects often involve the large-scale demolition of houses and the forced relocation of residents (Popkin, 2010; Posthumus *et al.*, 2013). Forced relocation is highly frequent in urban redevelopment projects in China. It is estimated that between 2008 and 2012 approximately 12.6 million households were involved in the redevelopment of declining neighbourhoods initiated by the central government of China (Li *et al.*, 2016; MOHURD, 2013). Previous studies in the United States and Western Europe have shown that the demolition of a neighbourhood involves more than tearing down physical buildings. It can cause dramatic changes to the daily routines and living strategies that residents have developed in their declining neighbourhoods over a long period of residence (Manzo *et al.*, 2008; Vale, 1997; Popkin, 2010). Demolition and the associated forced relocation are especially threatening to less mobile residents, who are often low-income, aged, or have severe mental or physical problems (Fried, 1963; Gilroy, 2012; Manzo *et al.*, 2008; Popkin *et al.*, 2004; Posthumus & Kleinhans, 2014).

Place attachment is associated with the affection residents have for their neighbourhood (Anguelovski, 2013; Fried & Gleicher, 1961). The existing literature presents various findings about the influence of urban redevelopment on the place attachment of residents. Some argue that the extent to which urban redevelopment affects place attachment is closely related to the lived experiences of residents (Manzo *et al.*, 2008; Manzo, 2014). For instance, several studies report that demolition of public housing disrupts place attachment, as residents are forced to leave their familiar environment and social networks (Fried, 1963, 2000; Fullilove, 1996; Manzo, 2008). However, other research has found that some residents may be less attached to their neighbourhoods due to the deterioration of various aspects (e.g. physical declines or the high population turn over) (Bailey *et al.*, 2012), with strong place attachment not necessarily translating into a strong willingness to stay (Wu, 2012).

The diverse research outcomes above about residents' place attachment and the impact of urban redevelopment on residents may be closely related to the ambivalent feelings that residents have about their neighbourhood experiences. A resident can feel attached to their neighbourhood while neighbourhood declines may damage his/her attachment and further drive him/her to leave. Thus ambivalence in the neighbourhood experiences of the resident has not yet been adequately studied in relation to the influences of urban redevelopment on residents (Manzo, 2014; Vale, 1997). In addition, previous literature has focused on place attachment *during* and *after* forced relocation in Western Europe and the United States, or merely in deprived neighbourhoods, without any indication of whether they have been redeveloped or not. There is a lack of research on residents' place attachment in declining neighbourhoods in the *pre-demolition/pre-relocation* phase (Goetz, 2013; Manzo, 2008; Tester *et al.*, 2011). This gap is even larger in research focussing on China, despite its large-scale demolition of dwellings and the forced relocation of millions of residents (He & Wu, 2005; Li *et al.*, 2016). Moreover, the literature from the US and Europe almost exclusively concerns redevelopment of public or social housing, while redevelopment in Chinese cities targets neighbourhoods with owner-occupied housing. This difference in ownership in redevelopment areas is bound to have major

implications for the impact of impending relocation on residents' lived experiences and place attachment.

Inspired by these concerns and knowledge gaps, this paper aims to investigate homeowners' lived experiences in declining *danwei* communities and urban villages that face demolition, focusing on the city of Shenyang in China. It highlights (1) aspects of the declining neighbourhoods that residents are attached to and why, (2) the ambivalence in their place attachment, and (3) the influence of neighbourhood changes and the impending demolition and relocation on their place attachment. The following section discusses the various dimensions of place attachment and locates these in the context of declining neighbourhoods facing demolition. Section 3 introduces the research area and methods, while Section 4 explores the ambivalence in residents' lived experiences and attachment and the impacts of the demolition on residents. The final section offers our conclusions.

2. Place attachment in traditional urban neighbourhoods in China

2.1 Place attachment and its dimensions

Place attachment is defined as an affective bond between people and places (Altman & Low, 1992; Giuliani & Feldman, 1993; Hidalgo & Hernández, 2001; Scannell & Gifford, 2010a). Place identity and place dependence are commonly recognized as the two most important dimensions of place attachment (Williams *et al.*, 1992; Williams & Vaske, 2003). According to Proshansky (1978, p. 155), *place identity* is that aspect of personal identity that is related to a specific physical environment or the symbols that the physical setting represents. It can define who we are (see also Raymond *et al.*, 2010). It indicates the cognitive and emotional connection between place and people, which operates through the 'means of a complex pattern of conscious and unconscious ideals, beliefs, preferences, feelings, values, goals, and behavioural tendencies and skills relevant to this environment' (Proshansky, 1978, p. 155). Place identity is embedded in the long-term history and social-cultural process experienced by a family or social group, which helps people generate a sense of distinctiveness and rootedness (Fried, 2000; Twigger-Ross & Uzzell, 1996).

Place dependence, on the other hand, concerns the functional scale of place attachment, which emphasizes the quality, utility or value of a place in relation to satisfying people's needs (Ramkissoon *et al.*, 2013, p. 554; Stokols & Shumaker, 1981). The concept of place indicates the social and physical dimensions of place dependence. 'Place' is defined as the experience of space and the collection of 'meaningful locations' (Fullilove, 1996; Lewicka, 2011). Place is an entity; it is a real physical setting with certain tangible physical attributes which must meet people's needs in relation to surviving day by day and achieving their longer term goals (Fullilove, 1996; Lewicka, 2011; Scannell & Gifford, 2010a, 2010b). These physical features, therefore, cultivate the *physical dimension* of place attachment, which can also be interpreted as the physical dimension of place dependence.

Place is also an emotional, cultural and social arena which generates a sense of ease, familiarity and affection (Fried, 2000; Lewicka, 2011; Relph, 1976; Scannell & Gifford, 2010a). These

can be regarded as the *social dimensions* of place dependence. In addition, previous research also indicates the economic dimensions of place dependence, as residents can benefit economically, even when living in declining neighbourhoods, if they are close to job opportunities, pay low rent or can run neighbourhood-based businesses (He *et al.*, 2010; Luo, 2012; Manzo *et al.*, 2008). Figure 1 summarizes of the dimensions of place attachment that will be discussed in Section 2.3 and the empirical analysis of Section 4.

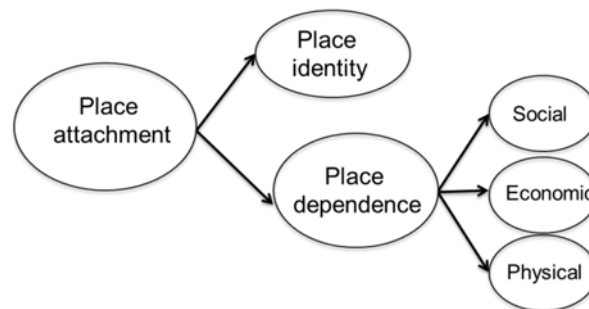


Figure 1: The dimensions of place attachment

Source: Authors

The definition of place attachment above refers to a broad range of places, including residence and recreation places in general. This paper focuses in particular on place attachment in declining neighbourhoods facing demolition.

2.2 Place attachment in declining neighbourhoods facing demolition

Brown & Perkins (1992) have pointed out that the development of place attachment entails a cost-benefit evaluation process. Residents continually assess, adjust to and negotiate both the stable and changing circumstances in neighbourhoods (Brown & Perkins, 1992; Brown *et al.*, 2003; Giuliani & Feldman, 1993). This is especially the case for those who have limited resources and tend to remain in a declining neighbourhood. For example, Vale (1997) used the concept of ‘empathology’ to refer to the attitudes of residents toward an environment that is both ‘a source of empathy as well as a locus of pathology’ (Vale, 1997, p. 159). He displayed the ambivalence in the lived experiences of these residents who are living in declining public housing communities, demonstrating that residents are both socially and economically dependent on their neighbourhoods, while their quality of life is affected by neighbourhood disorder, in his case study, due to factors such as drugs and unemployment (Vale, 1997).

The lived experiences of residents in the declining neighbourhood can affect their housing behaviour and the degree to which they are attached to a declining neighbourhood (Bailey *et al.*, 2012; Manzo, 2014; Wu, 2012). The material and spiritual support that residents gain from the declining neighbourhood can alleviate the life constraints they must deal with, such as poverty, unemployment or mental and physical disability. These factors contribute to their place attachment (Anguelovski, 2013; Brown *et al.*, 2003; Corcoran, 2002; Fried & Gleicher, 1961; Wu, 2012). However, the degradation of the quality of life caused by neighbourhood decline disrupts residents' sense of place and identity, driving some to leave (Feijten & van Ham, 2009; Livingston *et al.*, 2010; Wu, 2012).

Many studies emphasize the importance of place attachment in declining neighbourhoods and the disruptions which result from forced relocation (Fried, 1963; Fullilove, 1996; Manzo *et al.*, 2008). Some studies indicate that an involuntary move can interrupt a resident's routines and social networks, and cause a discontinuity to their place identity (Brown & Perkins, 1992; Fried, 2000; Manzo *et al.*, 2008). For example, Fried (1963) reveals the grief and affliction felt by residents after the forced movement out of their home in working-class communities. However, these studies have not paid adequate attention to the ambivalence of feelings that residents have in relation to their lived experiences and to neighbourhood redevelopment (Manzo, 2014). Recognizing this ambivalence in residents' lived experience and place attachment in declining neighbourhoods may assist us to clarify vital issues, revealing which dimensions of place attachment – and to what extent and why – are significant to residents and how urban redevelopment can affect residents. Moreover, only a small body of research focuses on the influences of urban redevelopment on residents' attachment to their declining neighbourhoods in the pre-demolition/pre-relocation phase (Manzo *et al.*, 2008; Manzo, 2014). This means that there is a lack of knowledge about an important phase of urban redevelopment (Kearns & Mason, 2013), which limits our capacity to develop a deeper understanding and create an overview of the impact of redevelopment on residents, especially in relation to issues such as time and context (see also Kleinhans & Kearns, 2013).

2.3 Place attachment in traditional and declining neighbourhoods in urban China

This paper investigates homeowners' place attachment to declining neighbourhoods, i.e., *danwei* communities and urban villages facing demolition in China. Danwei community is established by state-owned enterprise (SOE¹) or collectively-owned enterprise (COE²) to reside their employees. Urban villages are villages that are within urban areas due to the urban expansion. Previous studies of residents' attachment to declining neighbourhoods have usually focused on renters who are living in public or social housing in Western Europe and the US. The resulting body of knowledge may not be applicable to the Chinese situation because of the differences in development history, social composition and the physical environment of neighbourhoods in China and Western countries. In China, declining neighbourhoods such as *danwei* communities and urban villages have many homeowners. These residents have developed a unique place attachment based on the specific residential and local histories associated with such urban forms (Wu & He, 2005).

Residents of *danwei* are socially, physically and economically dependent on these communities. The *danwei* contains sources of employment associated with industrial production and other enterprises, and also provide those employed with other services and social welfare (Bjorklund, 1986; Bray, 2014; Wang & Chai, 2009). *Danwei* communities provide residential accommodation to danwei's employees in a relatively homogenous social space, where neighbours are also work colleagues. Residents living in *danwei* communities thus often have strong social capital and close relationships due to the long length of residence and shared work and social experiences. In addition, the residents develop a strong place identity embedded in the *danwei* system:

The identity [of officials (technical employees) or common workers] is in fact [a] ‘danwei identity’. A danwei identity hinders the freedom of mobility of workers, because mobility without permission (from a worker’s danwei) will cause the loss of personal identity (income, position, etc.). (Lu, 1989, p.77)

Urban villages are found within a city or on the urban periphery. They are a traditional type of neighbourhood, in which the indigenous residents have lived for generations. Local residents living in urban villages have rural *hukou* (resident permits), and their land is collectively owned by all of the villagers. The villagers, therefore, have developed a place identity rooted in their generation-long family histories related to these urban villages. They have also formed shared norms and customs. Generally, in urban villages, if residents are from the same family clan, they will also share the same surname (Hin & Xin, 2011; Wang *et al.*, 2009), and villagers who have local *hukou* are usually entitled to privileges not shared by residents who do not. For example, they have rights to welfare (e.g. a pension) from the village community or have shares in collective companies. Collective company is collectively owned by the villagers based on the land and other resources of the village. It can provide villagers with jobs and monetary or in-kind benefits. It is also responsible for the management of the village, e.g. by providing public facilities (Liu *et al.*, 2010).

However, against the backdrop of economic reform and rapid urbanization in China, both the *danwei* and urban villages have experienced disinvestment and decline at multiple levels (He *et al.*, 2008; Wu & He, 2005). Population turnover has become more common in these neighbourhoods, with those who have more resources moving out, while those who are less mobile, due to poverty or ageing, remaining trapped (He *et al.*, 2008). Also, many residents who are also employees in danwei or collective companies in urban village become unemployed due to the collapse of these companies. These neighbourhoods have thus become enclaves characterized by a migrant population of renters on the one hand, and homeowners in the aged or low-income categories, on the other (He *et al.*, 2008; He *et al.*, 2010). These transitions have diverse impacts on homeowners’ sense of place, residential satisfaction and residential mobility in these neighbourhoods. Some research has revealed that place attachment and social interaction remain stronger in these neighbourhoods than in newly built neighbourhoods, however this strong place attachment does not contribute to the residents’ willingness to stay (He *et al.*, 2008; Wu & He, 2005; Wu, 2012; Zhu *et al.*, 2012). The strong sense of place alongside an intention to move reflect the ambivalent feelings of residents in relation to their neighbourhood experiences. In China, numerous old neighbourhoods have undergone demolition, initiated by government and/or developers (Hin & Xin, 2011; Li *et al.*, 2016). Before moving, residents are usually aware of the type and the amount of compensation they will receive from government or developers. This not only allows them to make a cost-benefit assessment based on their current situation and the potential outcomes after redevelopment, but also may lead residents to better understand the meaning of the neighbourhood to them under the threat of urban redevelopment.

Figure 2 presents the research framework that we suggest can explain residents’ place attachment to a declining neighbourhood facing demolition. As can be seen, people, place and the

interactions between them, develop into place attachment. This framework breaks down place attachment into place identity and place dependence, based on the discussion of the dimensions of place attachment above (Section 2.1) and on the specific features of place attachment in *danwei* communities and urban villages. Urban redevelopment leads to huge changes in people, place and their interaction, and thus, in turn, place attachment. In our paper, the category of ‘People’ used in Figure 2 refers to homeowners, who are less mobile due to low-income and/or ageing, while ‘Place’ means the traditional and declining neighbourhoods (*danwei* communities and urban villages) facing demolition. We will examine the interaction between these two categories in terms of the lived experiences of the people who stay in these neighbourhoods despite the threat of demolition. Before discussing this framework in Section 4, the following section will introduce our research area and methods.

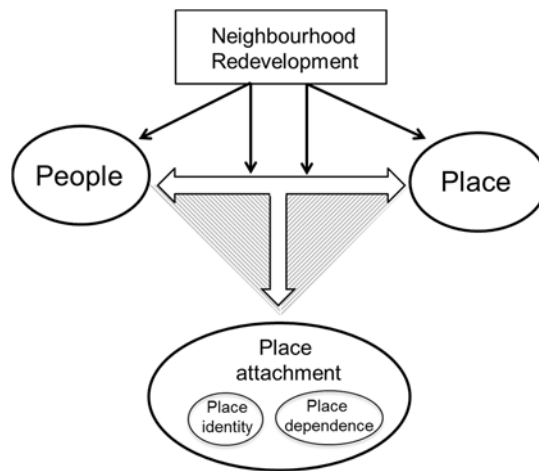


Figure 2: The research framework for place attachment in declining neighbourhoods facing demolition in urban China

Source: Authors

3. Research area, data and methods

The *danwei* communities and urban villages in our research are located in the city of Shenyang in northeast China (figure 3). Shenyang is a typical old industrial city, and has even been called the ‘Ruhr of the East’. The city once had many state-owned enterprises and established many *danwei* during the era of centralized economic planning. Most of them are located in the old industrial areas. Shenyang, therefore, had – and still has – a lot of industrial workers and *danwei* communities. In addition, there are many urban villages located in the suburban areas. The respondents in our study have lived in these neighbourhoods for at least ten years, in some cases, for their whole life (more than 60 years). The physical conditions of their dwellings and neighbourhoods have severely deteriorated during this time. The dwelling size of the respondents from the *danwei* communities ranges from 20 m² to more

than 100 m², while that of the respondents from an urban village ranges from less than 20 m² to more than 200 m².

The empirical basis for this paper consists of in-depth interviews conducted in March, April, September and October in 2015. We interviewed residents living in these neighbourhoods in Shenyang that will be demolished according to the national redevelopment policy. We recruited respondents through a combination of snowball sampling and door knocking. All of the interviews were conducted face to face using a semi-structured interview schedule. A total of 64 interviews were conducted (see Appendix 1), of which 55 interviews lasted from about 20 minutes to more than 2.5 hours, and 10 interviews around 15 minutes. 33 interviews were conducted in seven *danwei* communities and 31 interviews were conducted in one urban village. The ages of the respondents range from around 30 to more than 80 years. All of the respondents were homeowners, currently living and/or working in the neighbourhood. Some respondents were approached more than once to obtain supplementary information.

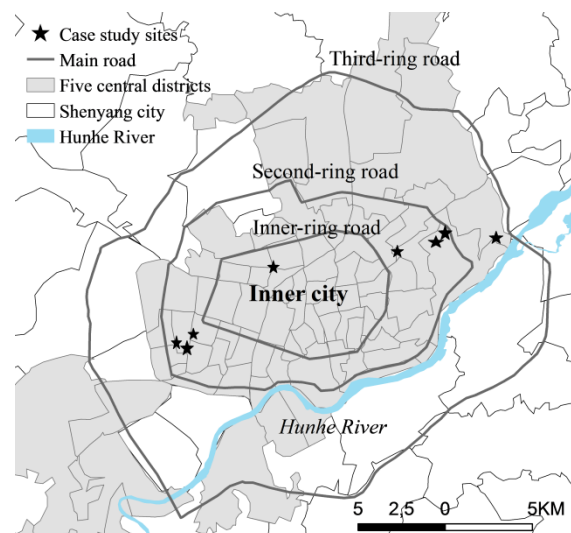


Figure 3. Locations of the case study areas in Shenyang

Source: Authors

During the interviews, questions were asked about topics such as family and moving history, moving intention, residential satisfaction, the various dimensions of place attachment, perceptions of the impending demolition and neighbourhood changes. All interviews, with the exception of four (either because that the author got no permission to record or due to the recording device failure), were recorded and subsequently transcribed verbatim, enabling content analysis of the transcriptions. In addition, the emotions and tones of voice of the respondents were noted while undertaking the transcription. Before using Atlas.ti to analyse the transcriptions, they were read and listened to several times to gain familiarity with the stories and extract concepts and elements related to place attachment and lived experiences. Atlas.ti was then used to code and categorize these concepts and elements based on the different dimensions of place attachment (see section 2.1). For example, friends, relatives, family members, acquaintances and mutual assistance were coded as social dimensions of place

dependence. Information about and comments on the physical environment, such as dwellings, buildings, neighbourhoods, toilets, roads, transportation, schools, etc., were grouped under physical dimension. To guarantee the anonymity of respondents in the analysis, the quotes are accompanied by gender, age category and fictitious names.

4. Lived experiences in declining neighbourhoods: ambivalence in place attachment

4.1 Ambivalence in relation to the social dimension of place dependence

Most respondents have a (very) low income. The social resources (e.g. mutually physical and social assistance) that they have access to on the basis of the long term of residence can help to relieve the constraints they face in their daily lives. Residents know each other due to frequent interaction, including chatting, playing mahjong or providing mutual assistance. These interactions help residents to develop familiarity, trust and a sense of safety among neighbours, i.e. significantly distinct qualities in traditional neighbourhoods that are generally rare in new Chinese developments. In addition, these residents have developed a sense of belonging to the same social group and become insiders of each other's private life. Mei (60s, female) had been living in a small apartment with her family for about 30 years. Her husband was seriously ill and the family relied on her pension to make ends meet. She appreciated the mutual support in the neighbourhood and felt not judged as neighbours understand each other's hardships:

Her son is addicted to drugs...She [a neighbour] doesn't need to ask for a favour, and I will help her ... You cannot ignore her situation, because you know she is suffering ... You [I] have to help her.

The histories of these families and the neighbourhood are also strongly connected, which develops into collective memories and shared norms of the residents. Some neighbours reported a family-like relationship with their neighbours because they had grown up in the same neighbourhood and worked in the same place. These respondents felt relaxed, warm and at ease with their neighbours. Some residents whose families have been living in the one place for generations also remain close to their wider social network, with family members, friends and other relatives all living in the same neighbourhood. Most of the respondents think they can still maintain their current social networks after rehousing if local governments provide them with in situ relocation.

Compared with the intensive interactions between neighbours in these neighbourhoods, most respondents had negative opinions about the relationships they might have in newly built high-rise neighbourhoods that are used for relocation from *danwei* communities and urban villages. They also regarded the level of social engagement in high-rise neighbourhoods, such as exchanging greetings, knowing the neighbours' names or their occupations, as relatively superficial and generally showing

indifference. They were also concerned about a potential dramatic reduction in neighbourhood contacts once they moved to a high-rise building. These worries make many respondents unwilling to be rehoused. This echoes previous research, which found that residents currently living in newly built neighbourhoods in urban China cherish privacy and prefer to maintain anonymity and a distance within their communities (Zhu *et al.*, 2012):

If you move into the newly built apartments, nobody knows each other ... Here everybody knows everybody! I don't need to lock my door [here], and just ask my neighbours to take care of my home... (Ling, 60s, female, resident for about 35 years)

However, many respondents reported that neighbourhood decline had affected their quality of life and driven many of their neighbours to leave. Residential changes due to the departure or death of old neighbours have reduced many stayers' familiarity with their neighbourhoods. Also, many stayers, especially older residents, are not familiar with the renters (mostly migrants from rural areas), which has resulted in distrust of these newcomers and a sense of insecurity.

The old neighbours have already moved out ... I don't know them [renters] ... I am not able to put stuff outside [any more] ... my cabbages were stolen! ... These old neighbours won't steal cabbages. I know who stole them. (Meng, 80s, male, resident for more than 30 years)

Changes in the composition of the residents also undermines long-term residents' self-esteem and their confidence in the neighbourhood. As a self-selection process, population turnover and residential mobility in these neighbourhoods demonstrate the social and economic resources of households. The stayers in these declining neighbourhoods regard themselves as the most deprived households, and many respondents felt that their self-esteem was being undermined by their declined social status. For them, leaving the declining neighbourhood would mean overcoming the stigma. However, as some of the respondents live in serious poverty, they expect limited improvements in their life after redevelopment:

We cannot afford the new buildings and we have to buy another one just like this ... 80% of the stayers are in poverty ... Some families are in difficult situations, just like us: some have health issues and [even worse] don't have a pension or insurance; some have mental illness ...(Mei, 60s, female)

4.2 Ambivalence in relation to the economic dimension of place dependence

Most of our respondents were economically deprived and had developed coping strategies to make ends meet. This is often achieved by the clever use of neighbourhood resources. This echoes a Chinese saying: 'kai yuan jie liu' (tap new sources and reduce expenditure). These neighbourhood-based economic strategies and opportunities have become part of the respondents' daily life. For example,

many respondents rent out rooms or run restaurants or supermarkets, which have become the dominant source of income. Jun (40s, male) had been living in a suburban *danwei* community for about 20 years. Recently, he built many rooms in his yard and above his own rooms to rent out to incoming migrants from rural areas. He considered this as an achievement that had increased his self-esteem, as he is able to make a living on his own rather than rely on government subsidies.

The economic dependence of residents on the declining neighbourhood clearly contributes to their place attachment. As Jun's circumstances suggest, the impending demolition and relocation may well cause disruption to their regular economic activities and incomes. For some respondents, this has created a sense of insecurity. Lili (40s, female) had been living in a shanty stall in an urban village for about fifteen years. Although she has a decent apartment in a nearby commodity neighbourhood, she considered her stall to be her home and spends almost every day there:

There have been several rounds of news about the demolition here. ... the market was closed down and renters left ... I don't know what I will do after this place is demolished. One option would be to find a job ... but you know at my age it is difficult to find one ...

For those who are deprived, it is vital to find ways to make ends meet. Most respondents reported they need much less to maintain their life in the declining neighbourhood than they would in the high-rise apartments after relocation. Firstly, they have to pay little, if any, housing management fees compared to residents living in newly built neighbourhoods. Due to the general lack of maintenance and investment by *danwei* and local village communities, such neighbourhoods have no central heating or sewage system, nor have the local residents hired a real estate management company to undertake general neighbourhood maintenance. Secondly, by mobilizing local resources, such as building hot-brick beds³ and collecting firewood, residents of the traditional communities can save money on heating. A respondent (60s, male, retired) with the pension of RMB 1800 per month reported that he only spent around RMB 300-500 per month (i.e. less than a third of his monthly income) on living and can save money by living in his current neighbourhood.

Local residents are also economically dependent on job opportunities in or close to the traditional neighbourhoods. In addition, these traditional neighbourhoods are often in relatively desirable locations (e.g. close to the public transportation) making these parcels of land potentially expensive after redevelopment. Thus, some consider remaining in occupancy a positive measure that will lead to an enhanced amount of compensation from the redevelopment. The disparity between their expectation of the increased value of the land in the future and the current compensation criteria makes most residents dissatisfied with the redevelopments and unwilling to move (He & Asami, 2014).

Although many stayers economically benefit from business opportunities brought by migrants (e.g. clientele for stores), they generally consider these migrants to be the cause of a neighbourhood deterioration and of enhanced levels of crime. Most of the migrants are from rural areas and are participating in low-end labour market. Their low socioeconomic status contributes to local residents' negative opinions on them. Also, local residents think that migrants will neither stay in their

neighbourhood for a long time nor will they take the neighbourhood as their home. They regard migrants as outsiders and think that migrants lack place-based identity. Therefore, local residents blame migrants for most of the incivilities. Ai (30s, female) had been living in a *danwei* community in a suburban area for about 20 years with her family. Her family was renting several rooms in their courtyard to migrants. While she appreciated the income they provided, she considered that her living space had been restricted. Although she thought she could get along with the renters, she regarded them as untrustworthy and as lacking care for the local neighbourhood environment.

We found that the respondents were generally in a position to maintain their living conditions, but could not improve them at all, or achieve upward social mobility, due to limited resources, including basics such as education or social networks. Thus, those who stay in these declining neighbourhoods are to some extent economically trapped there. This may explain why some respondents said that they had been expecting redevelopment and wanted to move into the newly built neighbourhoods. They want to escape the stigma of the declining neighbourhood. However, they are also concerned about their economic situation, because after relocation it seems almost impossible to them that they will be able to mobilize local resources to gain income and reduce their living costs:

I prefer the current undesirable living conditions, and at least I still have my income as a safeguard ... After this [demolition and relocation] my conditions will be better ... but I will be nothing ... (Jun, 40s, male)

4.3 Ambivalence in relation to the physical dimension of place attachment

Respondents have developed their own patterns of use of the neighbourhood and housing space, reflecting activities established over a long period of residence. Facing demolition, most of them are concerned about how they will adapt to the physical environment after forced relocation. Most respondents reported that the location of their current neighbourhood has obvious advantages over that of the relocation neighbourhoods provided by local governments, with easy access to public transport, schools, hospitals, open markets, etc. While these facilities are especially significant to the aged and the disabled, most of the residents also live on low incomes and cannot afford taxis or a private car, making the proximity to these facilities just as important. They reported that the proposed relocation neighbourhood is far from the city centre and that it currently lacks many public and commercial facilities, increasing their reluctance to relocate.

Familiarity with the physical environment is a significant component of the residents' place attachment. This familiarity is embedded in routines that the residents have developed over a long term of residence and it provides them with a sense of home and security. The impending demolition of the neighbourhood has triggered the realization of their strong attachment to the physical environment:

Ah [sigh], I didn't have this feeling before [this neighbourhood is special to me], but now I can feel it. I have been walking around this neighbourhood for so many years. Say there is no

way for me to get lost here. Every [bit of] grass and tree in this place, everything [I mean] I am attached to for sure. (Jing, 50s, female, resident for more than 40 years, including work)

Nevertheless, residents feel ambivalent about the overall physical state of their neighbourhood. Many respondents reported that they were not satisfied with the deterioration in sanitation conditions. However, most of them said that they were satisfied with the forms of their dwellings. In these traditional neighbourhoods, the dwellings are one to three-storey buildings, which enables residents to get out of their private rooms easily for daily activities such as cooking or exercise. This is especially important for the aged or the disabled.

Also, unlike high-rise buildings, these low-storey buildings make it easier for residents to meet and interact with their neighbours. This was important for most respondents as it allowed them to build and maintain their social network. Ai (30s, female) gave her opinion on moving to a high-rise building after demolition, compared with her current courtyard:

Residents living in the high-rise building apartment are trapped in it ... Now you see I live in this courtyard, and I feel very comfortable to go outside and inside ... and it is very convenient. If I live in the high-rise building, it will take time to go up into the apartment and go down to the ground ...

Residents in these traditional neighbourhoods have the flexibility to change the nature of their dwelling space. This is because traditional neighbourhoods have more open space and less rigid construction management than the newly built neighbourhoods. As we saw above, for example, residents can employ empty spaces in their yard to construct more rooms to house other family members, store furniture or rent to others. Also, some of the respondents from suburban villages have established gardens in their courtyards, which are scarce in the high-rise buildings. More importantly, residents in traditional neighbourhoods have more autonomy in relation to construction within their dwellings. For example, they can build their own heating systems, such as hot-brick beds, to warm the rooms. However, this will not be possible when they move into the high-rise buildings. This makes some concerned that it will be difficult to keep warm in periods outside the regulated heating provision seasons in Shenyang. In addition, most respondents considered that the actual space they will have available will shrink if they move into apartments in high-rise buildings after relocation. Respondents recounted the many advantages of their current dwellings and how they better meet their lifestyle, both practically and emotionally. As Jun (40s, male) indicated:

Here [in my courtyard] I can grow vegetables and raise chickens or a dog. I like animals. My children like animals ... I don't think there will be enough space in the high-rise apartment [even] for my furniture

Despite the residents' dependence on the physical dimension of their neighbourhoods, the decay in the physical conditions, such as the lack of toilets in their dwellings and no sewage system, as well as the poor sanitation conditions in their neighbourhoods generally, have driven them to move. Some respondents would prefer that the living conditions of their existing dwellings be improved or redeveloped, while others would prefer that the neighbourhood conditions were improved while their dwellings remained unchanged. A third category would prefer to leave both their current neighbourhood and dwellings. Ai (30s, female) recounted her ambivalence about moving:

Now these residents have all occupied the streets with constructed dwellings, so there is no room for sewerage at all on the street. It is very dirty here ... I never wear my good shoes and walk here ... I have an ambivalent feeling. I want to move out and also don't want to (laugh, observed hesitation). I want to move out into the apartments in the high-rise building just because it is very neat and clean.

As mentioned above, the lack of investment by *danwei* management and local governments and the perceived antisocial behaviour of migrants have contributed to the physical deterioration of the neighbourhoods. However, Ai's statement implies that local residents are also abusing their own neighbourhood environment. In addition, many homeowners have stopped investing in their dwellings to maintain good dwelling conditions due to the extent of neighbourhood degradation and the strong likelihood of redevelopment. In fact, in an attempt to receive more compensation in the context of relocation, local residents had established many illegal constructions merely to enlarge the floor area of their dwellings, because (the amount of) compensation is partly dependent upon the size of the current dwelling. These illegal constructions have almost no residential function and they only serve to accelerate the degradation of the neighbourhood and disturb the residents' sense of place.

4.4 Ambivalence in relation to place identity

The place identity of most respondents is closely tied to their family history and that of their neighbourhood. Most respondents report their neighbours can tell where they are from and what do they do. Their relationship to the neighbourhood also determines the benefits to which they are entitled. Approximately two decades ago, both *danwei* communities and urban villages had a smaller population compared with the current population size in these neighbourhoods. At that time, the neighbourhoods were socially homogeneous, with almost all of the residents working in the same *danwei* and/or from families who had lived in the area for generations. For these residents, a *danwei* community or urban village was not only a place of residence, but also functioned economically as a work place. The affiliation to a *danwei* or urban village provides residents with job chances for both themselves and their family members, which is a key element in the respondents' place identity.

My parents worked in this danwei ... Then I came back to work in this danwei. At that time, it was common [in danwei] to succeed your parents' positions ... (Hui, 60s, female, retired with a pension from the danwei, resident for more than 60 years)

Moreover, these neighbourhoods had a unique social and cultural meaning to them. For example, residents from the same family clan in an urban village would necessarily share the same ancestors and family histories, and gather together for events such as weddings or funerals. Residents also reported that people know who they are and what they do just by telling them the name of the danwei community within which they live. The experiences and the collective memories shared with their neighbours are intertwined with the histories of indigenous families in these traditional neighbourhoods. They all enhance the residents' neighbourhood-based sense of identity. Although the danwei system and collectivism of urban village have disintegrated, the close relationship between indigenous residents has been reserved.

...when I meet the old commune members⁴, we still have the intimate feelings. I am the third child of my family... People here younger than me call me Uncle Three, those who are older than me take me as their little brother. (Zhuang, around 60s, male, urban village)

At present, the place identity of the residents is not only related to the family history embedded in the neighbourhood, but also to their institutional status, such as *hukou* or homeownership. These institutional factors may empower residents, reflecting their insider-status within the neighbourhood. They reinforce positive behaviour towards the environment, such as resistance to undesirable changes in the neighbourhood. For example, Jun (40s, male) bought a house in the neighbourhood about 20 years ago and has a local *hukou*. In this respect, he regards himself as an insider in the neighbourhood and often went to the local governments to appeal for sanitation service and facilities.

As mentioned above, many migrants from rural areas are moving into the danwei and urban villages. As a result, the residential composition of these neighbourhoods is becoming increasingly heterogeneous. The newcomers can be divided into: (1) the early arrivals (EAs), who moved into the neighbourhoods and bought dwellings there, and (2) later newcomers (renters), who have recently moved into the neighbourhoods as renters. Some EAs have come from remote rural areas looking for job opportunities or for a better education. To live in their current neighbourhood thus means upward social mobility to them. However, these EAs do not have the collective memories or the shared experiences in these neighbourhoods. Compared with the indigenous residents, they are not eligible to get the pension from or share in the danwei or urban village, which makes them feel foreign in these neighbourhoods.

At the same time, the indigenous residents also reported a sense of placelessness. The dismantling of the danwei system and collectivism of urban village, the influx of EAs and renters, the increased social inequality and the perceived decrease of their socioeconomic status have disrupted the place identity of the indigenous.

*The old neighbours who become rich, which we have to thanks for Mr Deng [Xiaoping], have moved to the high-rise building... That day on a meeting, he [one old neighbour] said 'Mr **, you are still nesting here'. Of course I am still nesting here. I am poor, and what else can I do?! (Zhuang, around 60s, male)*

Overall, the history of a family within the neighbourhood, institutional factors and population turnover have all made the stayers feel ambivalent about their place identity. While redevelopment and forced relocation may lead to some desirable changes in relation to the place identity of some respondents, they also feel a sense of discontinuity, as they realize that the neighbourhood which was once instrumental in forming their identity is soon going to disappear. With the impending demolition of this neighbourhood and the separation with her acquaintances, Jane (40s, female) said that she felt part of herself was tearing apart. This is especially true for the older people. For instance, Zhuang (around 60s, male) said it is really difficult for him to leave this neighbourhood to his age. He was sentimentally attached to his neighbourhood, and said 'regardless of the how much compensation I can get, I still want to remain in this neighbourhood'.

5. Conclusions and Discussions

This paper has focused on the lived experiences that affect the place attachment of homeowners in declining Chinese neighbourhoods which face demolition. We found that the place attachment of homeowners in the *danwei* communities and urban villages in the city of Shenyang has become increasingly ambivalent in the face of demolition as part of large-scale urban redevelopment. Semi-structured interviews with residents from both types of traditional neighbourhoods have revealed that they feel a sense of satisfaction and dependence associated with their neighbourhoods, but at the same time, report dissatisfaction and an inclination to move due to the decline in the quality of life in their neighbourhood. The narratives of some respondents also show that the development of place attachment goes beyond the functional dependence on (tangible social and economic resources in) the neighbourhood, as it derives from the symbolic meaning that a neighbourhood represents. This is especially true for those who have lived in these old neighbourhoods and have worked in *danwei* or in urban villages (or collective companies) for many years or even generations. Due to serious physical decline and high population turnover, these stayers (all homeowners) have already experienced the sense of discontinuity even before the start of the redevelopment project. However, their neighbourhood, together with its related people and their established living strategies, have captured stayers' nostalgia about the traditions, collectivism, socialist ideology and the relatively equal social status in the past. By revisiting the resources that bear their nostalgia, it enables them to resist against their diminishing place attachment and against the dramatic social and economic changes (Lewis, 2016). However, the impending urban redevelopment forces residents to face a dilemma concerning

the relative importance of their sense of rootedness and attachment to the neighbourhood and the desire to relocate to achieve better living conditions.

Exploring the ambivalence in their neighbourhood experience helps us understand how stayers cope with the dramatic neighbourhood changes and thus, in turn reconstruct their place attachment. These neighbourhood changes to some extent disrupt their place attachment. On the other hand, their place attachment gets compensated or in some cases even enhanced while they are suffering from negative neighbourhood changes. This is because these changes force and stimulate residents to transfer the challenges caused by them into resources from which residents can benefit. Over the long term of residence, neighbourhood changes and the stable neighbourhood features (e.g. physical form and flexibility of transforming space) have become vital resources for these residents to relief some of their life constraints and to maintain their self-esteem. In light of this, place attachment can be regarded as the outcome of a collection of the living strategies of residents under neighbourhood effects. Meanwhile, the content and the importance of some dimensions of place attachment have been reshaped by the changing social-economic context. In socialist era, the economic dimension of place dependence is mainly related to the jobs and welfare, which are empowered by the affiliation to danwei and urban village. Currently, it is more related to incomes and business chances brought by marketization and urbanization. In the past, the (place) identity of residents was entailed via the affiliation to the institutional organizations, which played an important role in residents' social life and economic activities (Lu, 1989). Currently, however, the importance of place identity has been diluted with the dismantling of danwei system and collectivism in urban village. At the same time, urbanization, marketization and globalization have been challenging the importance of danwei and urban village on the redistribution of resources.

During residents' negotiation with changing personal and neighbourhood conditions, the dynamic nature of place attachment emerges. Lewicka (2011, p. 215) implies that the speed for the development of different dimensions of sense of place can be different. In our research, it may indicate that some dimensions of place attachment can be less sensitive to neighbourhood changes than other dimensions. For instance, place identity of stayers is formed in the long term of residence in these traditional neighbourhoods. It is embedded in residents' collective experiences and shared norms of the socialist era. It is more related to the symbolic meaning of the neighbourhood than to its tangible and physical aspects. Hence, when neighbourhood declines occur which mostly start with tangible changes, place identity probably changes slower than other dimensions of place attachment.

Despite neighbourhood decline, the danwei community and urban village are still significant to the residents. Current neighbourhood redevelopment in China is characterized by complete demolition of neighbourhoods, which deprives these low-income households of the economic, social and physical resources that are embedded in these neighbourhoods. Hence, this paper contributes to the literature on relocation and urban redevelopment by showing how the affliction (i.e. a sense of loss and grief), which is supposed to appear during or at the post-relocation stage of urban renewal (see also Fried, 1963), already emerges strongly at the pre-relocation stage in the case of poor Chinese homeowners.

Our findings for this particular group of residents fills a clear gap in the literature that is dominated by experiences of public or social housing tenants in the United States and Europe.

It is vital to focus on residents' lived experiences and place attachment at the pre-relocation phase, because it can help us better understand the coping strategies of residents facing urban redevelopment. Gaining an understanding of their perspectives while they are living through this phase may provide better insights than asking ex-residents in the post-relocation phase to make a retrospective assessment of their pre-demolition life (Goetz, 2013). During this time they need to make compensation choices based on their current household, dwelling and neighbourhood situations. They also need to evaluate the merits and demerits of staying in their declining neighbourhood and the potential outcomes of redevelopment. It is vital that policymakers and local governments take these factors associated with residents' lived experiences and living strategies into consideration if they wish to improve the living conditions of those who are deprived.

References

- Altman, I. and Low, S. M. (1992) *Place Attachment*, (New York: Plenum).
- Angelovski, I. (2013) From Environmental Trauma to Safe Haven: Place Attachment and Place Remaking in Three Marginalized Neighborhoods of Barcelona, Boston, and Havana, *City & Community* 12 (3): pp.211-237.
- Bailey, N., Kearns, A. & Livingston, M. (2012) Place Attachment in Deprived Neighbourhoods: The Impacts of Population Turnover and Social Mix, *Housing Studies*, 27(2), pp. 208-231.
- Bjorklund, M.(1986) The Danwei: socio-spatial characteristics of work units in China's urban society, *Economic Geography*, 62 (1), pp.19-29.
- Bray, D. (2014) *Social space and governance in urban China: the danwei system*, (Nanjing: Southeast University).
- Brown, B. & Perkins, D. D. (1992) Disruptions in place attachment, in: I. Altman and S. M. Low (Eds) *Place Attachment*, pp. 279–304 (New York: Plenum).
- Brown, B., Perkins, D. D. & Brown, G. (2003) Place attachment in a revitalizing neighborhood: Individual and block levels of analysis, *Journal of Environmental Psychology*, 23 (3): pp.259-271.
- Corcoran M. (2002) Place attachment and community sentiment in marginalised neighbourhoods, *Canadian Journal of Urban Research*, 11(2), pp. 201-221.
- Feijten, P. & van Ham, M. (2009) Neighbourhood Change... Reason to Leave? *Urban Studies* 46(10), pp.2103-2122.
- Fullilove, M. (1996) Psychiatric implications of displacement: Contributions from the psychology, *The American Journal of Psychiatry*, 153 (12)pp.1516-1523.
- Fried, M. & Gleicher, P. (1961) Some sources of residential satisfaction in an urban slum, *Journal of the American Institute of Planners*, 27(4), pp.305-315.

- Fried, M. (1963) Grieving for a lost home, in: L. J. Duhl (Ed.) *The Urban Condition*, pp. 151–171 (New York: Basic Books).
- Fried, M. (2000) Continuities and discontinuities of place, *Journal of Environmental Psychology*, 20 (3), pp. 193–205.
- Gilroy, R. (2012) Physical threats to older people's social worlds: findings from a pilot study in Wuhan, China. *Environment and Planning A*, 44, pp.458-476.
- Giuliani, M.V. & Feldman, R. (1993). Place attachment in a developmental and cultural context, *Journal of Environmental Psychology*, 13, pp.267-274.
- Goetz, G. (2013) Too Good to be True? The Variable and Contingent Benefits of Displacement and Relocation among Low-Income Public Housing Residents. *Housing Studies*, 28 (2), pp. 235-252.
- He, S.J., Webster, C., Wu, F. L., & Liu, Y. T.(2008) Profiling urban poverty in a Chinese City, the case of Nanjing. *Applied Spatial Analysis and Policy*, 1(3), pp. 193-214.
- He, S.J., Liu, Y. T., Wu, F. L. & Webster, C.. (2010) Social Groups and Housing Differentiation in China's Urban Villages: An Institutional Interpretation. *Housing Studies*, 25(5), pp. 671-691.
- He, Z. Y. & Asami, Y. (2014) How Do Landowners Price their Lands during Land Expropriation and the Motives Behind It: An Explanation from a WTA/ WTP Experiment in Central Beijing, *Urban Studies*, 51(2) 412–427
- Hidalgo, M. C. & Hernández, B. (2001), Place attachment: conceptual and empirical questions, *Journal of environmental Psychology*, 21(3), pp. 273-281.
- Hin, L.L. & Xin, L. (2011) Redevelopment of urban villages in Shenzhen, China – An analysis of power relations and urban coalitions. *Habitat International*, 35(3), pp. 426-434.
- Kearns, A. & Mason, P. (2013) Defining and Measuring Displacement: Is Relocation from Restructured Neighbourhoods Always Unwelcome and Disruptive? *Housing Studies*, 28(2), pp.177-204.
- Kleinmans, R. & Kearns, A. (2013) Neighbourhood Restructuring and Residential Relocation: Towards a Balanced Perspective on Relocation Processes and Outcomes. *Housing Studies*, 28(2), pp. 163-176.
- Lewicka, M. (2011) Place attachment: How far have we come in the last 40 years? *Journal of Environmental Psychology*, 31(3), pp. 207-230.
- Lewis, C. (2016) ‘Regenerating community’? Urban change and narratives of the past, *The sociological Review*, 64(4), pp. 912-928.
- Li, X., Kleinmans, R. & van Ham, M. (2016) Neoliberalization and the Changing Roles of Stakeholders in State-Led Shantytown Redevelopment in Shenyang City, China, IZA DP No. 10141 August 2016
- Liu, Y.T., He, S.J., Wu, F.L. & Webster, C. (2010), Urban villages under China's rapid urbanization: Unregulated assets and transitional neighbourhoods, *Habitat International*, 31(2), pp.135-144
- Livingston, M., Bailey, N. & Kearns, A. (2010) Neighbourhood attachment in deprived areas: evidence from the north of England, *Journal of housing and the built environment*, 2010 (25), pp.409–427.

- Lu, F. (1989) Danwei: a special form of social organisation. *Social Sciences in China*, 1, 71-88.
- Luo, Y. (2012) Institutional Arrangements and Individual Action: The Spontaneous Moving Back of Urban Inhabitants of Resettlement and Space Reconstruction of the Original Community, Master Dissertation, East China Normal University, 2012.
- Manzo, L.C., Kleit, R.G. & Couch, D. (2008) "Moving Three Times Is Like Having Your House on Fire Once": The Experience of Place and Impending Displacement among Public Housing Residents. *Urban Studies*, 45(9), pp. 1855-1878.
- Manzo, L.C. (2014) On uncertain ground: being at home in the context of public housing redevelopment, *International Journal of Housing Policy*. 14(4), pp. 389-410.
- MOHURD. (2013) Decoding the suggestions on accelerating the redevelopment of the shantytowns from the state council. Available at: http://www.gov.cn/zwhd/2013-07/12/content_2445702.htm (accessed 12 July 2013).
- Popkin, S.J. (2010) A glass half empty? New evidence from the HOPE VI Panel Study, *Housing Policy Debate*, 20(1), pp. 43-63.
- Popkin, S.J., Levy, D.K., Harris, L.E., Comey, J., Cunningham M.K., & Buron, L.F. (2004) The HOPE VI Program: What about the residents? *Housing Policy Debate*, 15(2), pp. 385-414.
- Posthumus, H., Bolt, G. & van Kempen, R. (2013) Victims or victors? The effects of forced relocations on housing satisfaction in Dutch cities, *Journal of Urban Affairs*, 36(1), pp. 13-32.
- Posthumus, H. & Kleinhans, R. (2014) Choice within limits: how the institutional context of forced relocation affects tenants' housing searches and choice strategies, *Journal of Housing and the Built Environment*, 29 (1), pp.105-122.
- Proshansky, H. M. (1978) The city and self-identity, *Environment and behavior*, 10(2): pp.147-169.
- Ramkissoon, H., Smith, L. D. G. & Weiler, B. (2013) Testing the dimensionality of place attachment and its relationships with place satisfaction and pro-environmental behaviours: A structural equation modelling approach. *Tourism Management*, 36, pp. 552-566.
- Raymond, C. M., Brown, G. & Weber, D. (2010) The measurement of place attachment: Personal, community, and environmental connections, *Journal of Environmental Psychology*, 30(4), pp.422-434.
- Relph, E. (1976) *Place and placelessness*. (London: Poin).
- Scannell, L. & Gifford, R. (2010a), Defining place attachment: A tripartite organizing framework, *Journal of Environmental Psychology*, 30(1), pp.1-10.
- Scannell, L. & Gifford, R. (2010b), The relations between natural and civic place attachment and pro-environmental behavior, *Journal of Environmental Psychology*, 30(3), pp.289-297.
- Stokols, D. & Shumaker, S.A. (1981) People in places: a transactional view of settings, in J.H. Harvey (Ed) *Cognition, Social behavior and the Environment*, pp. 441-488 (Hillsdale, NJ: Lawrence Erlbaum Associates)
- Tester, G., Ruel, E., Anderson, A., Reitzes, D., & Oakley, D. (2011) Sense of place among Atlanta public housing residents, *Journal of Urban Health*, 88(3), pp.436-453.

- Twigger-Ross, C. L. & Uzzell D. L. (1996) Place and identity processes, *Journal of Environmental Psychology*, 16, pp.205-220.
- Vale, L. J. (1997) Empathological Places: residents' ambivalence towards remaining in public housing, *Journal of planning education and Research*, 16(3), pp.159-175.
- Wang, D. G. & Chai, Y. W. (2009) The jobs–housing relationship and commuting in Beijing, China: the legacy of Danwei, *Journal of Transport Geography*, 17(1), pp. 30-38.
- Wang, Y.P., Wang, Y. L.& Wu, J. S. (2009) Urbanization and informal development in China: Urban villages in Shenzhen, *International Journal of Urban and Regional Research*, 33(4), pp. 957-973.
- Williams, D. R., Patterson, M. E., Roggenbuck, J. W. & Watson, A. E. (1992). Beyond the commodity metaphor: Examining emotional and symbolic attachment to place. *Leisure Sciences*, 14(1), pp. 29-46.
- Williams, D. R., & Vaske, J. J. (2003). The measurement of place attachment: Validity and generalizability of a psychometric approach. *Forest Science*, 49(6), pp.830-840.
- Wu, F. L. & He, S. J. (2005) Changes in traditional urban areas and impacts of urban redevelopment: a case study of three neighbourhoods in Nanjing, China. *Tijdschrift voor economische en sociale geografie*, 96(1), pp. 75-95.
- Wu, F. L. (2012) Neighborhood Attachment, Social Participation, and Willingness to Stay in China's Low-Income Communities. *Urban Affairs Review*, 48(4), pp. 547-570.
- Zhu, Y., Breitung, W. & Li, S-M (2012) The Changing Meaning of Neighbourhood Attachment in Chinese Commodity Housing Estates: Evidence from Guangzhou. *Urban Studies*, 49 (11), pp. 2439-2457.

Notes

1. SOE means 'state-owned enterprise'. In China, they are owned and overseen by the state. SOEs run commercial activities on behalf of the central government (state).
2. COE refers to 'collectively owned enterprise', which are run and owned by the SOEs, communities, villages or the municipality. These organizations: (1) provide job opportunities for family members or local residents affiliated with these organizations and/or (2) produce supplementary products to meet the needs of these organizations.
3. The hot-brick bed is a traditional type of bed found in northern China, designed to provide a warm bed when it is cold. They are made from bricks or clay and can be connected to either or both the stove and the central heating system in the dwelling.
4. Commune member: From the 1960s to the early 1980s, commune system is the main governance pattern in rural areas of China. The households in villages are divided into different commune teams and different production brigade. At that time, villagers are called commune members. Commune members need to work collectively on farming and its related activities, especially for those villagers who are in the same commune team.

Appendix table: The detailed information of the respondents

Interview No.	Respondent No.	Gender	Age	Household Size (person)	Residence Length (year)	Community type	Fictitious name
1	1	M	58	2	51	danwei	
2	2	M	46	3	18	danwei	
3	3	F	82	3	24	danwei	
4	4	M	36	2	36	danwei	
	5	M	34	3	20	danwei	
	6	F	around 60	2	35	danwei	Ling
5	7	F	more than 70s	1	46	danwei	
6	8	M	85	2	30	danwei	Meng
7	9	M	52	2	52	urban village	
8	10	M	62	3	25	urban village	
9	11	F	75	2	12	urban village	
10	12	F and M	more than 50s	2	25	urban village	
11	13	F	60s	2	35	urban village	
12	14	F	66	5	66	urban village	
	15	F	75	6	more than 35	urban village	
13	16	F	71	2	more than 40s	urban village	
14	17	M	64	2	64	urban village	A respondent
15	18	M	68	2	more than 30s	urban village	
	19	M	84	not known	84	urban village	
16	20	M	61	2	28	urban village	
17	21	M and F	M: more than 80s F: more than 70s	2	M: around 60	danwei	
18	22	F	35	5	around 20s	danwei	Ai
19	23	M	65	2	65	danwei	
20	24	M	50s	3	50	danwei	
21	25	F	about 60s	5	60	danwei	Hui
		M	60s	5	40		Gang
22	26	M	about 70s	2	23	danwei	
23	27	M	about 60s	2	27	danwei	
24	28	F	about 80s	3	63	danwei	
25	29	F	40	3	40	danwei	Jane
26	30	F	50	5	more than 30s	danwei	
27	31	F and M	76	2	40	danwei	
28	32	M	about 70s	more than 4 persons	21	danwei	
29	33	M	more than 60s	more than 5 persons	not known	danwei	
30	34	M	48	3	16	danwei	Jun
31	35	F	more than 60s	2	30	urban village	

32	36	M	more than 60s		not known	urban village	
33	37	M	about 50s	5	more than 30s	urban village	
34	38	F	78	1	15	urban village	
35	39	F	75	1	36	danwei	
36	40	F	45	2	15	urban village	Lili
37	41	F	45	5	14	danwei	
38	42	F and M		6	more than 60	urban village	
39	43	F	60	3	around 30s	danwei	Mei
40	44	F	70	2	around 30s	danwei	
	45	F	56	6	around 30s	danwei	
	46	F	more than 60s	1	around 30s	danwei	
41	47	M	47	2	2-3months	urban village	
42	48	M	57	2	57	urban village	
43	49	M	72	2	40	urban village	
44	50	M	62	2	62	urban village	
45	51	F	around 60s	6	around 40 years	urban village	
46	52	F	around 70s	5	more than 40s	urban village	
47	53	M	75	5	75	urban village	
48	54	F	67	1	more than 20 years	urban village	
49	55	F	60	2	60	danwei	
50	56	M	30s	3	30	urban village	
51	57	M	57	2	more than 30s	urban village	Jing
52	58	M	60	3	36	urban village	
53	59	M	58	2	58	urban village	Zhuang
54	60	F	more than 75	1	45	danwei	
55	61	F	more than 70s	1	49	danwei	
56	62	F	57	2	47	danwei	
57	63	F	83	2	62	danwei	
58	64	M	60	not known	30	urban village	
59	65	M	58	1	17	urban village	
60	66	F	more than 70s	not known	around 40 years	danwei	
	67	F	more than 70s	not known	around 40 years	danwei	
	68	F	more than 70s	not known	around 40 years	danwei	
61	69	M	group discussion	not known	Not known	urban village	
62	70	F	around 50s	2	50s	danwei	
63	71	F	around 50s	3	Not known	danwei	
64	72	F	more than 70s (observation)	1	Not known	danwei	