Toward a Relational Account of Neighborhood Governance: Territory-based Networks and Residential Outcomes in Urban China

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ABSTRACT

Although changes in urban space often mean a restructuring of social relations, few studies elucidate why network-related frameworks are inherently related to residential outcomes in urban neighborhoods. By proposing a relational account of neighborhood governance, we investigate outcomes of neighborhood governance by incorporating a series of measures of network forms of organization, network-based social capital, and neighborly interactions. Based on a collaborative survey project conducted in Guangzhou, we find that neighborhood ties and neighborly interactions are positively associated with neighborhood attachment and cohesion, whereas uneven power relations between grassroots governments and civic homeowners associations are negatively associated with these two measures. These results not only reveal new social dynamics in urban space but also lend support to a relational account of neighborhood governance.

Keywords: social capital, social networks, network forms of organization, neighborhood governance, China

INTRODUCTION

It has often been questioned whether neighborhood-based networks and interactions remain an integral part of social and political life (Harvey, 2010; Wellman, 2005). For scholars imbued with a keen sense of space, neighborhoods provide a powerful mobilizing discourse and territory-based identity for civic engagement, yet social networks in contemporary society have long transcended neighborhood barriers such that the link between neighborhoods and urban residents has been attenuated in the digital age (Wellman, 2005).

Social scientists should nevertheless be cautious in de-emphasizing the relevance of neighborhoods in sociological and geographical inquiries if their empirical evidence is drawn primarily from Western societies. The marriage between sociological imagination and spatial consciousness could be unsuccessful if a critical issue—neighborhood governance—is not considered in the sociological framework of relations. This research thus defines neighborhood governance as the control over collective resources rooted in territory-based networks. Given that state-society relations, neighborhood assets, and neighborly interactions may differ in nontrivial ways across societies, this relational aspect considers both possession and mobilization of collective resources.

Urban neighborhoods in contemporary China are of paramount importance in building territory-based interactions, developing consciousness of property rights, and strengthening the identities of middle-class homeowners (Bray, 2006; Fu & Lin, 2013; He & Wu, 2009; Hsing, 2010; Read, 2003; Wu, 2002; Zhu, Breitung, & Li, 2012). In prereform urban China residential space was dominated by work-unit (*danwei* or workplace[1]) compounds that provided low-rent

[1] Although work unit and workplace are used interchangeably in this article, the former has a specific connotation with the state in China while the latter does not.

housing to affiliated employees. Since urban-housing, land, and fiscal reforms have severed the link between workplace and residence (Fu & Lin, 2013), the demolition of workplace compounds and the proliferation of commodity-housing communities have resulted in a reorientation of neighborhood-based relations (Read, 2003; Zhu et al., 2012).

Yet few studies on China's urban neighborhoods have included concrete measures of social capital and networks. Existing research that focuses on more proximate determinants affecting urban neighborhoods (such as transfers of property rights, the development of homeowners associations, the introduction of professional property managers, and a consolidation of grassroots government agencies) bypasses important social forces in reform-era urban China: the shift in interpersonal and organizational relations. We next provide a discussion of changing neighborhoods and neighborhood-based relations in reform-era China.

CHINA'S NEIGHBORHOOD GOVERNANCE: RESOURCES, NETWORKS, AND POLITICS

Urban sociologists have informed us that the city can "increase aggregate rents and trap related wealth for those in the right position to benefit" (Logan & Molotch, 2007: 50). Thus the value of collective resources and assets is a key factor in explaining variations in urban neighborhoods across cities and societies. As massive capital flows entered China's real estate industry, not only did the value of collective property within urban neighborhoods such as gardens, parking lots, swimming pools, gyms, and clubhouses grow dramatically over the years but enormous fortunes were generated by this collective property. For example, our field research in 2010 documented that the amount of parking fees for a neighborhood in Guangzhou consisting of about 2,000

households was estimated to be around 300,000 U.S. dollars. Because Chinese neighborhoods vary in size from several hundred to over ten thousand households, communal spaces can also serve as effective business platforms. A party possessing control over collective property in a neighborhood not only charges property management fees from all residents for the maintenance and management of collective property but claims substantial profits from outdoor and indoor advertising, the installation of cellular radio base stations, neighborhood shops and vendors and other business activities within a neighborhood.

While this framework of neighborhood governance emphasizes collective resources and property (or condominiums) within a neighborhood, private (housing) property owned, possessed, or executed by a Chinese household also deserves attention. Since a housing unit of average dwelling size costs thirty-three times a household's annual disposable income (Tomba, 2004), the skyrocketing yet still rising housing prices in urban China would greatly discourage residential mobility. The much-lower rates of residential mobility in urban China as compared with residents in Western countries (Li, 2004) means that Chinese housing consumers seldom move from one neighborhood to another to "satisfy their preference for public goods" (Harvey, 2010: 91). Consequently, urban residents must rely more on existing neighborhood relations instead of relocation to avoid long-lasting problems and deepening tensions within a neighborhood.

Neighborhood governance also involves dynamic interplay among other significant players in urban space, such as real estate developers, property management companies, and local government agencies. In particular, local governmental agencies continue to interfere in neighborhood governance. The socialist provision of urban housing was once regarded as a welfare policy, which meant that each workplace was responsible for accommodating their employees' housing needs (Huang, 2003). Urban neighborhoods and residential arrangements

were part of welfare provisions to the labor force in the process of production. Multiple waves of China's urban reforms, especially those in 1994 and 1998, broke the linkage between workplaces and residence (Fu & Lin, 2013; Huang, 2003), yet it is inaccurate to interpret the severed link between the workplace and residency as a retreat from urban space by state power. To the contrary, grassroots government agencies such as street offices (*jiedaoban*) and residents committees (*juweihui*) established in the prereform era have been consolidated to maintain the state's control over urban space. As decentralization and marketization have dispersed and created resources beyond the authoritarian order, the Chinese government has found it imperative to strengthen their grassroots branches and fill in the vacuum left by the retreat of workplaces in urban administration (Wu, 2002). A new institutional identity has emerged, consisting of a prescribed territory and de jure population, the participation of professional cadres and supportive social workers, and a vertical integration of grassroots state agencies and local governments (Bray, 2006). This institutional presence sets China's model of neighborhood governance apart from those adopted by other countries. Assisted by land development and urban renewal projects in China, a contentious territorialization process has virtually transferred control over territory-based resources and people in China's urban space from workplaces to grassroots government agencies (Hsing, 2010). In this regard, neighborhood *governance* pertains to grassroots state-society interactions.

The politicization of urban neighborhoods takes place when empowered neighborhood entities, such as grassroots government agencies, try to control territory-based personnel and resources by maintaining hierarchical authority over urban residents (Fu, 2014; Hsing, 2010). Nevertheless, because the exchange of products and services such as property management, access to community facilities, and the allocation of collective property in a populous and sizable

Chinese neighborhood is "idiosyncratic, complex, and dynamic," effective social exchanges are unlikely to take place under political hierarchy (Powell, 1990: 302). Instead, the failure of hierarchical structure in addressing residential needs demands network forms of organization so that *the shadow of the future* (e.g., contentious actions conducted by residents whose property rights are impaired) may elicit collaboration and reciprocal exchanges among entities in neighborhood governance. In fact, illegitimate or even illegal state intrusion into neighborhood property has already become an important source of socialization and mobilization (Read, 2003).

The association between territory-based social relations and residential outcomes should be incorporated into the framework of neighborhood governance. Urban planners have long observed that "although people reside, work and play in buildings, their behavior is not determined by the buildings, but by the economic, cultural, and social relationships within them" (Gans, 1969: 37). Although the prereform Chinese society was once described as an atomized society in that individuals lacked opportunities and incentive to extend their weak ties beyond their corresponding workplaces, substantial neighborly interactions took place because urban residents living within a workplace compound were both neighbors and co-workers. Since traditional workplace compounds are increasingly being replaced by (gated) commodity-housing neighborhoods that manifest a distinct array of territoriality, neighborly interactions are now driven by territory-based identities rather than workplace-based ties.

Moreover, urban neighborhoods are defined both spatially and socially. Conceptualized as communities with spatially confined territories, neighborhoods consist of networks of interpersonal ties among residents that "provide sociability, support, information, a sense of belonging, and social identity" (Wellman, 2005: 53). Underlying neighborly interactions are then the formation of networks, the sharing of information, the exchange of resources and the making

of territory-based identities among otherwise atomized residents (Bourdieu, 1986; Coleman, 1990; Lin, 1982). Since the decline in anonymity and neighborly interactions mutually reinforce each other within a neighborhood, the accumulation of network-based social capital, or resources embedded in social networks, in turn enhance residential experiences through the exchange of information, mutual influence, social prestige, and reinforcement of identities (Lin, 2001).

We argue that neighborhood perception from *the majority of residents* instead of other entities should be regarded as the most important, if not the sole, outcome of neighborhood governance. By invoking a set of neighborhood perceptions from the perspective of residents, it is possible for scholars to establish a subjective yardstick for evaluating the success or failure of neighborhood governance. Different from other entities such as property management companies or grassroots government agencies that claim their salaries, benefits, or political credentials from neighborhoods, residents who invest in their neighborhoods via housing purchases and property management fees are fundamental stakeholders in urban neighborhoods. In China this resident-centered way of determining neighborhood issues such as execution, management, and transfer of collective property is also officially recognized, sanctioned, and supported (National People's Congress, 2007; The Supreme People's Court, 2009), although relevant laws and regulations are often loosely enforced.

While sociologists emphasize the role of subjective perception in shaping a series of individual-level and neighborhood-level outcomes such as mental health, civic engagement, residential mobility, and crime, a large volume of literature in urban studies attributes the success of neighborhoods to sense of place (belonging) or territory-based identities among residents (e.g., Manzo & Perkins, 2006; Martin, 2003). The interdisciplinary emphasis on *residents'* perception

lends credence to our employment of two measures—neighborhood attachment and social cohesion—to gauge neighborhood governance.

Neighborhood attachment refers to positive affective bonds between people and place, i.e., the extent to which residents regard their neighborhood as a place to call home (Shumaker & Taylor, 1983). This people-place relationship constitutes a significant domain of neighborhood governance, especially for neighborhood mobilization. Place attachment may translate to feelings of pride and commitment to the residential area, motivating participation in community efforts (Brown, Perkins, & Brown, 2003; Manzo & Perkins, 2006). In contrast, disruptions of place attachment by interrupting economic, religious, genealogical, and other emotional bonds between people and places can cause feelings of loss and alienation and evoke collective activities to rebuild these relationships (Low, 1992; Perkins, Brown, & Taylor, 1996).

In this research social cohesion, here defined as community solidarity and mutual trust among neighbors, constitutes another domain of neighborhood governance. Sociologists (e.g., Sampson, Raudenbush, & Earls, 1997) regard social cohesion as an integral part of the local population's collective efficacy in solving neighborhood problems or maintaining community stability. Empirical studies generally support the idea that social cohesion serves as an important informal mechanism through which residents achieve public order and act collectively in pursuit of the common good (Browning & Cagney, 2002; Duncan, Duncan, Okut, Strycker, & Hix-Small, 2003). Given the theoretical emphasis of neighborhood governance on grassroots state-society interactions and territory-based networks, we expect that *power over residents possessed by grassroots state agencies is negatively related to neighborhood attachment and social cohesion, whereas neighborhood-based ties and neighborly interactions are positively associated with*

neighborhood attachment and social cohesion. We next evaluate these hypotheses based on the first large-scale survey of neighborhood governance in Guangzhou.

DATA

In this project urban residents were selected using a multistage stratified random sampling scheme. In the first stage, three primary sampling unit strata (the inner core area, the inner suburb area, and the outer suburb area) were determined by purpose of land use and population density. In the second stage, grassroots street offices within each stratum were selected with reference to the total number of street offices in each stratum and their spatial distribution in Guangzhou. By the end of 2012 the sampling frame of street offices located within the border of the outer ring road in Guangzhou consisted of fifty-two, forty-five, and forty-two street offices from the inner core area, the inner suburb area, and the outer suburb area, respectively. In the third stage, one targeted urban neighborhood and a list of neighboring alternatives were determined within a selected street office by a GIS sampling method. If interviewers failed to gain access to one-third of the target households due to gatedness, intervention from property managers, or the absence of a working homeowners association, an alternative neighborhood was selected from the candidate list. In the fourth stage, residents within a neighborhood were recruited using an interval sampling based on residential distribution. The total number of interviewees per neighborhood was adjusted according to total number of households. Besides data collection at the household level, the director, deputy-director, or an active member of a corresponding homeowners association was asked to fill in a neighborhood-level questionnaire.[2]

[2] Homeownership per se in urban China only guarantees a seat in a homeowners assembly. A homeowners association normally consists of seven to thirteen homeowners, which is equivalent to the board of directors of a homeowners association (HOA) in the United States.

This multilevel survey design allows the inclusion of network-related measures at both the individual and aggregate levels.

VARIABLES

Dependent and independent variables

Two measures of neighborhood attachment and social cohesion were obtained from factor analyses of three and six related questions, respectively. Although China's urban-housing reforms resulted in massive transfers of housing property rights from workplaces to households and the rise of middle-class homeowners, existing research shows that most urban residents are unaware of their partitioned ownership even though they are now housing consumers instead of socialist producers residing in workplace compounds. This impedes civic engagement and influences their sense of place. Neighborhood attachment in commodity-housing neighborhoods is also strongly associated with access to and evaluation of the built environment (Zhu et al., 2012). Therefore two variables were generated by factor analyses (principal component factors with orthogonal varimax rotation) of two sets of six relevant questions to account for the influence of awareness of property rights and the built environment.

Information pertaining to organizational relations between grassroots government agencies and civic territorial organizations (homeowners associations) was retrieved from neighborhood-level questionnaires completed by a key member of a homeowners association to evaluate whether grassroots government agencies possess power over corresponding homeowners associations. A dichotomous variable was coded as one if this member suggested the existence of such power relations. For individual-level social network and social capital,

network extensity measured the total number of positions accessed by interviewees, using the position-generator method.[3] Network extensity was further divided into that accessed within a neighborhood (neighbors) and that accessed outside a neighborhood (e.g., classmates and colleagues). Upper reachability denotes the prestige score of the most prestigious occupation accessed by a respondent. Three measures were included to indicate neighborly interactions. The first is a continuous variable that measures the number of neighbors known by name as reported by a respondent, or number of acquaintances. An ordinal variable denotes the frequency of neighborly interactions in communal space within one month (response categories were: 1. never; 2. once a month; 3. once every two weeks; 4. once a week; 5. more than once a week). An additional variable was included to denote whether a respondent engages in any community-based interest group (Putnam, 2000).

For demographic and geographic characteristics, respondent's sex (male was coded as one), age, marital status (ever married was coded as one), local residence (local household registration was coded as one), and status of housing tenure (tenancy, homeownership of commodity housing, and homeownership of other types of housing, such as privatized workplace housing and affordable housing[4]) were included in this research. Years of schooling, occupational category (administration, professional, clerical staff, and service, manual labor, and other jobs), and retirement (retired was coded as one) were introduced to account for a resident's socioeconomic status. We also included variables denoting whether the respondent worked in a

[3] The list of occupations is available upon request.

[4] This paper mainly deals with three types of housing in urban China: (1) Commodity housing is the only type of housing readily available on the open market. This expensive type of housing has been newly developed by real estate developers, and possesses desirable features such as gated neighborhoods, round-the-clock security systems, and gardens. (2) Privatized workplace housing, also known as *danwei*-reform housing or *fang gai fang*, are housing units previously owned by a workplace and sold to their employees at a heavy discount. Persons outside the workplace were ineligible for this type of housing. (3) Affordable housing with governmental subsidies targets low- or middle-income urban households.

state sector (government agencies, institutes, or state-owned enterprises) or held Communist Party membership.

RESULTS

The descriptive analysis of the sample is shown in Table 1. Over one-half of the respondents were female, with an average age of forty-five years old; most were married and local residents. In terms of housing tenure, tenants, homeowners of commodity housing, and homeowners of other types of housing including privatized workplace housing and affordable housing accounted for 21.0 percent, 69.4 percent, and 9.6 percent of the sample, respectively. On average, respondents had ten years of schooling. Less than one-third of interviewees were retired. Over one-third held administrative, professional, or clerical jobs; the remainder held service, manual, or other jobs. About one-fifth of interviewees either worked in state sectors or were Communist Party members.

With regard to network-related measures, about 60 percent of directors of homeowners associations reported that corresponding grassroots government agencies hold power over them, adjusted by sizes of neighborhoods. The mean number of occupations accessed by each respondent was 4.798 (network extensity), of which about one occupation (N=1.068) is accessed via neighborhood-based ties. The average value of upper reachability was 72.207, which lies between movie stars and officials at business or tax bureaus. In terms of neighborly interactions, the mean number of neighbors known by name was around twelve. On average residents interacted with their neighbors in communal space at least once a month (mean=2.662), and 14.2 percent reported that they participated in interest groups.

[Table 1 about here]

Results from factor analyses (after rotation) are shown in Table 2. Both the factor of awareness of property rights and the factor of evaluation of built environment and communal space were associated with large eigenvalues (4.317 and 3.850, respectively). They also explained substantial variances in each set of six questions used for factor analyses (72.0 percent and 64.2 percent, respectively). In particular, all six questions related to awareness of property rights (maintenance fund, the existence of homeowners' collective revenue, partitioned ownership, the use of property management fees, expenditure of collective revenue, and laws and regulations) have high factor loadings (above 0.8). Loadings on the factor of evaluation of built environment and communal space showed little variation (from 0.745 to 0.836) as well. Regarding the dependent variables, most variations in the three questions employed to construct *neighborhood attachment* can also be explained by the factor generated. While this factor possesses a fairly large eigenvalue (2.085), factor loadings fluctuated somewhat across the three questions (from 0.747 to 0.877). Over one-half of variances in the six questions measuring social cohesion can be explained by the factor generated and the corresponding eigenvalue is high (3.216), yet factor loadings also fluctuated in the range from 0.631 to 0.807. Finally, factor scores were calculated by the -predict- command in Stata, which sums the products of the factor score coefficients and the standardized values of the corresponding variables.

[Table 2 about here]

Table 3 shows results from regression analyses of neighborhood attachment. Models 1 to 4 include differential measures of social network and social capital, while Model 5 considers all network-related measures. From Model 1 to Model 3 there is a significantly negative association between years of schooling and neighborhood attachment. Across different models, residents working in state sectors, reporting positive evaluation of the built environment and communal space, or becoming conscious of their property rights tend to have significantly higher neighborhood attachment. With regard to effects of network and social capital measures, an interesting finding is that residents expressed significantly weaker neighborhood attachment if grassroots state agencies possessed power over the corresponding civic homeowners associations, as reported by key members of local homeowners associations (Model 1). When Model 2 included network extensity and upper reachability reported by residents, the former is significantly and positively associated with neighborhood attachment but the latter does not exhibit a significant effect. Model 3 further divides network extensity into that accessed within a neighborhood and that accessed outside a neighborhood. Results from Model 3 show that the effect of network extensity on neighborhood attachment is primarily mediated by that accessed within a neighborhood. In Model 4 all three measures of neighborly interactions, especially *number of acquaintances* and *neighborly interactions in communal space*, are significantly associated with higher neighborhood attachment. Furthermore, the significant effect of years of schooling can be explained by the inclusion of neighborly interaction measures, indicating that, probably because of higher opportunity costs of their time, people with higher levels of education tend to retreat from public life and thus report significantly lower neighborhood attachment (Blakely & Snyder, 1997). These conclusions are not modified when Model 5

considers all network-related measures, although the effect of power relations with grassroots government becomes marginally significant.

[Table 3 about here]

With regard to social cohesion, an intriguing finding is that uneven power relations also significantly reduce social cohesion, which cannot be explained by other variables. Except for upper reachability, the effects of other network-related measures on social cohesion were significantly positive. The negative effects of homeownership of other types of housing, years of schooling, and administrative jobs on social cohesion are virtually explained by the inclusion of network-related measures (Models 6 to 10). Residents working in state sectors also reported significantly higher levels of social cohesion, possibly because employees from certain state sectors (e.g., large-scale SOEs, government agencies, and cultural/educational/technological institutes) can stay in the same urban neighborhood, either in the form of traditional workplace compounds or newly built gated communities, thus retaining bonded social relations and housing subsidies (e.g., Liu, He, & Wu, 2012). Meanwhile, evaluation of the built environment and communal space and consciousness of property rights were still positively associated with social cohesion.

CONCLUSIONS AND DISCUSSION

Using a recent survey of urban residents in Guangzhou, we found that network intensity and

neighborly interactions (number of acquaintances, neighborly interactions in communal space, and participation in interest groups) were significantly and positively associated with neighborhood attachment and cohesion, yet political power over corresponding civic homeowners associations held by grassroots governments was negatively associated with these two outcomes of neighborhood governance. Given that political power over civic homeowners associations is at odds with social cohesion and neighborhood attachment, the existence of uneven power relations warrants a change in grassroots state-society relations in order for urban neighborhoods to prosper. At the microlevel, abundant evidence indicates that both network-based social capital, especially that accessed within a neighborhood, and neighborly interactions contribute to the perception of a cohesive and adhesive neighborhood. By linking micro and macro measures of network and social capital, these findings point to the significance of a relational account of neighborhood governance.

China's great urban transformation provides an opportunity to theorize on and integrate a relational account into existing research on neighborhood governance. Since urban neighborhoods in Chinese cities encompass increasing social interactions among residents with nascent identities, unprecedented interplay between state power and civic discourses, and, more importantly, considerable territory-based resources, a relational account of urban governance provides deep understanding of the making of social capital, civic participation, and, more broadly, civil society. For example, it is illuminating to explore why political power over urban residents, which did not appear to hamper residential experience in prereform workplace compounds (Zhu et al., 2012), now discourages neighborhood attachment and social cohesion. Such change in the effect of political power has occurred in tandem with the coevolution of politics and society during China's urban transformation. Today political power over urban

neighborhoods is largely possessed by grassroots government agencies instead of workplaces, which had once shared political and economic interests with its employees living in their corresponding workplace compounds. The transfer of housing property rights from workplaces to households also facilitates bottom-up socialization. Urban residents with rising consciousness of property rights demand a say in managing their neighborhoods. This civic element in neighborhood engagement was virtually absent in the prereform era when the energies of urban residents were directed or coordinated by state corporatist organizations.

Finally, several aspects of this research deserve attention. First and foremost, net of other effects, we discovered significant and strong associations between network-related measures and neighborhood perception during China's urban transformation, which has not been reported elsewhere. However, the empirical analyses presented here should not be regarded in their essence as causal inference. Second, due to inadequate civic engagement and widespread tensions between neighborhood activists and grassroots officials, 603 urban neighborhoods with homeowners associations account for only a fraction of the 2,426 urban neighborhoods in Guangzhou at the end of 2013. Therefore the inclusion of organizational relations in our analyses may result in a sample-selection issue as well. Yet given the rich and consistent evidence suggesting the importance of network-related measures in affecting both neighborhood attachment and social cohesion, we do not expect major changes in our conclusions even with the inclusion of more neighborhoods. Finally, neighborhood governance in China often involves the participation of property management companies. While the current research focuses on state-society relations during urban transformation, both state-market and market-society relations in reform-era China call for further investigation.

TABLES & FIGURES

Table 1 Profile of Sampled Subjects (N=1,537)

	Mean	Standard deviation
Male	44.5%	
Age	44.819	15.160
Married	88.1%	
Local resident	70.5%	
Homeownership		
Tenants	21.0%	
Homeowners of commodity housing	69.4%	
Homeowners of other types of housing	9.6%	
Years of schooling	10.169	2.960
Occupation		
Administrative	14.9%	
Professional	13.7%	
Clerical staff	6.8%	
Service, manual labor, etc.	36.9%	
Retired	27.7%	
Working in state sector	20.5%	
Party member	20.8%	
Network-related measures		
Power relations with grassroots governments	60.1%	
Network extensity	4.798	4.383
Network extensity (within a neighborhood)	1.068	1.614
Network extensity (outside a neighborhood)	3.730	3.985
Upper reachability	72.207	25.017
Number of neighbors known by name	11.523	20.615
Neighborly interactions in communal space	2.662	1.661
Participation in neighborhood interest groups	14.2%	

Table 2 Factor Analyses of Awareness of Property Rights and Evaluation of Communal Space

	Eigenvalue	Total variance explained	Factor loadings
Independent variables			
Awareness of property rights	**4.317**	**72.0%**	
• Familiar with maintenance fund			0.859
• Familiar with the term of collective revenue			0.885
• Familiar with partitioned ownership of buildings			0.854
• Familiar with revenue and expenditures associated with property management fees			0.819
• Familiar with the allocation of revenues from homeowners' collective property			0.822
• Familiar with laws and regulations related to neighborhood governance (such as Regulations on Realty Management and Real Right Law)			0.849
Response categories: very familiar, somewhat familiar, not too familiar, or not at all familiar			
Evaluation of built environment and communal space	**3.850**	**64.2%**	
• Convenience			0.745
• Sufficiency			0.832
• Landscape design			0.790
• Gardening			0.794
• Comfort			0.806
• Satisfaction of your needs			0.836
Response categories: very good, good, neither good nor bad, bad, very bad			
Dependent variables			
Neighborhood attachment	**2.085**	**69.5%**	
• In general, I feel attached to this neighborhood.			0.871
• As a living space, I like my neighborhood.			0.877
• I do not want to move out of this neighborhood.			0.747
Response categories: Strongly agree, agree, neutral, disagree, strongly disagree			
Social cohesion	**3.216**	**53.6%**	
• People can get together and solve a neighborhood problem collectively.			0.736
• This is a consolidated neighborhood.			0.804
• People are willing to help each other in this neighborhood			0.807
• If I am away from home, I can count on my neighbors to collect mail, milk, and newspapers.			0.631
• People in this neighborhood get along with each other.			0.699
• People can be trusted in this neighborhood.			0.701
Response categories: Strongly agree, agree, neutral, disagree, strongly disagree			

Table 3 Regression Analyses of Neighborhood Attachment and Social Cohesion on Neighborhood-based Networks [a]

	Neighborhood Attachment					Social Cohesion				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
	Coefficien	Coefficien	Coefficien	Coefficien	Coefficien	Coefficien	Coefficien	Coefficien	Coefficien	Coefficien
Male	-0.074	-0.076	-0.071	-0.059	-0.052	-0.022	-0.026	-0.022	-0.005	0.000
Age	0.010	0.010	0.010	0.003	0.002	0.014	0.014	0.014	0.005	0.004
Age squared [b]	0.001	0.005	0.001	0.073	0.075	0.010	0.009	0.010	0.001	0.001
Married	-0.139	-0.153	-0.150	-0.167$^{\Psi}$	-0.157$^{\Psi}$	-0.090	-0.106	-0.104	-0.123	-0.112
Local resident	-0.033	-0.027	-0.026	-0.006	-0.010	-0.085	-0.077	-0.076	-0.052	-0.058
Homeownership (tenants as the reference)										
Homeowners of commodity housing	0.005	0.009	0.001	0.002	0.013	-0.077	-0.060	-0.067	-0.069	-0.038
Homeowners of other types of housing	-0.082	-0.070	-0.063	-0.064	-0.050	-0.159*	-0.130$^{\Psi}$	-0.125$^{\Psi}$	-0.135$^{\Psi}$	-0.107
Years of schooling	-0.023*	-0.026*	-0.025*	-0.010	-0.010	-0.020$^{\Psi}$	-0.026*	-0.025*	-0.003	-0.008
Occupation (service, manual labor, etc. as reference)										
Administrative	-0.100	-0.099	-0.082	-0.074	-0.059	-0.179*	-0.174*	-0.160*	-0.140$^{\Psi}$	-0.124$^{\Psi}$
Professional	-0.109	-0.097	-0.093	-0.085	-0.082	-0.086	-0.066	-0.062	-0.062	-0.056
Clerical staff	-0.127	-0.109	-0.095	-0.097	-0.085	-0.126	-0.093	-0.082	-0.105	-0.087
Retired	-0.045	-0.050	-0.052	-0.087	-0.100	0.017	0.011	0.010	-0.046	-0.063
Working in state sector	0.210**	0.209**	0.205**	0.192**	0.179**	0.221**	0.214**	0.211**	0.204**	0.183**
Party member	0.047	0.047	0.047	0.050	0.050	-0.092	-0.095	-0.095	-0.094	-0.096
Evaluation of built environment and communal space	0.351***	0.352***	0.348***	0.326***	0.324***	0.256***	0.258***	0.255***	0.216***	0.216***
Awareness of property rights	0.159***	0.150***	0.149***	0.125***	0.117***	0.197***	0.175***	0.174***	0.153***	0.132***
Power relations with grassroots governments	-0.095*				-0.084 $^{\Psi}$	-0.124*				-0.114*
Network extensity		0.014*					0.026***			
Network extensity (within a neighborhood)			0.060***		0.051***			0.063***		0.050**
Network extensity (outside a neighborhood)			0.006		0.005			0.020**		0.019**
Upper reachability		-0.001	-0.002		-0.002$^{\Psi}$		-0.001	-0.001		-0.002
Number of neighbors known by name				0.006***	0.006***				0.006***	0.005***
Neighborly interactions in the communal space				0.054***	0.052**				0.075***	0.073***
Participation in neighborhood interest groups				0.174*	0.169*				0.391***	0.383***
Constant	0.084	0.061	0.041	-0.203	-0.082	0.148	0.074	0.057	-0.225	-0.100
$\mathbf{R^2}$ (Percentage of total variance explained)	18.5%	18.5%	19.1%	21.2%	22.4%	11.9%	12.4%	12.8%	17.7%	18.9%

Note:

[a] Statistical inference is based on robust standard errors.

[b] The coefficients have been multiplied by 1000.

$^{\Psi}$ p<.10; * p<.05; ** p<.01;*** p<.001 (two-tailed tests)

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