Beyond neighbouring: Migrants' place attachment to their host cities in China

Abstract

The existing literature on migrants' social integration tends to focus on neighbourhood. Few studies have explored migrants' place attachment to their host cities, which might be a better scale for social integration. Drawing on the 2014 China Migrants Dynamic Survey, this paper examines migrants' place attachment and explores how it is influenced by individual status and the factors of social and physical environment. It is found that migrants who live in commodity housing are more likely to feel attached to their cities in contrast with those who live in urban and rural villages. Although substantial evidence has shown that urban villages serve as an important venue for migrants' entry into the city and demonstrate strong neighbourly interactions, living in these neighbourhoods does not enhance migrants' place attachment to their cities. This claim is further supported by another finding that migrants who live in local resident-dominated neighbourhoods tend to feel more attached to the city.

Keywords

Place attachment, migrant, social integration, neighbourhood, urban China

Introduction

China has the world's largest domestic migrant population. Although the total number of migrants has declined since 2015, there were still 241 million of them at the end of 2018 according to the National Health Commission of China. Pursuing 'people-centred' development, migrant integration has increasingly become a significant policy issue. The dichotomous household registration system (*hukou*) has excluded migrants from urban welfare and benefits. For a long time, an urban *hukou* designation has been commensurate with "citizenship" in a given city (Zhang, 2012). However, with the evolution of the migration situation and the implementation of a "points system[1]" in many Chinese cities, this crude definition of citizenship has become less useful for understanding migrant integration in the city (Guo and Liang; 2017; Kochan, 2019). Since 2010, *shiminhua* or "citizenisation" of migrants has been frequently used in official and popular discourse (Kochan, 2019). Against the emphasis on transforming migrants' *hukou* status, *shiminhua* symbolises a gradual process through which migrants are integrated into urban life not only legally, but also socially and attitudinally (Mobrand, 2015).

This has resulted in a growing literature about migrant social relationships with their host society, such as migrants' residential satisfaction (Li & Wu, 2013; Lin & Li, 2017; Tao et al., 2014), neighbouring and neighbourly interaction (Wang et al., 2016, 2019; Wu & Logan, 2016), and place attachment at the scale of the neighbourhood (Li et al., 2019). The existing studies found that migrants, particularly those living in urban villages, tended to have low neighbourhood attachment (Du & Li, 2010; Li & Wu, 2013). Unsettledness or the 'rootless' feeling of living in urban villages contributes to such low attachment. However, this does not mean that migrants are 'floaters' in the

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[1] Points system (*jifen zhidu*): since 2010, starting from Guangdong province, many cities have created a "points system" to integrate migrants into the city. The points system assigns points (*jifen*) based on migrants' age, education, professional skills, social insurance, investment and so on. If migrants reach a certain number of points as required by the city, they can apply for local *hukou*. In some cities, if a migrant does not have quite enough points for urban *hukou*, they can access partial citizenship rights, such as education or health in the city (Guo & Liang, 2017).

city. In fact, they are more likely to engage in socialising and the exchange of help with neighbours (Wu & Logan, 2016). Moreover, studies found that migrants may be mobile in the city as they often move to different neighbourhoods both willingly and unwillingly. As a disadvantaged social group in the city, many migrants may be reluctant to move due to frequent job changes (Lin & Gaubatz, 2017), or forced to relocate due to urban village demolishing and upgrading (Wu, 2004), although migrants wished to stay in the same village (Wu, 2012). Some skilled migrants may gradually move to better neighbourhoods and secure homeownership in the city when they gained upward social mobility (Cui et al., 2015). However, although they keep high intra-city mobility, the duration of migrants' residence in the same city is long (Lin & Gaubatz, 2017). Their willingness to settle is also stronger than before (Li et al., 2009; Tan et al., 2017), indicating their growing bonds with the city. Therefore, simply evaluating neighbourhood attachment is not sufficient to understand migrants' social bonds with the city.

Place attachment to the city promotes and provides social stability, familiarity and security (Brown et al., 2003; Wu, 2012), which is closely related to migrants' decisions to stay or return to the rural area (Clark et al., 2017; Heleniak, 2009; Li et al., 2019) and place identity formation (Hernández et al., 2007; Ujang, 2012). Place attachment is often used as an important indicator for migrants' psychological integration (Wang & Fan, 2012), which is the key to migrants' successful incorporation in the city, as it directly reveals migrants' bonds with the city. Place attachment to the city has a larger effect on subjective well-being than attachment to the neighbourhood (Casakin, 2015). Chinese cities, in particular, often have different policies towards migrants. Thus, there is a critical need to explore the variegated local geographies and social environments associated with migrants' attachment to the city in urban China. In this vein, this paper attempts to explore migrants' place attachment to the city rather than to neighbourhoods, and analyses its underlying mechanisms. It focuses on the ways in which individual socio-demographic characteristics and factors in the social and physical environment can contribute to the formation of place-based meaning for migrants.

The remainder of the paper is divided into four sections. The second section is a literature review of place attachment, predictors of place attachment and place attachment in Chinese cities; the third section explains our research design for this study, including data, methodology and research framework; the fourth section presents the empirical findings based on quantitative analysis; the last section concludes.

Literature review

Place attachment at different geographical scales and predictors

The concept of place attachment originated in humanistic geography research which emphasizes the relationship between people and place, and has now been widely studied by scholars in different disciplines such as psychologists, sociologists, geographers, urban studies scholars and urban planners (Lewicka, 2010, 2011; Tuan, 1975). Place attachment is commonly understood as the emotional ties that people develop with a place (Brown et al., 2003; Giuliani, 2003). However, Hidalgo and Hernandez (2001) argued that such a definition is too ambiguous and may be confused with other place-related concepts such as residential satisfaction and place identity. They defined place attachment as a positive affective bond between an individual and a specific place, the main characteristic of which is the tendency of the individual to maintain closeness to such a place. Lewicka (2011) pointed out that understanding the meaning of place attachment should take account of the differences in theoretical context. Different theoretical traditions or disciplines may view people–place relationships differently.

There is still no consensus about the measurement of place attachment (Lewicka, 2011). Earlier studies used proxy measures such as length of residence, neighbouring and neighbourhood social interaction, willingness to settle down, homeownership, and so forth (for detailed review, see Lewicka, 2011). These measures do not directly capture place-related emotions, but rather behavioural results due to affective bonds with places. Some scholars have constructed a complex, multidimensional index system (Williams & Vaske, 2003; Trąbka, 2019; Hesari et al., 2019). For example, Williams

and Vaske (2003) measured place attachment in two dimensions – place dependence and place identity. The majority of the others preferred a much simpler, one-dimensional structure to measure place attachment (Hidalgo & Hernandez, 2001; Hernández et al., 2007; Lewicka, 2011; Hou et al., 2018). Shamai and Ilatov (2005), for instance, used one direct question ("what is your level of attachment to your settlement/your region/your country") to measure place attachment.

Although it has long been recognized that there are different geographical scales of places to which people may feel attached, the focus of current research is mainly on neighbourhoods (Casakin et al., 2015; Hidalgo & Hernández, 2001; Lewicka, 2010, 2011). Lewicka (2010) stated that in place attachment research, about 70 per cent deals with attachment to neighbourhood (the local community) while about 20 per cent deals with attachment to dwelling (home). However, very few studies focus on place attachment to the city. The limited amount of research to date suggests that it is easier to establish and develop affective bonds with the city (or a larger scale of space) than with the neighbourhood, although familiarity, security and control may be reduced from the scale of the neighbourhood to the city (Lewicka, 2010), possibly because people tend to identify with distinguishable topological units rather than areas whose edges are not clearly defined. As such, cities, which are often represented in people's minds with relatively more clear-cut borders than neighbourhoods, tend to be objects of stronger attachment than their parts (Lewicka, 2010). Moreover, as "cities are places and centres of meaning par excellence" (Tuan, 1975, p.157), the more abstract dimensions of symbolic meaning and psychological identification of the city strengthen place attachment (Hernandez et al., 2007; Qian & Zhu, 2014).

In immigration studies, place attachment is often considered as an important dimension to measure and understand social integration (Hou et al., 2018; Du, 2017). The usual focus on immigrants' attachment at the neighbourhood scale reflects the key role that neighbourhoods play in assimilation/integration since the Chicago School. Ethnic enclaves may be their 'port of entry' into the city where they usually develop strong bonds. On the other hand, due to the transnational nature of international

immigrants in Western countries, the other scale of immigration literature is the host and source country (Hochman et al., 2017; Hou et al., 2018). Much research found that immigrants may maintain strong bonds with their place of origin, but they also develop attachment to their current country of residence (Boğaç, 2009; Hou et al., 2018).

Empirical studies on place attachment have identified a number of important determining factors (See Lewicka, 2011, for a detailed review). Firstly, attachment can be influenced by an individual's socioeconomic status, such as age, occupation and income (Hernandez et al., 2007; Raymond et al., 2010). Length of residency in particular plays a significant role in predicting place attachment (Bailey et al., 2012). Homeownership is also unquestionably a positive predictor of place attachment (Lewicka, 2010).

Another important set of factors related to attachment is the social or subjective environments of the place, which are also called social factors (Kohlbacher et al., 2015; Lewicka, 2011). Among social factors, levels of neighbourhood diversity or social mix within the neighbourhood have long been believed to affect attachment, with ethnic mix being the most concerned (Bailey et al., 2012). High levels of mix may impede social interaction, integration and cohesion (Dekker & Bolt, 2005; Livingston et al., 2010; Putman, 2007), thus resulting in low levels of neighbourhood attachment (Górny & Toruńczyk-Ruiz, 2014). However, actual diversity or statistically measured diversity may affect attitudes and behaviour in certain places only if it is noticed (Bonaiuto et al., 2003; Koopmans & Schaeffer, 2015). Studies found that perceptions of diversity had more significant effects on social cohesion indicators (including place attachment) than actual diversity (Koopmans & Schaeffer, 2015; Toruńczyk-Ruiz and Lewicka, 2017). Based on empirical study in Warsaw, Poland, Toruńczyk-Ruiz and Lewicka (2017) surprisingly discovered that actual diversity measures were not significantly related to neighbourhood attachment, while perceived ethnic diversity positively predicted attachment to neighbourhood. Both results contradict previous studies. They suggest that the relations between (perceived and actual) ethnic diversity and neighbourhood attachment could be context-dependent. The contextualised situation of Warsaw,

including having a low and stable percentage of immigrants, and its multicultural history, contributed to such unexpected results.

The third set of factors that determine place attachment is physical or objective environment, such as neighbourhood type, pedestrian environment, street layout, dwelling form, and so forth (Lewicka, 2011; Abass & Tucker, 2017; Lin et al., 2020). For example, Zhu et al. (2012) found that residents of commodity housing estates had weak neighbourly interactions but strong neighbourhood attachment by comparison with traditional neighbourhoods (including both work-unit compounds and old city neighbourhoods), in which residents' satisfaction with the physical environment, but not neighbourly contacts, played an important role. By comparing attachment in three different types of neighbourhood, Kohlbacher et al. (2015) found that residents (including both migrants and natives) in middle-class, inner-city neighbourhoods had higher levels of place attachment than residents living in social housing and deprived neighbourhoods. However, different from Zhu et al. (2012), they attribute such differences to the specific role played by social contacts within the neighbourhoods. Smalltalk or weak social ties within the neighbourhood, to be specific, significantly increases the likelihood of migrants feeling attached to the place where they live, but not for natives.

Due to the usual focus on neighbourhood, researchers bias their selection of variables and restrict them to neighbourhood level factors (Lewicka, 2010). Some city-level predictors have been identified (Lewicka, 2011). Casakin et al., (2015), for example, found that the city itself and its size matter to the degree of attachment to the city. They found that place attachment is higher in large cities (due to their good services and facilities) and small cities (for social reasons).

Setting the scene: migrants and place attachment in Chinese cities

Because of the *hukou* policy, migrants are excluded from urban welfare and benefits in the host city (Wu, 2002; Zhu, 2007; Zhu & Chen, 2010). Earlier studies often regarded

China's internal migrants as a 'floating population' (Fan, 2008), and the migration process as a de-territorializing process featuring high mobility and weak ties with the host city (Qian & Zhu, 2014). Migrants face notable institutional, social and cultural barriers in the city and often reside in marginal and unregulated areas, resulting in socio-spatial segregation (Lin & Gaubatz, 2017; Liu et al., 2010). Institutional factors, or *hukou* to be specific, are often regarded as the determining reason that hinders migrants from establishing strong ties with the host city (Kochan, 2019). However, many recent studies suggest that migrants' length of residence in the city is longer and their willingness to settle is stronger (Li et al., 2009; Tan et al., 2017), indicating their growing bonds with the city. As a result, there is a growing literature on migrants' social relationships with the host city (Wang & Fan, 2012; Wang et al., 2019; Wu, 2012; Wu & Logan, 2016), such as residential satisfaction (Li & Wu, 2013; Lin & Li, 2017), settlement intention (Liu et al., 2017; Cao et al., 2015) and social networks (Yue et al., 2013). These concepts often reflect migrants' positive perceptions/feelings towards specific aspects of urban environmental quality (Bonaiuto et al., 1999) or certain behaviours incurred by these positive feelings, such as willingness to stay in the place, to enter into close contacts with locals (Lewicka, 2011). However, these concepts cannot grasp migrants' direct sense of belonging and affective bonds with the host society (Lewicka, 2011; Wu, 2012). For example, studies of residential satisfaction tend to focus on the level of people's perceptions and cognitive evaluations of the specific aspects of the residential environment (Bonaiuto et al., 1999; Zenker & Rütter, 2014).

What we know about the place attachment of migrants in China is based largely upon empirical studies carried out at the neighbourhood level (Du & Li, 2010; Wang et al., 2016, 2017; Wu et al., 2019). Wu and Logan (2016) found that migrants were more likely to engage in socializing and the exchange of help with neighbours, and consequently their neighbouring helped to strengthen their sentiment towards the neighbourhoods where they lived. By refining neighbouring patterns, Wang et al. (2016) suggest that not only may migrants interact with each other, but they were also willing to interact with and help their local neighbours. Such intergroup neighbouring can lead

to more willingness to take part in community activities (Wang et al., 2019). Wu (2012) found that for rural migrants there was no straightforward relationship between neighbourhood attachment and willingness to stay. In addition, increased intra-city mobility can reduce the level of neighbourhood attachment (Li et al., 2019).

It is noteworthy that neighbourhood type is an important factor associated with migrants' social interactions. Compared with other types of neighbourhood, migrants living in commodity housing neighbourhoods tend to have weaker neighbourly interactions (Wang et al., 2016), but exhibit higher neighbourhood attachment and neighbourhood satisfaction (Li et al., 2012). This is largely due to the influence of homeownership and the enclosed neighbourhood environment. Another related factor is neighbourhood diversity (mainly between locals and migrants), which can affect social interactions within the neighbourhood, though there is no consensus about whether this effect is positive or negative (Wang et al., 2016, 2019).

The above review indicates that current neighbourhood attachment studies actually focus on 'neighbouring' and on neighbourhood interaction and social relations, not on attachment and settling down. Neighbouring interaction and neighbourhood attachment do not mean that migrants are well integrated with the host society (Wu & Logan, 2016), and are insufficient to address migrants' embeddedness in the host city. Especially in the case of China, the city is an important scale due to the *hukou* system. The *hukou* system not only creates general rural–urban division, it is also linked to people's access to benefits and opportunities provided by the city government. Each city may have different policies towards integrating migrants. For example, some cities such as Beijing and Shanghai apply a points system, setting up restrictive criteria to select qualified migrants, who are usually highly skilled, while other small and medium-sized towns and cities have relatively easier and more inclusive policies for the majority of migrants. Thus, the spatial parctice of 'citizenship' for China's internal migrants is performed by 'the host city' rather than 'the host country' as is often considered in immigration studies.

Moreover, migrants have higher intra-city residential mobility compared to locals (Cui et al., 2015; Li & Zhu, 2014). They often move to different neighbourhoods due to job changes (Lin & Gaubatz, 2017; Liu & Shen, 2014) and urban redevelopment (Wu, 2004). Migrants' attachment to their neighbourhoods is low (Du, 2017; Wu, 2012). 'Neighbourhood' signifies a living space or maybe a ladder for migrants to gain upward social mobility. It may only serve as a transitional place for migrants before they permanently settle down. However, the host city where they may finally settle is closely related to migrants' work, consumption and social networking. Thus, we suggest that attachment to the host city may be a better and more direct indicator for interpreting migrants' integration. This paper aims to fill the above knowledge gap by examining migrants' attachment to the host city and its underlying mechanisms.

Research Design

Data

The data for this study come from the 2014 China Migrants Dynamic Survey collected by the National Health Commission of China in eight cities, including Beijing, Jiaxing, Xiamen, Qingdao, Zhengzhou, Shenzhen, Zhongshan and Chengdu. These are pilot cities selected purposely by the State for promoting migrants' social integration. They represent cities with different development levels, population sizes and in different parts of China (Table 1). A stratified three-stage probability proportionate to size (PPS) sampling method was adopted to collect 2,000 samples from each city, 16,000 in total. The three stages of sampling are counties and street committees, residential communities and village committees, and individuals. PPS was used for the first two stages. Then, individual samples were randomly selected according to different migrant groups for the third stage. This sampling method enables migrants in each city to be selected randomly, but it cannot guarantee randomness when considering the eight cities together as a whole sampling frame. Despite the above drawback in sampling method, this provides so far one of the most reliable and comprehensive datasets for

understanding migrant social integration in China, and it has been used widely in different studies (Lin et al., 2016; Gu et al., 2020; Zheng et al., 2020). In the survey, migrants were defined as individuals whose *hukou* was not registered in the host city, but who had resided in the city for at least one month and whose age was between 15 and 59 at the time of the survey.

Measuring migrants' attachment to the city

Following previous studies (Shamai and Ilatov, 2005; Hou et al., 2018), the instrument employed a one-dimensional structure to measure place attachment to the city. In the questionnaire, there is a question asking how far the migrant agrees with the statement whether he or she is attached or belongs (*guishu*) to the city where he or she lives, with the choice of totally agree, agree, disagree, and totally disagree. This question straightforwardly mirrors migrants' feelings towards their city. We use this question as a proxy for place attachment to the city. "Attachment to the city" or *guishugan* (the feeling of being attached) as used here is slightly different from the term "sentiment" (*qinqiegan*) (Du & Li, 2010; Wu & Logan, 2016). The latter emphasizes affectionate feeling. Attachment to the city stresses the sense of belonging and association (Wu, 2012), reflecting the tendency of the individual to maintain closeness to (settle down in) the host city (Hidalgo & Hernandez, 2001).

Individual and environmental factors

In the empirical analysis, we explore the influence of individuals' socioeconomic characteristics as well as the social and physical factors of the living environment on migrants' place attachment to the city. We first take into account a number of socioeconomic factors which may have effects on migrants' place attachment, largely based on existing studies (Lewicka, 2011) (Table 2). The *hukou* variable distinguishes rural-to-urban migrants from urban-to-urban migrants. Migrants' marriage status is

classified into two categories, namely married (i.e. married or remarried) or unmarried (i.e. single, divorced or widowed). For the occupation variable, we use the status of employment (employed or unemployed) to simplify the model. The effect of income is measured by logged monthly individual income (in Chinese thousand Yuan). A merit of using logged income is that it allows us to reduce multicollinearity among variables. The length of stay in the host city variable is calculated in the exact number of years. Homeownership is classified in two categories, with or without ownership.

Second, we explore the impact of perceived social environment and objective environment factors on place attachment. Logan and Collver (1983:432) contended that "residents' perceptions of what their community and other communities are like are as important to urban theory as the information on objective characteristics on which most urban research is based". Thus, in this paper we explore the influence of both subjective and objective conditions of the neighbourhood on migrants' attachment. For perceived neighbourhood conditions, we select perceived neighbourhood composition as the major indicator. In Western societies, racial and ethnic composition in the neighbourhood has great impact on immigrants' place attachment. Ethnically diverse neighbourhoods tend to have lower social trust and rarer community cooperation (Putnam, 2007), which may reduce residents' place attachment. As such, we propose the hypothesis that if a migrant perceives more local residents in the neighbourhood, he or she may have lower degrees of attachment. In the questionnaire, respondents were asked to answer the question "who are your neighbours" with the choice of "mostly are migrants", "mostly are local residents", "there is almost equal number of migrants and local residents" and "not sure". This question provides an assessment by migrants about the level of social mix in their neighbourhoods. Although this perception might not be accurate, in China the appearance of recent rural migrants in the city is quite distinguishable from that of locals. The level of neighbourhood migrant diversity is easier to judge than other neighbourhood social attributes.

For the objective condition of the neighbourhood, we use neighbourhood types as the indicator. In general, existing studies divide China's neighbourhoods into four types

(Li et al., 2012; Wang et al., 2016; Wu, 2012): commodity housing neighbourhood, work-unit of reformed housing neighbourhood, urban and rural villages, and old inner city neighbourhood. In the questionnaire, the answer for neighbourhood types also included neighbourhoods in suburban areas. Due to their marginal and unregulated nature, we aggregated them into the type of urban and rural villages in order to maintain consistency with current neighbourhood studies in China. These four different types of neighbourhood in China often occupy different components of urban space and are characterised by distinctive socio-demographic mixes (for a detailed introduction to different types of neighbourhood please see Li et al., 2012). In addition, homeownership is well recognized as a crucial factor for explaining place attachment (Lewicka, 2011). In order to test the influence of neighbourhood types, we further use interaction terms between homeownership and neighbourhood types instead of the original four types to indicate the impact of homeownership. There are eight different neighbourhood and housing conditions: rental commodity housing, rental work-unit housing, rental traditional inner city housing, rental village housing, owned commodity housing, owned work-unit housing, owned old inner city housing, and owned village housing.

Moreover, the city itself is considered another important objective factor that may influence place attachment (Lewicka, 2010; Casakin et al., 2015). The eight cities in our study differ on many dimensions, including population size, development stage, economy and location. These differences indicate different policies towards migrants, as well as attractiveness and lifestyles.

The empirical analysis in this paper consists of two models using multinomial logistic regressions. The first model only includes migrants' socioeconomic variables. We then add three variables that indicate social and physical environment into the model to understand the predictors of migrants' place attachment to the city.

Results

Descriptive findings

Table 1 shows that most migrants in the survey are young and married. It is noticeable that the educational level of the migrants is higher than in the findings from previous studies (Wang, 2016, Lin & Li, 2017), with many of them having achieved senior secondary or college degrees. They mainly come from rural areas and are employed in the city. It is surprising that the majority of migrants in the survey show a sense of attachment to the city. More than 85 per cent of them either agree or totally agree that they are attached to the city where they live (Table 1). This is much higher than migrants' neighbourhood attachment (Du, 2017; Wu, 2012), while it is consistent with existing research showing that emotional attachment to more extreme scales of place, like home and city, is higher than to the midpoints of the scale (neighbourhood) (Hernández et al., 2007; Lewicka, 2010). In general, migrants who are female, married and with higher educational attainment (senior secondary and above) and better income are more likely to be attached to the city. Migrants with urban *hukou* also appear to have a stronger sense of attachment to the city.

(Insert Table 1 here)

As shown in Table 2, most samples are renters (above 90 per cent) who live in urban villages or rural villages (about 60 per cent). A close look reveals remarkable differences among migrants who live in different neighbourhoods. Migrants with an educational level of college or higher are more likely to live in commodity housing both owned (14.4 per cent) and rental (22.90 per cent), compared with migrants with an educational level of primary school or below. It is also noteworthy that comparatively more urban-to-urban migrants live in commodity housing than their rural-to-urban counterparts.

As to the social composition of their neighbourhoods, about 40 per cent of the samples thought that they lived in migrant-dominated neighbourhoods, and yet about 20 per cent of the sampled migrants thought that their neighbourhoods were local

resident–dominated. Surprisingly, migrants who perceived that they lived in local resident–dominated neighbourhoods tended to feel more attached to the city compared to others. Migrants who rented housing in urban and rural villages had a high propensity to be totally not attached to the city. As far as the city context was concerned, although the sample size for each city was the same, the pattern of place attachment shows remarkable differences. Migrants in Shenzhen, Jiaxing, Zhongshan and Beijing appeared to have the least attachment to the city, while those who lived in Chengdu, Qingdao, Xiamen or Zhengzhou were more likely to feel attached to the city.

(Insert Table 2 here)

Socioeconomic factors affecting place attachment to the city

In this section, we use multinomial logistic regression models to understand the influences of individuals' socioeconomic characteristics on place attachment (Table 3). The model reveals that socioeconomic status explains migrants' attachment to the city, while the demographic factors are generally insignificant. First, migrants who have a lower level of educational attainment are less likely to feel attached to the host city. In terms of income, the result shows a curvilinear relationship with place attachment. Migrants who have higher income are more likely to agree or disagree with the statement that they are attached to the city. The same curvilinear relationship is also found between employment and place attachment. This largely results from the fact that more than 70 per cent of unemployed migrants are married females. Although they are not employed, living with their family in the city greatly enhances their attachment.

Second, the effect of *hukou* status is only significant at the 'agree' level. As compared to urban-to-urban migrants, rural-to-urban migrants are 1.167 times more likely to agree with the statement that they are attached to the city than totally agree. The reason for this may be that urban-to-urban migrants are relatively well educated (47.50 per cent of them have a college degree or higher) and it is easier for them to adapt to local society. On the other hand, this result may indicate that there are no

15

significant differences between rural-to-urban migrants and urban-to-urban migrants since neither possess local *hukou*.

Third, the length of residence strongly predicts migrants' attachment to the city, which is consistent with existing studies. People may establish stronger social ties through staying longer in the city, and as a result they become more attached to it. However, this contradicts studies of neighbourhood-level attachment to urban villages. Du and Li (2010) found that longer stay in the urban village is associated with weaker community attachment. This is probably because urban villages are often considered as informal housing for temporary living. The longer they stay in urban villages, the more eagerly migrants hope to leave, thus less attachment is likely to develop. This result indicates that the same predictor may show divergent directions of association with attachment to the neighbourhood and attachment to the city.

Last but not least, homeownership is undoubtedly the strongest predictor for place attachment to the city. In accordance with many previous studies, migrants who have homeownership in the city are more likely to totally agree with the statement that they feel attached to the city. Owning housing in the city can greatly enhance migrants' attachment to the city.

(Insert Table 3 here)

Factors of social and physical environment affecting place attachment

Table 4 presents the results of multinomial logistic regression on individual, social and physical factors and place attachment. For perceived neighbourhood composition, migrants living with equal numbers of local residents and migrants or with mostly local residents significantly reduces the odds of the agree, disagree and totally disagree categories as opposed to the totally agree category. This implies that, regarding attachment to the city, mixed residential patterns are better than segregated migrant enclaves. This is in stark contrast to general international migration studies and previous

neighbourhood research findings (Dekker & Bolt, 2005; Putman, 2007; Livingston et al., 2010; Wang & Ramsden, 2018). They argued that a neighbourhood composed of diverse ethnicity tends to 'hunker down' with lower trust and rarer community cooperation (Putnam, 2007; Stolle et al., 2010), which may cause a weaker sense of attachment (Górny & Toruńczyk-Ruiz, 2014). In China, migration is not usually concerned with the issue of multi-ethnicity but mostly with socioeconomic differentiation created by the rural–urban dichotomy (Wu & Logan, 2016; Shen & Xiao, 2019). Migrant enclaves in China are often related to informality, a high crime rate and high mobility (Liu et al., 2010), while local resident–dominated neighbourhoods indicate stability and safety, which explains the higher level of place attachment. Besides the difference, this finding reveals another convergent conclusion with immigrant studies in Western countries, that is, living in a more mainstream setting (commodity housing in China's case) neighbourhood indicates a higher level of social integration and assimilation for migrants (Massey & Denton, 1985).

Another interesting finding about perceived neighbourhood composition is that those who are not sure about their neighbours are less likely to totally agree and are most likely to totally disagree about attachment to the city. This result echoes current research findings about the "decline of neighbouring" (Forrest & Yip, 2007; Lu et al., 2018). People tend to know less about their neighbours in modern society.

In order to clearly show the impact of neighbourhood types, we use interaction terms created by homeownership and neighbourhood types to identify the influence of homeownership in specific neighbourhoods. Compared with migrants who rent commodity housing, migrants who rent housing in other types of neighbourhood are less likely to feel totally attached to the city. In particular, those who rent village housing are 2.159 times more likely to feel totally not attached. This indicates that living in urban villages is still transient (Liu et al., 2010; Lin & Li, 2017; Liu & Shen, 2014). Migrants who live in these neighbourhoods are either newly arrived or highly mobile with little attachment developed. Moreover, by using the interaction terms, we found that by comparing them with migrants who rent commodity housing, those who

own commodity housing or village housing show positive and strong place attachment. It is assumed that migrants who can afford to own commodity housing are relatively affluent and settled down in the city, thus feeling more attached. However, it is surprising that migrants who own village housing are also more likely to feel attached to the city; these villages are probably now part of the city. A possible reason is that more than 90 per cent of such migrants are married and have lived in the city for an average of 6.42 years. The long-term commitment of these migrant families to the city strongly enhances their attachment to the city. The result again demonstrates the decisive influence of homeownership.

Regarding the city variable, firstly there is a clear division on the sense of place attachment among different cities. Compared to migrants in Zhongshan, migrants in Beijing and Shenzhen are 1.727 times and 1.873 times more likely to feel not attached to the city. Beijing and Shenzhen are two of the largest and most developed cities in China. With plenty of job opportunities and relatively higher salaries, cities like Beijing and Shenzhen have attracted a great number of migrants. However, due to sky-high housing prices and living costs, these cities are often considered as places for earning a living during one's younger years but not for permanent settlement. More importantly, these cities have set very high thresholds for household registration which have limited the ability of migrants to settle down. As such, attachment to the city remains lower among migrants in these cities, whilst cities such as Qingdao, Chengdu, Xiamen and Zhengzhou, which are also regarded as new first-tier or second-tier cities in China, often welcome migrants to settle down. For example, Chengdu has recently released several preferential policies and created an environment to attract migrants to settle down. Therefore, compared with Zhongshan, migrants in these four cities have a high propensity to be attached to the city.

It is interesting to note that Jiaxing is an exception. In the aspects of population size, economy and rank, Jiaxing is quite similar to Zhongshan. However, migrants in Jiaxing are 1.675 times more likely not to be attached to the city compared with totally attached. This shows a similar pattern to Beijing and Shenzhen. It largely results from

Jiaxing's proximity to Shanghai and their close economic connections. Jiaxing is only 90 kilometres from Shanghai, less than half an hour by high-speed train. As early as 1992, Jiaxing proposed the slogan of "connecting (*duijie*) Shanghai". In 2017, the Zhejiang provincial government approved Jiaxing as the demonstration zone for Zhejiang's integration with Shanghai. As such, many migrants who work in Shanghai but cannot afford housing in Shanghai live in Jiaxing. Jiaxing is becoming a 'dormitory city' for many migrants, which has led to a weak sense of place attachment.

The above finding about the influence of the city variable is different from Casakin et al., (2015). They found that place attachment was higher in large cities (due to their good services and facilities) and small cities (due to social reasons). However, this study reveals that city size is not the main reason that leads to different levels of attachment. Rather, in China, because of tighter control over migration in large cities, place attachment to large cities is lower than to smaller cities, indicating that it is more difficult to settle down in large cities. The specific characteristics of each city, such as migration policy, living cost and local culture, may be better predictors. In future studies, variation in cities' characteristics including both physical (objective) and social factors should be explored.

(Insert Table 4 here)

Conclusion

Place attachment to the city reflects migrants' affective bonds and sense of belonging, often used as the key indicator for migrants' psychological integration (Wu, 2012; Wang & Fan, 2012). Despite an emerging literature on migrants' neighbourhood interaction and place attachment at the neighbourhood level, surprisingly few studies have explicitly explored migrants' attachment to their host city. Neighbourhood attachment studies often focus on neighbouring and neighbourhood social interactions, which fail to grasp migrants' direct feelings towards the city. In this regard, this paper explores migrants' place attachment in eight Chinese cities and its determinants. We

paid particular attention to neighbourhood types, neighbourhood social composition and the characteristics of the city itself. Our analysis finds some new characteristics of migrants in urban China: their educational level has improved; family migration has become common; and although many of them still live in urban and rural villages, a large number of them are now living in commodity housing neighbourhoods.

There are several important findings from our study. First, our results show that homeownership does play a crucial role in migrants' attachment to the city. Wu & Logan (2016) conclude that the lack of homeownership does not hinder rural migrants' social interaction with their neighbours in their neighbourhood and does not undermine their sentiment towards the neighbourhood. Our study extends this understanding by addressing the impact of homeownership on migrants' attachment to the city rather than the neighbourhood. Homeownership proves to be strongly related to place attachment to the city. This is probably because current neighbourhood attachment studies are more about 'neighbouring' and neighbourhood interaction/social relations, while attachment to the city mirrors migrants' willingness to maintain closeness with the city and sense of belonging (Hidalgo & Hernandez, 2001). In other words, homeownership may not constrain neighbouring activities but rather is pivotal for migrants' integration in urban China. Homeownership is generally the only way to secure stable accommodation in the city (Deng et al., 2016). Homeownership in the city not only indicates one's socioeconomic status, but also directly relates to social welfare, particularly children's education, as renters are not entitled to school catchment areas.

Second, on the influence of neighbourhood type, our results are consistent with general neighbourhood attachment studies (Zhu et al., 2012), which suggests that migrants who live in commodity housing are more likely to develop a sense of attachment to the city compared with other types of neighbourhood, especially urban villages. This is possibly due to the better and more formal living environment of commodity housing neighbourhoods. Although frequent neighbouring in urban villages may contribute to community participation (Wang et al., 2019) and may enhance community sentiment (Wu & Logan, 2016), living in commodity housing promotes

migrants' attachment to the city. Urban villages, or 'migrant enclaves', may serve an important role in migrants' entry into the city (Ma & Xiang, 1998). However, living (without homeownership) in informal neighbourhoods does not enhance migrants' attachment to the city.

The third important finding is that migrants who live in a neighbourhood with a higher share of local residents are associated with a stronger sense of place attachment to the city. This is different from earlier studies in the West on ethnic mix impeding social interaction and integration. This may be due to different meanings of social composition. Migration in China is mainly domestic and migrants generally share the same ethnic background as local urbanites, so that social mix in China mainly indicates a mix of residents with different *hukou* status and related socioeconomic differences. The other side of the coin is that living in a local-dominant and mainstream setting neighbourhood indicates higher level of social integration.

Fourth, this study also reveals a significant variation in migrants' attachment across different cities. In general, migrants show a lower attachment to the most developed cities in China compared with other cities. While different from the major findings of Casakin et al.'s (2015) study, city size is not necessarily related to different levels of place attachment. Size in fact reflects the level of migrant control in China. Due to data limitations, current research is inadequate and cannot explore more city-level factors to understand the variation of migrants' attachment in different cities. Future research should study the impact of city-level social factors on place attachment, such as city-scale networks and perceptions of the city.

One policy implication of this study is to develop affordable commodity housing within the reach of migrants. Although substantial evidence has shown that urban villages serve as an important venue for migrants' entry into the city and demonstrate strong neighbourly interactions, living in these neighbourhoods does not enhance migrants' attachment to their cities. This claim is further supported by another finding,

that migrants who live in local resident–dominated neighbourhoods tend to feel more attached to the city.

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Table 1. Socioeconomic characteristics and levels of place attachment (mean value and percentage).

Variables	All samples	Totally disagree	Disagree	Agree	Totally agree
Place attachment (percentage)	100%	1.69%	12.60%	53.00%	32.71%
Place attachment (number)	15999	270	2016	8479	5234
Age (year)	32.69	34.02	31.77	32.48	33.32
Gender					
Male	55.00%	57.41%	55.06%	54.75%	55.25%
Female	45.00%	42.59%	44.94%	45.25%	44.75%
Marital status					
Unmarried	26.81%	24.81%	29.56%	27.85%	24.19%
Married	73.19%	75.19%	70.44%	72.15%	75.81%
Monthly income (1,000 Yuan)	3.59	3.18	3.49	3.53	3.75
Years of residence (year)	4.25	4.37	3.71	4.09	4.73
Educational attainment					
Primary and below	9.41%	14.81%	11.76%	9.26%	8.46%
Junior secondary	50.53%	50.37%	53.97%	50.84%	48.72%
Senior secondary	25.32%	21.48%	21.92%	25.63%	26.33%
College+	14.74%	13.34%	12.35%	14.27%	16.49%
Hukou					
Rural *hukou*	86.00%	87.78%	89.09%	87.05%	83.01%
Urban *hukou*	14.00%	12.22%	10.91%	12.95%	16.99%
Employment status					
Unemployed	8.32%	10.00%	7.44%	8.79%	7.80%
Employed	91.68%	90.00%	92.56%	91.21%	92.20%

Table 2. Neighbourhood characteristics, cities and place attachment (percentage).

Indicators	All samples	Totally disagree	Disagree	Agree	Totally agree
Neighbourhood composition					
Mostly are migrants	43.46	56.34	53.57	44.88	36.63
Equal	29.46	20.15	25.05	30.46	30.00
Mostly are local residents	20.65	14.55	13.84	18.15	27.62
Not sure	6.43	8.96	7.54	6.51	5.75
Homeownership					
Renter	90.10	94.44	96.38	92.20	84.05
Owner	9.90	5.56	3.62	7.80	15.95
Neighbourhood types					
Commodity housing	21.38	12.22	13.19	19.18	28.56
Work-unit housing	4.71	4.08	4.62	4.73	4.76
Old inner city neighbourhood	15.24	11.48	14.78	14.88	16.18
Urban and rural village housing	58.67	72.22	67.41	61.21	50.50
Homeownership and neighbourhood types					
Rent commodity housing	14.84	9.27	10.96	14.02	17.96
Rent work-unit housing	4.44	3.70	4.51	4.53	4.30
Rent old inner city housing	14.35	11.11	14.34	14.12	14.90
Rent village housing	56.47	70.37	66.57	59.54	46.89
Own commodity housing	6.53	2.96	2.23	5.15	10.60
Own work-unit housing	0.28	0.37	0.10	0.20	0.46
Own old inner city housing	0.89	0.37	0.45	0.77	1.28
Own village housing	2.20	1.85	0.84	1.67	3.61
City					
Chengdu	12.50	5.22	6.00	9.98	19.45
Jiaxing	12.50	18.28	19.89	12.51	9.32
Qingdao	12.50	5.60	8.73	11.45	16.01
Xiamen	12.50	10.45	10.96	12.38	13.39
Shenzhen	12.50	22.39	17.46	13.62	8.27
Beijing	12.50	14.55	15.92	13.19	9.97
Zhengzhou	12.50	5.22	10.17	12.71	13.43
Zhongshan	12.50	18.29	10.87	14.16	10.16

Table 3. Multinomial logistic regression models on individuals' socio-economic characteristics and place attachment (the reference group is those who said totally agree with him or her as attached to the city)

	Agree		Disagree		Totally disagree	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Age	-.005	.995	**-.019*****	.982	.010	1.010
Male (reference=female)	-.011	.989	.005	1.005	.185	1.203
Unmarried (reference=married)	.054	1.056	.006	2.072	.089	1.093
Monthly income (logged)	**.157****	1.170	**.232****	1.261	-.352	.704
Education attainments (reference= college+)						
Primary and below	.206*	1.288	**.728*****	2.072	.472	1.603
Junior secondary	.086	1.090	**.295*****	1.344	.002	1.002
Senior secondary	.046	1.047	.027	1.027	-.148	.862
Years of residence	**-.019*****	.981	**-.033*****	.967	-.013	.987
Rural hukou (reference=urban hukou)	**.153***	1.167	.155	1.167	.149	1.161
Unemployed (reference=employed)	**.705*****	2.023	**.756****	2.129	-.768	.464
Renter (reference=owner)	**.709*****	2.032	**1.398*****	4.046	**1.094*****	2986
Chi-Square	552.995					
-2 Log likelihood	29771.722					
Sample size (valid cases)	15997					
Nagelkerke R Square	.037					

Note: *$p<0.05$, **$p<0.01$, ***$p<0.001$.

Table 4. Multinomial logistic regression models on place attachment (the reference group is those who said totally agree with him or her as attached to the city)

	Agree		Disagree		Totally disagree	
	B	Exp(B)	B	Exp(B)	B	Exp(B)
Age	.001	1.001	-.008	.992	**.022***	1.023
Male (reference=female)	.008	1.008	.012	1.013	.185	1.203
Unmarried (reference=married)	**.176***	1.193	**.155***	1.168	**.385***	1.469
Monthly income (logged)	.044	1.045	.068	1.071	**-.559****	.572
Education attainments (reference= college +）						
Primary and below	**.196***	1.217	**.621****	1.861	.296	1.344
Junior secondary	.066	1.068	**.232***	1.261	-.102	.903
Senior secondary	.046	1.047	.033	1.033	-.184	.832
Years of residence	**-.024****	.976	**-.041****	.960	-.020	.980
Rural hukou (reference=urban hukou)	**.202***	1.224	**.270***	1.310	.301	1.351
Unemployed (reference=employed)	.236	1.266	.088	1.092	**-1.697***	.183
Who are your neighbours (reference=mostly are migrants)						
Equal	-.005	.995	**-.290****	.748	**-.490***	.613
Mostly are local residents	**-.274****	.760	**-.537****	.584	-.328	.721
Not sure	**.207***	1.230	**.398****	1.489	**.677***	1.968
Homeownership and neighbourhood types (reference=rent commodity housing)						
Rent work-unit housing	**.243***	1.274	**.435***	1.545	.586	1.797
Rent traditional inner city neighbourhood housing	**.224***	1.252	**.515****	1.673	.496	1.641
Rent village housing	**.311***	1.364	**.576****	1.778	**.770****	2.159
Own commodity housing	**-.486***	.615	**-.947****	.388	-.682	.506
Own work-unit housing	-.524	.592	-.888	.411	.447	1.564

Own old inner city neighbourhood housing	.027	1.028	-.004	.996	.057	1.058
Own village housing	**-.550***	.577	**-.882***	.414	-.174	.840
City (reference=Zhongshan)						
Chengdu	**-.970***	.379	**-1.154***	.315	**-1.913***	.148
Qingdao	**-.529***	.589	**-.439***	.645	**-1.359***	.257
Xiamen	**-.453***	.636	**-.360****	.698	**-.823***	.439
Zhengzhou	**-.534***	.586	**-.528***	.590	**-1.655***	.191
Jiaxing	-.138	.871	**.516***	1.675	-.012	.988
Shenzhen	.137	1.147	**.628***	1.873	.398	1.488
Beijing	.011	1.011	**.546***	1.727	.022	1.022
Chi-Square	1543.763					
-2 Log likelihood	31333.961					
Sample size (valid cases)	15997					
Nagelkerke R Square	.105					

Note: *p<0.05, **p<0.01, ***p<0.001.