

Occupation, Class, and Social Networks in Urban China*

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Abstract

China's class structure is changing dramatically in the wake of post-1978 market-oriented economic reforms. The creation of a mixed "market-socialist" economy has eroded the institutional bases of a cadre-dominated social hierarchy and created conditions for a new pattern of social stratification. Although conditions remain dynamic, results of a 1998 urban survey that measured strength and diversity of social ties among 400 households in four of China's largest cities documented networks of social exchange among 13 occupation-based classes that identify a class structure distinct from the cadre-dominated social hierarchy of the Mao era. In particular, analysis of visiting during the Lunar New Year celebration suggests an urban society simultaneously divided along two axes: one by economic success in the more privatized economy and one by distinctions in political authority at the workplace. Thus contrary to those who privilege market transactions as the primary engine for creating a new class hierarchy, we conclude that to understand processes of social stratification one needs theories and methods that work simultaneously with multiple dynamics of class differentiation rather than presuming linear hierarchy.

* Earlier versions of this article were presented at the Sunbelt International Conference on Social Network Analysis, Cancun, Mexico, February 12–16, 2003; the annual meetings of the American Sociological Association, Atlanta, August 15–19, 2003; and the conference "Current Situations in China," in celebration of the 50th anniversary of the Universities Service Center, Chinese University of Hong Kong, January 5–7, 2004. A Henry Luce Foundation grant financed the survey analyzed here. We thank two anonymous reviewers and the Editor of *Social Forces* for helpful comments on an earlier version, and Yu Li for his assistance with data preparation. Direct correspondence to Yanjie Bian, Division of Social Science, Hong Kong University of Science and Technology, Clearwater Bay, Kowloon, Hong Kong. E-mail: sobian@ust.hk.

Greater reliance on market transactions and privatization of ownership in China since 1978 have created conditions for a process of social class formation that differs from the status hierarchy of the state socialist era. Before market-oriented reforms, a politicized stratification regime anchored in a state redistributive economy divided families and individuals into qualitatively distinct status groups with little intragenerational mobility (Davis 1985; Kraus 1981; Walder 1986; Whyte 1975; Whyte and Parish 1984). However, the mixed “market socialist” economy created in the two decades after 1978 fundamentally eroded the institutional bases of the previous status hierarchy (Bian 2002) and supported dynamics of social stratification that gravitate around variation in market position (Davis 1995). Although this emerging post-socialist system continues to evolve, it is possible to identify persistent behaviors and patterns of asset accumulation across occupational groups that document a post-socialist social order.

In the earlier state redistributive economy (Szelényi 1978), political power and position conferred material privileges (Walder 1985) and distinguished cadre officials not only from industrial workers (L. Li 1995) but also from managers and professionals (Davis 2000). Thus researchers initially hypothesized that greater reliance on market exchange and privatization of property would weaken cadre privilege and advantage (Nee 1989). To date, the empirical support for this position has been mixed. While some have found that the economic advantage of cadre status has declined in the new era of market socialism, others have documented consistent financial returns to political power and position (see Bian 2002; Nee and Cao 2000; Nee and Mathews 1996). In this article, however, we do not address decline in the relative position of cadre officials but rather focus on how marketization and privatization are shaping networks of exchange across occupational classes and how a study of social networks speaks to broader sociological debates about class formation and networks.

Theoretical Considerations

Focusing on class and networks offers two distinct but complementary approaches to the study of social structure. Social class, however defined, is about the distribution of people across positions of distinction. This *positional approach* depicts society as a structure consisting of disconnected groupings of people that have distinct interests and possess different resources. Positional class analysis has identified property, authority, and skill as distinctive resources that define social class boundaries in contemporary capitalist societies (Wright 1997). By contrast, a *relational approach* that focuses on networks between groups and individuals builds on positional class categories but concentrates on identifying patterns of social relationships that assess the strength of social ties within and among different social positions. *Social network analysis* addresses the dynamic process of resource mobilization that is a key mechanism of social stratification.

Positional Analysis

In the pre-reform era, the class structure of urban China was relatively straightforward. At the top stood a small group of “state cadres” (*guojia ganbu*) who occupied prestigious administrative, managerial, and professional jobs and represented about 5% of the total workforce and about 20% of the urban labor force. These individuals were provided with above-average compensation packages (Walder 1995) and were kept in reserve for training and promotion into leadership positions (about 2%) in party and government offices (Zhou 2001). In contrast, those who began their careers as blue-collar workers (*gong ren*) rarely were promoted to positions of authority as a state cadre (Bian 1994:140-41).

After twenty years of increased marketization, the bureaucratic command economy no longer monopolized the key resources of the urban economy or dictated the reward structure. As a result, by the late 1990s the class structure of urban China had become more fragmented and less clearly hierarchical than in the late 1970s and early 1980s (Bian 2002; So 2003). Significant debate has arisen about the degree to which market reforms have created a fundamentally new order, and in particular about whether significant erosion has occurred in the privilege and superior social status of the cadre official class in comparison to entrepreneurs and intellectuals and whether inequality in the rewards of manual and nonmanual employment has significantly increased.

For example, many scholars find that former and current cadre officials and state managers have continued as a distinct class via a process of embourgeoisement. Nee and Lian’s (1994) opportunism model captures some features of an embourgeoisement process through which administrative and managerial cadres give up political commitments in order to catch opportunities in a growing marketplace. So (2003) argues that the statist society is the trademark of China’s reforms and that only the cadres were in a historically strategic position to develop a capitalist economy. Oi (1992) was impressed by the rise of “local state corporatism” during the 1980s, under which local governments became industrial firms while local officials either made capitalism “from within” (Walder 1994) or created “network capitalism” (Boisot and Child 1996) by taking advantage of their political and social capitals (D. Goodman 1996). During the second decade of reform, “informal privatization,” organizational proliferation, consortium building, and a system of “one manager, two businesses” massively diverted assets and profits of state enterprises into the private hands of cadres (Ding 2000a, 2000b; Duckett 2001; Nee 1992; Nee and Su 1998). Most recently a state-imposed property rights reform has permitted administrative and managerial cadres to become shareholders in the transformed state enterprises (Zhang 2000).

Clientelist relations between the new capitalist entrepreneurs and state officials have created a second process that allows the persistence of cadre advantage but marginalizes the new business class (Wank 1999). Nationally in 1997 there were more than 2 million registered private entrepreneurs, who hired 12 million

workers (SSB 1998:49). But these “business elites” appear to be weak politically, having no incentive, no autonomy, and no class capacity to work for the cause of a democratic state and politics (Pearson 1997). Rather, despite Jiang Zemin’s call to recruit party members from all social strata, including private entrepreneurs, wealthy entrepreneurs seem satisfied with the “symbiotic clientelisms” that Wank (1999) observed in the first decade of reform and remain unlikely to become part of either the bourgeois cadre class (So 2003) or a dominant class themselves (L. Li 1995). Over time, entrepreneurs may become incorporated politically, but because of the political marginality of the business class, we suspect that they have thus far remained a class distinct from cadres.

Positional analysis similarly documents an ambiguous class status for professionals, cultural elites, and technocrats, who had comprised the socialist intellectual class (Kraus 1981). Intellectuals lost their slight autonomy in the early 1950s when their occupations required them to be state cadres (Davis 2000). During the Cultural Revolution (1966–76) intellectuals were actually degraded as Mao’s “stinky old ninths” (*chou lao jiu*), ranking last among all nine “black” categories. They were flattered when given a “working class” status by Deng Xiaoping in 1979; with that labeling, intellectuals finally had become a “revolutionary” class in the reform era (Huang 1993). But while educational credentials granted prestige, only a successful political screening granted them the best material conditions and workplace authority (Walder 1995; Walder et al. 2000). Huang (1993) describes post-reform Chinese intellectuals as divided between “in-institution” and “out-institution” groups, depending on whether they work primarily within the state sector or outside it. However, this institutional boundary implies no anticipation that “out-institution” intellectuals are “autonomous humanists” (*zi you wen hua ren*) with an independent class identity.

In the Mao era, the urban proletariat was officially and politically recognized as a “leading class” (*ling dao jie ji*), and industrial state workers were also seen as “quasi-middle class” (Q. Li 2001). Post-1978 reforms have eroded this high status recognition and exposed manual workers to fierce economic competition in the newly commodified urban labor markets. By the late 1990s the Maoist working class was differentiated in four groups: employees in state-owned enterprises with multiyear contracts (70 million in 1998), migrant peasant labor in both state and private enterprises (60 million), laid-off labor from former state jobs (30 million), and daily wage labor in the private sector (12 million) (Zhang 2000:30). While state properties became productive assets for officials’ and managers’ private gains (Y. Lin and Zhang 1999; Y. Lin 2000), unprotected state manual labor began to experience truly proletarian (*wu chan zhe*) conditions. A new urban poverty stratum emerged among laid-off workers, retired workers, and migrant “peasant workers” (Zhang 2000), and labor opposition became a sensitive and serious issue in the changing structure of state and society (Chan 1996).

Migrant peasant labor is both institutionally distinctive and diverse in class position. Having no official permanent resident status in the cities, members of this class are called “peasant workers” (*nong min gong*) by urbanites but are confined to a secondary labor market of heavy-duty, poorly paid, and temporary jobs, living in conditions of direst hardship (Pun 1999). Yet some migrant workers become small-time entrepreneurs who run family businesses in the service sector or manage construction subcontracts through which to exploit fellow migrants from hometown area. After gaining both business skills and financial capital, they may return home to start a new business or become assimilated into urban life as long-term residents (Ma 2001). On the whole, a positional analysis should forfeit the assumption that migrant labor constitutes a single class and instead consider specific occupations and employment conditions when categorizing class positions of individuals and households in this group.

Relational Analysis

The relative distribution of material rewards and political power in a society can be analyzed to discern a rank order of class positions within it. But some theorists and researchers have urged a broader perspective on class analysis (e.g., Erickson 1996, 2001; Giddens 1980; Portes 2000; Wright and Cho 1992). The hallmark of this relational analysis is to look beyond position alone to social networks in order to explore relationships and social distance between positions. As Portes argues, “Classes are defined by their relationships to each other and not simply by a set of ‘gradational’ positions along some hierarchy. In this sense, status rankings are a manifestation, not a defining feature of class” (259).

Any number of relationships could be explored in such an analysis. Social network analysts have drawn attention to “friendship networks” (Fischer 1974; Laumann 1973), “discussion networks” (Burt 1984; Marsden 1987), and, more recently, “social support networks” (van der Poel 1993). This article focuses on “Chinese New Year visitor networks.” By long tradition, the Chinese make visits to the homes of close social contacts during a weeklong celebration of the New Year, the most important festival of the entire year. This deeply entrenched custom provides sociologists with an ideal opportunity to evaluate the scope and intensity of social ties across relational types and occupations of the visitors and their hosts (Bian and Li 2001). Capitalizing on our data about occupations of heads of interviewed households and those of their New Year visitors in 1998, we now venture to assess the strength and diversity of social ties within and between different occupational classes and to gauge the social distance among these classes.

While social relationships are not as dense between classes as within them, the *extent* of between-class relationships may vary from one pair of classes to

another. From a social network perspective this variation speaks directly to the underlying character of social structure. Not only does network analysis estimate social distances between class positions, but it also identifies which classes are socially central and which are marginalized or isolated (Wright 1997). In short, analysis of social ties helps establish an image of association among social classes across the entire social structure.

From a social network perspective, one could posit three theoretically distinctive patterns of association. The first is one of *class segregation*, in which members of the same class associate exclusively with other members of their class, resulting in high levels of social segregation. One possible cause of this pattern might be that political, economic, and social resources are so highly segmented along class boundaries that between-class association either produces no gains or even creates disadvantages. Such a scenario can be seen in the Cultural Revolution: people with “red class labels” (workers, poor peasants, “revolutionary” cadres, military officers) would not associate with people with “black class labels” (landlords, rich peasants, capitalists, antirevolutionaries, “revisionist” intellectuals) for fear of negative consequences (Whyte and Parish 1984). In the uncertain environment of more recent radical socioeconomic and political transformation, that politicized segregation appears to have been replaced by a new dynamic of segregation whereby occupational groups — with similar economic interests — form coalitions to ensure that others do not capture their resources and privileges (Sun 2002).

The second and third patterns of association are *class diffusion* and *class hierarchy*. Both relate more to cross-class ties than to class segregation, but with different dynamics of exchange. In the class diffusion model, cross-class ties are as likely between class positions as within social classes; in the class hierarchy model, ties are as likely with members of “adjacent” classes as within class positions, but less likely with those significantly “higher” or “lower” in the status hierarchy. The class diffusion model suggests high degrees of social inclusiveness even as income and wealth become more unequally distributed. The class hierarchy model suggests either a “class-for-network” process, by which variation in assets drives social networking, or a “network-for-class” process, by which networking for access to resources dominates — as some have argued it did in pre-Communist Chinese society (Fei [1949] 1992; Fried [1953] 1969).

Recently the study of social class has been enriched by a new version of an old debate, centering around realist (often micro-level) versus nominalist (often macro-level) approaches to class. Arguing from a realist perspective that “the simple fact” is that “detailed occupations are deeply institutionalized,” Grusky, Weeden, and Sørensen (2000:303) assert that the analyst who ignores fine-grained occupational categories “may be compared to the feudal scholar who eschews the ‘surface categories’ of serf, lord, and clergy in favor of uncovering latent or subterranean structures that are concealed from ordinary view.” From the other side of this debate, Portes charges that “calling occupations ‘classes’ leaves no baby

after the bath water” (2000:257). In his view “classes are *theoretical constructs* devised for the structural interpretation of social phenomena and the prediction of major long-term trends” (257, original emphasis). He advocates identifying “the ‘real’ class structure” prior to empirical analysis in order to apply the class concept subsequently to the analysis of various phenomena (257).

It is beyond the scope of this article to resolve such long-standing debates as these. Nonetheless we wish to demonstrate one research procedure that could integrate elements of both nominalist and realist class analysis. First, in the next section, we derive a number of (nominalist) hypotheses, each containing a claim about the “real” class structure of urban China. Each hypothesis is set forth as a distinctive claim about groupings of occupations. Then we present a model that allows us to test how well each of these claims captures the social-network structure by comparing frequency of New Year visits among households headed by 13 different occupations, representing 80% of all urban jobs in the national census of 2000.

Research Hypotheses

Because there is little research on how social ties form among Chinese urbanites, our hypotheses necessarily build on established scholarship rooted in Western societies and are provisional. They also take account of varied explanations about how *expressive ties* (such as friendship) formed in one arena continue as participants enter into another. For example, friendships formed on the job or within a family persist after one changes jobs or marries. Alternatively, control over resources and shared interests may also produce ties. You become friends with people like yourself, or you keep close ties with a relative whose similar social position wins your favor. Our expectation is that both sets of influences are important but produce different patterns of within-class and across-class associations. Shared resources and interests produce intraclass ties; expressive ties can generate interclass interaction.

On the basis of prior research and our observation of the emerging social class order, we propose four hypotheses about patterns of social relationships among different occupational classes to guide our data analysis.

HYPOTHESIS 1: A CLASSLESS SOCIETY

One possible starting point in empirical analysis about China is to assume that Maoism created a state of equality, such that occupations are merely job duties that do not imply social class distinctions. In other words, the destratification process of the Cultural Revolution (Parish 1984) might have persisted through time, and the underlying distinctions (on the basis of property, authority, and skill) that emerged in the reform era have not yet created distinctive patterns

of social relationships among cadre officials, managers, professionals, manual workers, new entrepreneurs, and any other occupational groups. If this hypothesis is true, the social patterning of New Year visits will be random with respect to the occupation of the host (head of household).

HYPOTHESIS 2: MANUAL VERSUS NONMANUAL DICHOTOMY

The classless assumption is probably highly unrealistic in reform-era China. As many researchers have documented (Bian 2002), variations in ownership of property, authority on the job, and occupational skill have created unequal distribution of positional power, social prestige, and economic rewards in contemporary China. Manual, blue-collar workers increasingly have substantially fewer of these resources than those in nonmanual, white-collar jobs, who have greatly benefited from the reforms. Over time those engaged in manual labor have experienced increased levels of anxiety, deprivation, isolation, and separation from the society, causing social unrest and generating movements of resistance to the regime (Chan 1996; Whyte 1999). Plausibly, such differences in resources and concomitant feelings of alienation might translate into greater social distance between blue-collar and white-collar workers. If this hypothesis is true, we will see a manual/nonmanual dichotomy in visitation patterns among urban households as well as propensities of segregation within each broad class category.

HYPOTHESIS 3: DUAL ELITES

Nonmanual, white-collar occupations may not form a class category that is uniform with respect to New Year visitation behavior. Research on contemporary capitalist societies indicates that although acquired skill presents people with labor market opportunities and grants them enhanced social prestige, it does not necessarily extend to imply property control or managerial authority (Wright 1997). In China, skill and authority are very different resources: skilled and prestigious professionals are a different elite group from cadre officials, administrators, and managers. These latter groups not only have social prestige; more importantly, their political, administrative, or managerial authority offers material rewards that professionals do not have (Walder 1995; Walder et al. 2000). This dual elite model implies that skilled professionals (e.g., scientists and researchers, college professors, elementary and high school teachers, doctors and nurses) may form a distinctive class. If this hypothesis is true, our analysis will show skilled professionals visiting more among themselves than with either manual laborers or other nonmanual workers.

HYPOTHESIS 4: THE MANAGERIAL CLASS

Because of their primary interests in the growing market economy, managers have emerged as an increasingly powerful class. Initially they benefited from managerial reforms within the state sector (Naughton 1995), and “informal privatization” gradually gave managers the power of exclusive control over enterprise operation (Ding 2000a, 2000b). Since 1998 new legislation has routinized the status quo of managerial control and confirmed income rights over properties in state, collective, and hybrid enterprises (Y. Lin 2001). By the late 1990s these transformations had created an expanded managerial class consisting of three strategic players in any business enterprise: (1) general managers, who assume the overall managerial authority and decision-making power of an enterprise; (2) accountants, who manage enterprises’ budgets and exercise the power of manipulating accounting books in order to safeguard against any inside or outside uncertainties of a transitional economy; and (3) sales and marketing managers, who explore and secure business opportunities for the enterprises. Inside and outside an enterprise setting, these three business players are highly dependent upon each other not only for career advancements but, more importantly, for minimizing risks that rise from the high uncertainty and transitional nature of China’s emerging market economy (Y. Lin 2001). Sociologically, therefore, these three business players both share a managerial class interest and tend to form a clique of trust and social protection to safeguard their positions. If this hypothesis is true, we may expect that households headed by members of the managerial class will have significantly more New Year visitations among themselves than with households headed by other white-collar or blue-collar classes.

Hypothesis 4 predicts that different levels of New Year visitation will emerge among four classes: managers (general managers, accountants, sales and marketing managers), administrator-officials (cadre officials, legal administrators, the police, administrative and clerical workers), skilled professionals (all other white-collar jobs), and workers (all manual, blue-collar jobs).¹

Data and Methods

The data used in this analysis were collected during a yearlong interview project designed to explore living standards and social life among several occupational groups for whom the market reforms had brought differential income rewards. Specifically, we used a panel of 400 households that were headed by cadre officials, state enterprise managers, professionals, industrial and service workers, and migrant workers. All households were located in four of China’s largest metropolitan areas (Shanghai, Shenzhen, Tianjin, and Wuhan), evenly distributed into samples of 100 households per city. To ensure having a sufficient number of households for analysis in each occupational category, we used a quota sampling

Table 1. Occupational Samples as Percentages of China's Fifth Population Census in 2000

Occupation	Urban total	4 cities	Shanghai	Shenzhen	Tianjin	Wuhan
1. Cadre	.8	.3	.3	.1	.6	.6
2. Manager	4.3	4.2	3.7	3.6	5.4	5.6
3. Scientist/professor	.8	.8	1.0	.1	1.2	1.6
4. Teacher	2.4	1.6	1.7	.5	2.5	2.6
5. Professional	3.0	3.4	3.8	2.3	4.1	3.5
6. Doctor/nurse	2.4	1.8	1.8	.6	2.8	2.7
7. Accountant/sales	6.3	5.6	6.3	3.2	7.6	6.3
8. Legal/police	1.0	.9	.9	.3	1.6	1.0
9. Admin/clerk	8.2	9.1	11.8	5.2	10.8	8.4
10. Industrial	38.1	42.1	36.2	60.2	35.1	30.0
11. Chauffeur	5.3	4.6	5.0	2.6	6.3	5.6
12. Service/commercial	27.0	25.3	26.9	21.0	21.9	31.7
13. Domestic worker	.3	.4	.6	.4	.2	.3
All occupations	100.0	100.0	100.0	100.0	100.0	100.0
Total labor force (<i>N</i>)	147,298,220	17,663,160	6,883,742	5,187,079	2,919,739	2,672,600
All occupations as % of total labor force	79.6	87.9	89.8	93.1	89.4	76.1

procedure that over sampled cadre officials, state managers, and professionals and under sampled industrial and service workers and migrant workers. To avoid subjectivity, we adopted random procedures for sampling four neighborhoods in each city and for sampling households within each occupational cluster. (These clusters were developed from household registries of the sampled neighborhoods that listed occupation for head of household.) In terms of specific occupations itemized in the China 2000 Census, our samples captured household heads in 88% of all occupations in these four cities, and 80% of all jobs in urban China, as shown in Table 1. This comprehensive coverage of all urban occupations gives us confidence that our samples can legitimately serve to test hypotheses that may apply more generally to trends across urban China.

Interviewers visited each household four times at approximately three-month intervals between January 1998 and January 1999. In addition to these home interviews, in which spouses were interviewed separately for between 60 and 90 minutes, each spouse completed two daily logs, the first during the Spring Festival of 1998 for Chinese New Year social interactions and the second in May 1998 for social eating. Our analysis here uses the material from the logs kept during the six days of the New Year celebration (the last day of the old year and the first five days of the new). One could, of course, rely on comparisons of many different

social interactions to assess scope and strength of relational ties, but because of the centrality of socializing and exchange of greetings during the New Year for households of all income levels across the country, we find that the New Year celebration offers a particularly good focus for an initial study of class variation in associational dynamics.

In Chinese cities, as well as rural villages, social gatherings and visitations are important occasions for individuals and families to cultivate, maintain, and develop, or terminate social ties (Bian 1997; Yan 1996; Yang 1994). For example, receiving an invitation to a wedding, funeral, birthday party, or feast signals the recipient's membership within the host's social networks (known locally as *guanxi*) (Bian 2001). Of the many significant social occasions that pattern social exchanges, the Spring Festival (Lunar New Year) is most widely observed across all regions in China. Traditionally the celebration starts on New Year's Eve and lasts for fifteen days, each day reserved for a culturally significant event or meal. Since 1949 the Communist government has granted urban workers a weeklong official holiday. In recent years telephone greetings have become popular, but exchanges of visits continue to be among the core social activities of the season. Although not every visitor is necessarily a core social tie, our broad observation indicates that one's core ties will be among the visitors: there is no good excuse for close relatives or friends not to visit each other during the New Year celebration (Bian and Li 2001; Bian, Davis, and Wang 2002). Thus, New Year visitation data are a strong event-based measure of membership, strength, and composition of core social networks among the Chinese, far more so than a survey of casual interactions among neighbors or a study of participation in associations at the neighborhood level such as Gould (1993) conducted in the Paris Commune.² In our sample, households received an average of 17 visitors and 20 telephone calls, and of these greeters 44% were relatives, 25% friends, 20% colleagues, 8% neighbors, and 3% other close contacts.³

To record the occupational class of visitors to our sample households, we utilized an occupation-based position generator, a social network device that was invented for measuring the structure of an egocentric network (N. Lin and Dumin 1986). As with survey ratings of occupational prestige, this network device can include only a few job titles to cover a range of occupations in terms of prestige, socioeconomic status, or embedded resources. For the present study we initially selected 20 occupations to represent the range of prestige standings of urban occupations in China; for comparison purposes the selection was confined largely to job titles for which prestige ratings had already been collected in previous studies (Bian 1996; N. Lin and Xie 1988). We requested our responding households to record whether or not their New Year visitors had a job in any of the 20 job categories on the list. Seven job titles each received an insignificant total in frequency counts, and these were merged with others, resulting in the 13 occupational categories shown in Table 1.⁴ Although these selected occupations do not represent the entire array of urban jobs, they do provide 80% coverage

Table 2. Social Exchanges among Occupations

	New Year visitor's occupation													Total		
	1	2	3	4	5	6	7	8	9	10	11	12	13			
Householder's occupation																
1. Cadre	13	17	8	13	6	6	11	5	19	8	9	2	1	118		
2. Manager	34	63	41	40	48	34	61	22	52	48	39	16	5	503		
3. Scientist/professor	2	13	14	11	14	9	11	6	9	11	5	4	1	110		
4. Teacher	6	8	4	13	4	6	8	3	6	7	6	1	0	72		
5. Professional	6	13	8	10	14	12	13	7	14	14	9	4	0	124		
6. Doctor/nurse	6	12	8	8	7	13	11	7	6	8	7	5	1	99		
7. Accountant/sales	7	19	9	14	13	18	26	10	16	17	14	5	3	171		
8. Legal/police	4	6	2	3	1	6	5	5	8	7	4	2	0	53		
9. Admin/clerk	10	11	6	7	6	10	18	11	12	13	10	4	3	121		
10. Industrial	2	13	5	9	7	10	11	3	8	26	16	8	2	120		
11. Chauffeur	3	7	0	6	2	3	6	3	4	6	9	3	1	53		
12. Service/commercial	6	18	6	10	4	12	23	8	15	27	19	15	2	165		
13. Domestic worker	2	3	1	1	0	2	2	3	0	4	2	2	3	25		
Total	101	203	112	145	126	141	206	93	169	196	149	71	22	1734		

of urban jobs of the country and 88% coverage in the four cities in our sample (Table 1) and also capture underlying class positions along the dimensions of authority and skill.

The occupations of the heads of sample households were organized into the same 13 occupational categories, and a 13×13 occupation matrix was generated to indicate how host households in each occupation exchanged New Year greetings with visitors (households or individuals) from each occupation. That matrix (Table 2) presents the data we analyze and report here.⁵ Table 2 is thus a contingency table using occupations as the units of analysis and counting the number of contacts between hosts and New Year visitors in terms of their respective occupations.

MODELS AND ANALYSIS

To assess the degree to which any one of our research hypotheses fits the data of Table 2, we employ Leo Goodman's (1981; Breiger 1981) modeling framework for assessing the homogeneity among categories in a contingency table. Within this framework, the most general model we will use is

$$\ln F_{ij} = u + u_i^R + u_j^C + u_{ii}^D + u_{ij}^{RC}, \text{ subject to}$$

$$u_{ii}^D = u_k^D \text{ for } i \in \text{class } k, \text{ and} \quad (1)$$

$$u_{ij}^{RC} = u_{s(k,l)}^{RC} \text{ for } (i, j) \in \text{subtable } s(k, l)$$

where the F_{ij} are the cell counts estimated by means of the model,⁶ with subscripts i and j indexing occupational origins (rows) and destinations (columns) of New Year visitors, subscripts k and l indexing class origins and destinations of New Year visitors, and the u terms representing parameters to be estimated. If all the u_{ii}^D and u_{ij}^{RC} terms were set to zero, then equation 1 would simplify to the model of simple independence for Table 1 (with superscripts R and C indexing the table's rows and columns, respectively). If the u_{ij}^{RC} terms were set to zero and a separate u_k^D were hypothesized for each occupation (superscript D indexing cells on the table's diagonal, reflecting New Year visits *within* occupations), then equation 1 would simplify to independence for cells off the diagonal of Table 2, the so-called quasi-independence model. The final terms (those with superscript RC) pertain to off-diagonal interactions above and beyond the effects of the marginals; a separate interaction parameter is estimated for each of the *subtables* formed at the intersection of each pair of classes that are defined in one of our hypotheses. We provide an example of these u_{ij}^{RC} parameters, as well as the u_{ii}^D , in Table 3, with respect to our hypothesis 4, which relates to owner-manager coalition.⁷

Notice (Table 3) that any two occupations placed by hypothesis within *the same* class are constrained, by application of Goodman's model as given in our equation 1, to have *identical* intensities of interaction (u_{ij}^{RC} parameters) with all

Table 3. Hypothesis 4 (Managerial Class Hypothesis), Estimated Parameters u_i^D (on diagonal) and u_{ij}^{RC} (off diagonal)

	Occupation of receiving household												
	1	8	9	2	7	3	4	5	6	10	11	12	13
1. Cadre	.287	.319	.319	-.031	-.031	-.133	-.133	-.133	-.133	-.156	-.156	-.156	-.156
8. Legal/police	.319	.287	.319	-.031	-.031	-.133	-.133	-.133	-.133	-.156	-.156	-.156	-.156
9. Admin/clerk	.319	.319	.287	-.031	-.031	-.133	-.133	-.133	-.133	-.156	-.156	-.156	-.156
2. Manager	-.020	-.020	-.020	.132	.005	.133	.133	.133	.133	-.118	-.118	-.118	-.118
7. Accountant/sales	-.020	-.020	-.020	.005	.132	.133	.133	.133	.133	-.118	-.118	-.118	-.118
3. Scientist/professor	-.056	-.056	-.056	-.016	-.016	.700	.207	.207	.207	-.134	-.134	-.134	-.134
4. Teacher	-.056	-.056	-.056	-.016	-.016	.207	.700	.207	.207	-.134	-.134	-.134	-.134
5. Professional	-.056	-.056	-.056	-.016	-.016	.207	.207	.700	.207	-.134	-.134	-.134	-.134
6. Doctor/nurse	-.056	-.056	-.056	-.016	-.016	.207	.207	.207	.700	-.134	-.134	-.134	-.134
10. Industrial	-.243	-.243	-.243	.041	.041	-.207	-.207	-.207	-.207	.859	.408	.408	.408
11. Chauffeur	-.243	-.243	-.243	.041	.041	-.207	-.207	-.207	-.207	.408	.859	.408	.408
12. Service/commercial	-.243	-.243	-.243	.041	.041	-.207	-.207	-.207	-.207	.408	.408	.859	.408
13. Domestic worker	-.243	-.243	-.243	.041	.041	-.207	-.207	-.207	-.207	.408	.408	.408	.859

other occupations. (Compare, for example, the first two rows in Table 3, as well as the first two columns.) Breiger and Mohr (2004) build on this point to assert that Goodman's (1981) homogeneity model provides an operationalization of the social-network concept of *structural equivalence* (reviewed in Wasserman and Faust 1994) as applied to cross-classification tables such as the counts of New Year greetings given in Table 1. Thus, the model of equation 1 provides us with a means for furthering the relational analysis of class and networks in China that we reviewed above. Each of our research hypotheses can be assessed by measuring (by means of standard chi-square tests) how well the expected frequencies produced by the model (the F_{ij}) correspond to the observed data in Table 2.

Conventional log linear class analyses often distinguish between within-occupational relations (for which the data lie on the principal diagonal of the contingency table) and relations within and between the class categories (macro-categories of occupations) that are postulated (for which the relevant data are all the cells in the contingency table, as illustrated above in Table 3). We follow this distinction, focusing first on within-occupational relations (in the first subsection below and in Table 4) and then on the full class structures that have been postulated (in the second subsection below and in Table 5).

Results

Hypothesis tests (1): Class-specific Effects on Visiting Others of the Same Occupation

A test of hypothesis 1, the classless society hypothesis, is given in line 1 of Table 3. Hypothesis 1 postulates no distinctions among positions or sectors in their relational propensities. It may thus be operationalized as the model of simple independence for Table 2. The independence model clearly does not fit these data ($p = .02$, line 1 of Table 4).

The model of independence could be improved considerably by a model postulating the randomness of between-occupational moves (as the independence model does) but a uniformly higher propensity for visitations among households within the same occupation. This is the model Marsden (1981) termed "constant inbreeding" in his application of log linear contingency-table models to counted data on social networks. We may specify this model as

$$\text{Eq. (1) with } u_k^D = u^D \text{ and } u_{ij}^{RC} = 0, \quad (2)$$

postulating a within-occupation propensity for New Year visitation, but one that does not differ by occupation (u^D is a constant). Table 4 indicates that this so-called constant-inbreeding model fits the data (line 2) and provides a significant improvement over the independence model (line 7), and the constant u^D is

Table 4. Models Pertaining to Class-Specific Propensities *within* Occupations for New Year Visits

A. Models					
Line	Model	Class specification	df	G ²	p
1	Independence	none	144	180.744	.02
2	Constant by occupation	[1–13]	143	147.264	.37
3	Separation of working class	[1–9], [10–13]	142	138.636	.56
4	Dual elite	[1,2,7,8,9], [3–6], [10–13]	141	132.804	.68
5	Managerial class	[1,8,9], [2,7], [3–6], [10–13]	140	131.933	.67
6	Occupation-specific	[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13]	131	122.652	.69

B. Comparisons among models					
Line	Comparison	df	G ²	p	
7	2 v. 1	1	33.480	<.001	
8	3 v. 2	1	8.628	.003	
9	4 v. 3	1	5.832	.016	
10	5 v. 4	1	.871	.351	
11	6 v. 5	9	9.281	.412	

estimated empirically as .457, which exponentiates to 1.58. The model of line 2 (Table 4) thus suggests that New Year visitation is 58% more likely among greeters who share an occupation, in comparison to greeters of different occupations.

We now bring social class into this picture. The models of lines 3–6 of Table 4 may be specified as

$$\text{Eq. (1) with } u_{ij}^{\text{RC}} = 0$$

Hypothesis 2 postulates a dichotomy between manual and nonmanual occupations. Within the context of equation 3, this hypothesis mandates that the four manual occupations (those numbered 10–13 in Table 1) will have a class-specific propensity for New Year visitation, as will the nine nonmanual occupations (those numbered 1–9). The fit of this hypothesis (tested in line 3 of Table 4) provides a significant improvement over the constant inbreeding model (see line 8 of Table 4); we thus would prefer the class model of hypothesis 2. The u_k^D parameters estimated for the model of line 3 are (in exponentiated form) 2.46 for the manual working class and 1.40 for the nonmanual class, thus suggesting that manual workers are 2.46 times as likely as by chance to visit within their own occupations, whereas those in nonmanual jobs are 1.40 times as likely as by chance to behave similarly. These class-specific propensities are significantly different from one another ($p = .003$, line 8 of Table 4).

Hypothesis 3 posits that the white-collar class is divided into a dual elite: skilled professionals (categories 3–6 in Table 2) and occupations based on administrative or managerial authority (categories 1, 2, 7, 8, 9). With respect to occupation-specific propensities for New Year visits, the model is tested in line 4 of Table 4; it is seen to provide a significant improvement over the previously discussed models (see line 9 of Table 4). The four skilled-professional occupations are estimated to have a common propensity for New Year visitation with others of the same occupation (exponentiated $u_k^D = 1.93$) that is significantly higher than the class propensity associated with other white-collar occupations (exponentiated $u_k^D = 1.20$); the common class propensity for the manual working class estimated by this model (2.47) is similar to that estimated by the previous model.

Hypothesis 4 postulates distinctions between managers (categories 2 and 7) on the one hand and official-administrators (categories 1, 8, and 9), skilled professionals (categories 3–6), and workers (categories 10–13) on the other. Applied within the context of equation 3, this hypothesis does fit the data (line 5 of Table 4), but it does not provide a significant improvement in fit over hypothesis 3 ($p = .35$, line 10 of Table 4).

Just as lines 1 and 2 of Table 4 provided null models for our models (3, 4, and 5 of Table 4) of class-specific effects on the propensity for within-occupation New Year visits, line 6 provides a different sort of comparison. Suppose, still within the framework of equation 3, that each of the 13 occupations was in a class by itself. The result would be the model of quasi-independence (discussed previously). Although this model does fit the data (line 6 of Table 3), it does not provide a significant improvement over hypothesis 4 ($p = .412$, line 11) or over any of the other class models that we have introduced. Thus we have established (so far) that there are significant class-specific effects on propensities for Chinese householders to visit others within the same occupation. The most parsimonious model that we have formulated (so far) that fits the data is based on hypothesis 3 (line 4 of Table 4), specifying classes of manual workers, skilled professionals, and administrative and economic managers and personnel.

Hypothesis Tests (2): Class-specific Effects on Visitation within and between Classes

We now turn to equation 1 in its most general form, and we are concerned with the class patterning of New Year visitations (Table 5) in addition to the class differences manifest for within-occupation visiting patterns (Table 4).

Hypothesis 1 has already been tested (in line 2 of Table 4). The first three lines of Table 5 provide tests of our other substantive class hypotheses, in the context of equation 1. Each of these models fits the data. Hypothesis 2, the separation of manual and nonmanual occupations (line 1 of Table 5), provides a significant improvement over hypothesis 1 (line 4 of Table 5). Hypothesis 3, the dual elite (line 2 of Table 5), significantly improves over hypothesis 2 ($p = .042$, line 5).

Table 5. Models Pertaining to Class-specific Propensities for New Year Visits within and between Occupations

A. Models					
Line	Model	Class specification	Df	G2	p
1	Separation of working class	[1–9], [10–13]	141	115.051	.946
2	Dual Elite	[1,2,7,8,9], [3–6], [10–13]	137	105.120	.980
3	Managerial class	[1,8,9], [2,7], [3–6], [10–13]	131	92.762	.995

B. Comparisons among models, part 1					
Line	Comparison	Df	G2	p	
4	1 (Table 5) v. 2 (Table 4)	2	32.213	<.001	
5	2 v. 1 (Table 5)	4	9.931	.042	
6	3 v. 2 (Table 5)	6	12.358	.054	

C. Comparisons among models, part 2					
Line	Comparison	Df	G2	p	
7	1 (Table 5) v. 3 (Table 4)	1	23.585	<.001	
8	2 (Table 5) v. 4 (Table 4)	4	27.684	<.001	
9	3 (Table 5) v. 5 (Table 4)	9	39.171	<.001	

Hypothesis 4 (line 3), the manager class hypothesis, provides improvement over hypothesis 3 that is almost as great ($p = .054$, line 6), though clearly this p -value (as well as the one in line 5) is marginal at the .05 level.

Panel C of Table 5 provides comparisons, within each substantive model of social classes, of the extent to which the fit of each hypothesis (2, 3, and 4) is improved when applied to the class patterning of visitation (equation 1 and Table 5) as distinct from class differences manifest for within-occupation visiting patterns (equation 3 and Table 4). The results on each line of Panel C are unambiguous: the class effects on New Year visitation patterns are significant above and beyond the class-specific within-occupation (diagonal cell) propensities investigated in Table 4.

Summary

What have we found so far? Occupational classes matter in structuring New Year visitation patterns in China. Our four hypotheses are nested and hierarchical, and each hypothesis adds to our understanding of these patterned relations among occupations. Occupations themselves matter (Table 4, line 2), in that

households are more likely to visit others within the same occupation. But classes add significantly to this picture, both with respect to visits within the same occupation (Table 4, lines 3–5) and with respect to visits with households in other occupations (Table 5). There is an important separation of manual workers from other occupations (our hypothesis 2). There is a significant ($p = .042$, line 5 of Table 5) additional separation among white-collar occupations into skilled professionals versus administrative and economic managers and personnel (our hypothesis 3). And there is a marginally significant additional separation (above and beyond hypothesis 3) between bureaucratic elites (cadres, legal workers and police, administrative clerks) and economic actors (general managers, accountants, sales and marketing managers) (our hypothesis 4, line 6 of Table 5). In post-reform China skill and authority are relevant to the structuring of occupational classes.

Let us interpret the u_k^D and u_{ij}^{RC} parameters for hypothesis 4 (the model of line 3, Table 5) that we introduced previously, in Table 2. Manual workers (those in occupations 10, 11, 12, 13) are 2.36 (= exponential of .859) times as likely as chance to greet others within the same occupation, and they are 1.50 (= exponential of .408) times as likely as chance to greet households of other occupations within the same class. Similarly, those in the other classes postulated by hypothesis 4 are also more likely to conduct New Year visitation within the same class (though this is least true for managers). With two important exceptions (discussed below), the pattern of New Year visitation in Table 3 exhibits the “saddle” pattern well known to analysts of mobility tables: on the diagonal, the intensities decrease and then increase; off the diagonal, the intensities decrease in any direction. The model thus suggests an ordering moving from those with administrative authority (occupations 1, 8, 9) to those engaged in business management (2, 7) and skilled professionals (3–6), to workers (10–13).

As noted, there are two exceptions to this “saddle” pattern. There are slight tendencies for workers to visit managers (exponential of .041 = 1.04 times chance) and for managers to visit skilled professionals (exponential of .133 = 1.14 times chance). The first of these is expected by the nature of *guanxi* connections: subordinates pay respect to their superiors by visiting the homes of the latter on the important occasion of the Chinese New Year celebration (Bian and Li 2001). The second of these reflects the other side of the *guanxi* connection: bosses extend their thankful greetings in person to their professional elites who, though having no managerial or administrative authority, are nonetheless the most respected socially; the New Year celebration is traditionally a strategic occasion for this gesture to occur. Most crucially, however, in all the postulated classes individuals and households are shown as more likely to visit others within the same class. Classes matter significantly to New Year visitors in China. That is to say, using the terminology of our introductory discussion of relational analysis, we find extensive tendencies toward occupational *class segregation*. We also find some examples of *class diffusion* (e.g., the tendencies for workers to visit managers, and

for managers to visit skilled professionals) and *class hierarchy* (with reference to the “saddle” pattern identified just above).

Conclusions

Analysis of New Year visiting patterns in urban China indicates a dual dynamic of economic and political stratification. Increased marketization and privatization have simultaneously divided urban Chinese society along two axes: one by economic success in the more privatized economy, and one by distinctions in political authority at the workplace. Thus unlike those who privilege market transactions as the primary engine for creating a new class hierarchy, we observe processes of social stratification that are simultaneously political and economic. Therefore we propose research strategies that employ theories and methods that work simultaneously with multiple dynamics of class differentiation rather than presuming linear hierarchy.

Specifically, the results of our data analysis support three empirical conclusions. First, households headed by manual workers have a distinctive pattern of social ties. In particular, members of these households concentrate their New Year visitations upon others in similar manual occupations and are relatively unlikely to cross occupational class boundaries to socialize with households headed by managers, white-collar professionals, or cadres. Thus our results suggest that after two decades of intensifying marketization and privatization not only have the economic rewards of manual employment in urban China declined (Bian 2002; Chan 1996), but blue-collar workers may be increasingly isolated socially. Second, households headed by white-collar employees in state bureaucracies (such as cadres, legal workers, police officers, administrators, and clerks) also have occupationally distinctive patterns of association. During the New Year celebration these households tend to visit each other more frequently than to visit those in other job categories. Finally, we find a bifurcated segregation between households headed by white-collar professionals and those headed by managers that indicates the importance of distinguishing between political position and authority at the workplace among those with comparable incomes.

These results are congruent with previous studies that have documented an increasingly differentiated reward structure since 1978 (Bian 2002; So 2003; Sun 2002). However, they also go beyond earlier documentation of rising income inequality to demonstrate how the emerging market economy segments social networks. In particular they suggest a pattern of social segregation among households headed by manual workers who were “quasi–middle class” in the pre-reform years (Q. Li 2001). Through the late 1970s state industrial workers were provided with lifetime employment and an impressive array of collective benefits (Walder 1986); because of lifetime employment and enterprise-owned housing systems (Bian 1994) they frequently interacted on a daily basis with

managers and professionals within their work units (Blau, Ruan, and Ardel 1991). However, by 1998 the basic conditions of employment and housing had changed. Lifetime employment had disappeared within the state sector, most new jobs were in the private sector, and most new housing had been privatized (Davis 2003). Our results suggest that these transformations of the socialist system may constrain socializing across the manual/nonmanual divide and that marketization and privatization may have socially isolated workers from those with authority and wealth.

A second implication of these patterns of association is the emergence of bureaucratic elites as a distinct class. Most striking is the preference for intraclass socializing among government officials. This finding implies that while the cadre class still holds a central position in the distribution of resources and opportunities (Bian 2002), in a relational perspective political cadres may not have centrality in connecting different occupational classes in urban China.

Finally, our results indicate a bifurcated professional/managerial class with the managerial group in a position of network centrality. That is, although managers are more likely than officials to socialize with the intellectuals (engineers, teachers, doctors and nurses, college professors, scientists), they also demonstrate a tendency to be visited by manual workers and to visit skilled professionals. Thus it appears that not only do managers in state and non-state business enterprises have superior income and authority, they also experience advantageous social and networking power.

Our small sample and our focus on only one type of socializing necessarily render our results preliminary. Only further research can verify the relevance of these conclusions to the entire urban population and to occasions other than visitations during the Chinese New Year celebration. We also need to apply alternative measures of network ties to assess the comparative and theoretical significance of the position-generator device. For example, would analysis of interclass marriage and intergenerational mobility confirm or reject the hypotheses in the same way as this study of New Year visits? Finally, we need to extend the relational approach to include analysis that examines property assets as well as the authority and skill differentials among occupations. Until such extensive materials are available, however, the occupationally segmented socializing of the 400 households in our study provides working hypotheses for subsequent research.

Notes

1. Data limitations prohibit us from explicitly testing any hypothesis that requires information about property ownership as an underlying dimension of class boundary.
2. We fully understand that in New Year social exchanges, younger persons are likely to visit older persons among family and kin, subordinates to visit superiors among close colleagues, and low-status friends to visit high-status friends, whereas the reverse is less likely to occur.

Our purpose here, however, is to show the propensities of within- and between-occupation linkages, and within- and between-class linkages, as indicated by visits of relatives, friends, and other contacts to the interviewed households. Such visits imply the presence of a network connection between visitors and members of the interviewed households.

3. Our object is to explore occupational and class boundaries as implied in the patterns of New Year visitation. Because colleagues are only one-fifth of New Year visitors in our sample, the proposition that the workplace, rather than occupation or social class, is the mechanism for social interaction may be only partially viable at best. Unfortunately, because our survey did not record information about the extent to which such ties were with colleagues in respondents' own workplaces, we cannot test this alternative interpretation.

4. The merged categories and their serial numbers as shown in Table 1 are: (2) enterprise and nonprofit organization managers, party and mass organization leaders; (3) scientists and researchers, college teachers; (4) elementary school teachers, high school teachers; (6) doctors, nurses; (7) sales and marketing managers, accountants; (8) legal workers, police officers; (12) cooks, restaurant wait staff.

5. Using the occupation of the household head as the indicator in this contingency table analysis amounts to an assumption of occupational and class homophily for all family members in the household. We tested this assumption by using husbands as the unit of analysis and found that the estimated results showed no difference at all from the ones reported in Tables 2–5. Because a substantial number of wives were homemakers, an occupation that is not provided for in visiting parties, we abandoned the possibility of using wives as the unit of analysis.

6. Estimation of this log linear model is straightforward (e.g., Hout 1983:72–76).

7. Specifically, these are the parameter estimates for the model at line 3 in Table 5.

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