Predicting Recidivism in a Communitarian Society: China

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Abstract: *Research on the prediction of recidivism has largely been an enterprise of Western criminology. Therefore, the identification and selection of predictors has tended to follow the individualistic traditions of the West. Important advances in models and methods have not been extended to non-Western societies such as China. This article explores the implications of communitarian features of Chinese urban communities for prediction of recidivism. The article applies the perspective of social capital to the specification of predictors. Available community social-capital measures are included in the prediction model to capture the effects of communitarian cultural features. The results indicate that social capital variables generally have significant effects.*

Keywords: *prediction; China; recidivism; communitarian; social capital*

Risk assessment and prediction have become regular tools in Western criminal justice decision making. Prediction instruments are widely used to aid decisions regarding initial placement, classification, prisoner selection for parole, establishment of treatment protocols or supervision requirements for probationers or parolees, identification of offenders for selective incapacitation, identification of dangerous offenders, and delinquency prediction. The size of the literature on prediction is enormous; much of this research involves identifying significant predictors of recidivism (see reviews in Gendreau, Little, & Goggin, 1996; D. M. Gottfredson & Tonry, 1987; Lattimore, Visher, & Linster, 1995).

Many advances in the prediction of recidivism have been made in the past 2 decades, which occupies a central position in the research on prediction. However, prediction research remains an almost exclusively Western enterprise. The extension of this research to non-Western settings remains unexplored. This article explores the implications of communitarian features of Chinese urban communities for research on prediction of recidivism. The article contributes to the literature by extending prediction research to a non-Western culture and examines

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community social capital as an important predictor in a communitarian social context.

PREDICTION RESEARCH

Prediction research has a long history in Western criminology. The most influential earlier works include Burgess's points score method (as cited in S. Gottfredson, 1987) and the Gleuck and colleagues' prediction table (Gleuck & Eleanor, 1968; Gleuck & Gleuck, 1940, 1950). These earlier instruments, although used in practice, are generally unsophisticated. The predictors used to form the instruments were determined primarily or exclusively based on their availability in official case records.

In the 1950s, least squares regression gained increasingly wider use in the development of prediction instruments. The methods used in the 1960s include clustering techniques (Glaser, 1964) and predictive attribute analysis (Wilkins & MacNaughton-Smith, 1964); and in the 1970s, loglinear and logistic techniques. The use of statistical models has been assessed by several major authors (e.g., S. Gottfredson, 1987; Monahan, 1981) to be more accurate than clinical and other informal methods.

In the early 1980s, prediction research expanded considerably, partially as a response to the discovery that a small chronic offender group was responsible for most crimes (e.g., Wolfgang & Ferracutti, 1982; Wolfgang, Sellin, & Figlio, 1972). In the mid-1980s, Farrington's (1987) work used the Cambridge Study self-report data to develop a model for predicting delinquency. In the late 1980s, the most significant advance in prediction research was the use of survival models. The pioneer work using survival models was done by Stollmack and Harris (1974), and Maltz (1978, 1984). The National Academy of Sciences' Panel on Research on Criminal Careers noted in its report (Blumstein, Cohen, Roth, & Visher, 1986) that survival analysis is particularly appropriate for analyzing the frequency of offense and the length of criminal careers. The Academy called for more research on survival techniques and their uses. Earlier work had modeled the marginal distribution of the data (see Maltz, 1984, for a good survey) without including explanatory variables. Because there were no explanatory variables, the models could not make accurate predictions for individuals or nonrandom samples. The work by Schmidt and Witte (1984, 1988; Witte & Schmidt, 1977) represents significant advances in the use of survival models. Since Schmidt and Witte's work, survival analysis incorporating a variety of individual characteristic variables to predict recidivism has been more commonly used. Some authors have innovatively and skillfully specified distributions and produced very sophisticated instruments (notable example: Lattimore et al., 1995).

The selection of appropriate predictors is an essential aspect of the research (for review, see Gendreau et al., 1996). Although scholars often disagree on the inclusion of predictors, there is a general consensus that the most important pre-

dictors for adult offender recidivism are age, gender, past history of offense, and criminal associates (Gendreau et al., 1996).

Advancement in prediction research has been made largely in Western criminology and in the practice of Western criminal justice. The literature shows that the use and advancement of prediction technology has a strong individualistic flavor. Data, theoretical guidance, and the inclusion of individual characteristics into survival models have all developed along with the renewed emphasis on examining individuals, which can perhaps be argued as reflecting the influences of the Western individualistic cultural tradition and social context. The literature shows that the dominant advances are toward the use of individual characteristics to understand and predict individual behavior. The predictors, either static or dynamic, are individual characteristics. The former are determined by the past of the offender; the latter are mutable and, therefore, appropriate targets for treatment (Andrews & Bonta, 1994). Some authors have criticized this general individualistic tendency in Western criminology. Ohlin commented (quoted in Loeber & Farrington, 1998) that "Much less attention has been devoted to identifying community and institutional differences that could become major targets for intervention and prevention strategies" (p. xiv).

A promising further direction is to extend the research on prediction to non-Western settings. In most non-Western settings, such as the Chinese criminal justice system, predictive decisions are still made based largely on subjective judgment of the offenders by legal personnel and practitioners, similar to earlier decades in the United States. In these countries, there is a broad prospect for and need to improve prediction research. Literature developed in the West seems to imply that advances in prediction research are largely free of culture context. However, criminal behavior occurs within specific cultural contexts. Historical, political, and social cultural traditions are known to have important impacts on offenders' behavior. Extending prediction research to different cultures can offer new knowledge of the use of the technology and its limitations and can provide important insights highlighted by different cultural context. A primary question is the following: Do features of the political and social cultural context influence the formulation of prediction models at all? If they do, what predictors should be used to reflect these cultural contextual impacts? Significant contributions can be made to prediction research literature by answering these questions. The current study is an effort to do so.

The existing literature on recidivism prediction is largely culturally predisposed toward individualist characteristics. To extend this Western individualistic prediction literature to non-Western settings, we must examine the special features of non-Western social and cultural contexts and investigate how these features can be captured at a conceptual level and properly specified in predictive models. We must make modifications to model specifications to formulate new predictors reflecting these social cultural features.

China is a society with many characteristics contrasting sharply with those of an individualistic society such as the United States. Perhaps the most salient

difference between Chinese and Western society is the difference between their basic cultural orientations—individualism versus communitarianism (Lu & Drass, 2002; Lu & Miethe, 2001; Troyer, Clark, & Rojek, 1989; Zhang, Messner, & Zhou, 1999; Zhang et al., 1996). Chinese communities tend to exhibit higher levels of interdependency among individuals. They tend to present strong family values, higher levels of interaction among neighbors, and collective orientation within neighborhoods (Lu & Miethe, 2001; Troyer et al., 1989). Neighborhood organizations and their social programs are much more prevalent, more formal, and more active in communities than in the West (Feng, 2001; Lu & Miethe, 2001; Troyer et al., 1989; Whyte & Parish, 1984; Zhang et al., 1996). These features furnish essential social resources for community members. This article extends the Western prediction research by exploring the impacts of these communitarian features of Chinese urban communities on the specification of prediction models for recidivism. The article applies the social capital perspective to capture the features of communitarian settings and examines the effects of individual social capital and community social-capital resources on prediction of recidivism.

COMMUNITARIAN SOCIETY AND SOCIAL CAPITAL THEORY

Braithwaite (1989) described communitarianism as the antithesis of individualism. He (Braithwaite, 1989) explained that there are three elements of communitarian societies: "(1) densely enmeshed interdependency, where the interdependencies are characterized by (2) mutual obligation and trust, and (3) are interpreted as a matter of group loyalty rather than individual convenience" (p. 86). Communitarian societies, according to Braithwaite (1989), tend to provide the social support needed for offenders to return to conventional life and be reintegrated back into the community. Studying communitarian society (Adler, 1983; Baumer, 1997; Baumer, Wright, Kristinsdottir, & Gunnlaughsson, 2002; Bayley, 1976; Clifford, 1976; Clinard, 1978; Lu & Drass, 2002; Zhang et al., 1999; Zhang et al., 1996) has proved to be very fruitful for developing criminological knowledge.

In comparison with the United States, Chinese communities show strong features of communitarianism (Lu, 1998; Lu & Drass, 2002; Zhang et al., 1999; Zhang et al., 1996). A number of authors have discussed the prevailing communitarianism of Chinese urban communities, especially before the early 1990s (for details, see, e.g., Anderson & Gil, 1998; Lu, 1998; Lu & Drass, 2002; Troyer et al., 1989; Whyte & Parish, 1984; Zhang et al., 1999; Zhang et al., 1996). These studies describe central features of communitarianism in urban China. These features include the collective culture of Chinese community, high frequencies of social interactions, interdependence among residents, and a sense of mutual obligation. Braithwaite (1999) explained the source of Chinese tradition of "Confucian Communitarianism"; he maintained that Confucius was "arguably the most

influential thinker about restorative justice the world has known" (p. 12). He argued for restorative justice, explained that the Western impression of the punitive aspect of Chinese formal criminal justice often fails to grasp the whole picture, not seeing the essence of the social control processes that heavily rely on informal and community mechanisms, whose results are largely reintegrative in nature (Lu, 1998; Lu & Drass, 2002; Whyte & Parish, 1984; Zhang et al., 1999; Zhang et al., 1996).

When studying features of societies, the concept of communitarianism captures well the nature of a society such as urban China before the mid-1990s. It summarizes cultural properties at a societal level. The significance of the communitarian feature of a society is that community resources are offered that are less available in an individualistic society. The relevance of the communitarian nature of the Chinese urban neighborhood community to the current study is that the social cultural context highlights the importance of including the effects of these community resources in prediction models. It is clear to note, resources available to offenders must play important roles in their decision to further offend or to cease to offend. This understanding suggests that the implication of the communitarian feature of the social context perhaps is best captured by adopting the theoretical framework of social capital theory, which highlights the role social resources embedded in relationships and community institutions play in an individual's social actions. The social capital perspective provides a powerful conceptual framework, which significantly enhances our understanding of the nature of our work in specifying predictors for recidivists in a communitarian cultural setting.

Coleman's (1990) work *Foundations of Social Theory* was a major contribution to social theory in the early 1990s. Coleman defined *social capital* as those aspects of a social structure that function as resources for an individual's actions (p. 302). The concept introduces social structure in the form of social resources into purposive action. Social capital exists in the form of personal relationships and networks of relationships, which is what Granovetter (1985) called "embeddedness." Individuals' actions are influenced by the social capital existing in the networks of relationships they are imbedded in. In recent years, social capital has become a major concept stimulating a large amount of theoretical work and research, especially in sociology and political science (for review, see Lin, Cook, & Burt, 2001; Portes, 1998; Putnam, 1995). The emphasis of resourcefulness in relationships and community suggests that the concept of social capital is a good tool for capturing the impact of the communitarian context. I argue that Braithwaite's (1989) discussion of communitarian society and Coleman's (1990) concept of social capital suggest that communitarian society provides higher levels of social capital to its members.

There have been a good number of applications of the concept of social capital in criminology. The pioneering work was done by Sampson and Laub (1992, 1993). Several influential examples applying social capital are that of Hagan and his colleagues (Hagan & McCarthy, 1997a, 1997b; Hagan & Parker, 1999). These

works link the absence of social capital (Hagan & McCarthy, 1997a) and the long-term accumulation, conservation, and diminishment of social capital (Hagan & McCarthy, 1997b) to criminal behavior and delinquency. Rosenfeld, Messner, and Baumer (2001) linked low levels of social capital to high levels of homicide. All these applications of social capital theory suggest that social capital can be an organizing concept in specifying prediction models for recidivism.

The conceptual framework of social capital provides well-suited theoretical guidance for modifying Western prediction models to suit features of Chinese society and their impact on Chinese recidivism. Most important, the theoretical framework links community and institutional features to individual behavior and thus fits nicely for investigating prediction of an offender's behavior in a communitarian society. Frequent interaction, interdependence of individuals, closed networks, and prevalence of community organizations are described by Coleman (1988, 1990) as features of social structures that create social capital. With this insight, we expect offenders with more available social capital to have lower likelihood of recidivism. The special features of communitarian society highlight the salience of the social capital concept in the prediction of recidivism.

I would like to argue that Coleman's (1988, 1990) analyses of social capital suggest that social capital comes primarily from two types of structures: individual relationships and community institutions and organizations. At the individual level, interaction with others, including family relationships, interaction with neighbors, and trusting and seeking help from other members of the community all reflect the social resources available to the individual, that is, the level of a person's source of social capital. In the prediction literature, the traditional emphasis has been on individual characteristics as predictors. With a few exceptions, there has been little application of the social capital concept in prediction research.

I argue that social capital at the community level is another form of social capital. Coleman (1988, p. 108) stressed its importance in his theory. An example used by Coleman (1988) specifically highlighted this kind of social capital.

> A mother of six children, who recently moved with husband and children from suburban Detroit to Jerusalem, described as one reason for doing so the greater freedom her young children had in Jerusalem. She felt safe in letting her eight-year-old take the six-year-old across town to school on the city bus and delft her children to be safe in playing without supervision in a city park, neither of which she felt able to do where she lived before. (p. 99)

This discussion points out the kind of social capital available to all members of the community, not specific to particular individuals from their particular set of relationships. Especially important is that Coleman (1988, p. 108) further discussed the nature of community social capital by addressing the public good of social capital in the form of voluntary and community associations. He pointed out that the social structural condition that supplies this social capital is a strong community. He suggested a hope for the prospect that formal organizations in the

community will replace the voluntary and spontaneous social organization that in the past has been the major source of community social capital in Western societies, to resolve the problem of declining community social capital. Coleman gave the example of community organization as available social capital that improves the quality of life for the residents. As an illustration, he noted that there have been resident organizations established for the purpose of solving problems with poor housing construction. After the problem has been solved, the organization remains as available social capital.

In Western criminological literature, the applications of the concept of social capital are mostly on individual social capital, not much discussion has been on the concept of community social capital. However, the concept of collective efficacy (Morenoff, Sampson, & Raudenbush, 2001; Sampson & Raudenbush, 1999; Sampson, Raudenbush, & Earls, 1997) bears some relevance to the notion of community social capital. Collective efficacy refers to the capacity and willingness of residents to intervene in unwanted occurrences and to maintain order in public spaces, reflecting the residents' shared sense of mutual trust and expectation for social control (Sampson & Raudenbush, 1999; Sampson et al., 1997). Sampson and his colleagues (Sampson et al., 1997) have demonstrated that collective efficacy accounts for some of the variations in crime and victimization rates across neighborhoods. The concept of collective efficacy shares some similar elements with the concept of social capital; both are relevant to the level of informal control; however, the concept of social capital is a much broader theoretical concept. Collective efficacy exists on a voluntary basis and is a specialized ability of the community "relative to the task of maintaining order in public spaces" (Sampson & Raudenbush, 1999, p. 613). In contrast, community social capital, as described by Coleman (1988, p. 108), refers to resources including all resources arising from the community's networks of relationships. Community social capital includes resources and capacity for all kinds of specialized community tasks, including informal social control against crimes. The development of the concept of collective efficacy reflects a specialized presence of community social capital and is applied largely in criminological research. A particular difference between the two concepts is that community social capital includes institutional and organizational resources that are "appropriable" (Coleman, 1988, p. 108) for other purposes for the public good after some specialized tasks are accomplished. Community social capital certainly exists in Western and Eastern cultures. It is theoretically significant to stress this aspect of Coleman's social capital theory. We adopt the social capital framework, which better reflects institutional and more formal organizational resources in the urban Chinese setting.

In prediction research, although the importance of the community has been long recognized and discussed (Ohlin, cited in Loeber & Farrington, 1998), only a few empirical studies have examined the effects of community contexts. Little data concerning community conditions for released offenders have been collected. Few empirical studies examine the effects of institutions and organizations in a community on recidivism. Especially, no studies have linked prediction to

social capital theory. The general lack of saliency of the community social capital concept in Western literature perhaps reflects the influence of individualistic features of the Western cultural tradition.

In Chinese urban communities, institutional resources play very important roles. Many communities have organizations and programs regularly available to residents. These community social capitals are salient features of urban community. Especially important is that many of these organizations and programs are quite formal, have government support, and therefore have become long-lasting community resources, as Coleman (1988) had hoped for in Western communities. Coleman (1988) expressed concern for eventual decline as a weakness of Western community organizations because of their voluntary and spontaneous nature (p. 118). In many urban Chinese neighborhoods, a number of community organizational programs offer important resources to prevent released offenders from reoffending. For example, some communities offer legal education programs to the public. These programs organize lectures by legal personnel to publicize and explain the law. Dispute arbitration is another common community program; it promotes informal resolution of disputes among neighbors by an arbitration team consisting of neighbors elected to the committee. Timely solutions were believed to be important in preventing disputes from developing into violent confrontations. Some communities offer job arrangement programs, which arrange employment for offenders released from correctional facilities after they served their sentences. The Chinese believe that being without a job constitutes a major source of crime production and recidivism. More detailed descriptions of these community programs are offered in many articles about Chinese social control (e.g., Liu, Zhang, & Messner, 2001; Lu, 1998; Troyer et al., 1989; Zhang et al., 1999; Zhang et al., 1996). Given the communitarian nature of the society and distinctive importance of social capital in Chinese urban neighborhoods, predicting recidivism in China ought to consider these features of the community institutional resources and include the associated social capital as a predictor in the prediction models. Including the social capital concept extends Western prediction research to these communitarian settings.

DATA AND METHOD

The purpose of the current study was to examine the effect of social capital variables on recidivism in a communitarian society. The data used are from a survey of inmates conducted by the faculty at the center of criminology at the Tianjin Academy of Social Sciences in the fall of 1992. Tianjin is a large Chinese city that had a population of 9.28 million at the end of 1993 (PRC State Statistical Bureau, 1990-1999). The urban neighborhoods in Tianjin are typical urban Chinese communities. A random sample of 25% all inmates admitted into Tianjin prisons in 1991 was selected using the complete inmate roster, resulting in a total of 1,063 respondents. Among them, 279 inmates were recidivists serving sentences for

their most recent offense. These recidivists are the participants of the current study.[1] The 279 recidivists were regarded as a random sample of all recidivists in the inmate population in Tianjin prison, thus statistical significance and generalization is aimed at the recidivist population.

Many authors argued for the superiority of survival models for prediction of recidivism (Maltz, 1984; Schmidt & Witte, 1984, 1988; Sechrest, White, & Brown, 1979; Stollmack & Harris, 1974). This article uses the Cox proportional model to estimate the effects of social capital predictors for the 279 recidivists surveyed.

The questions for the recidivists included the date of an inmate's release from prison after completing the sentence for his last offense, and the date of his rearrest for the current offense. Using these two dates, we calculated the length of nonoffending time from the inmate's release to re-arrest. For ease of presentation, let's use the terminology in a more "standard" design, which is typically longitudinal: The date of rearrest is the end of an observational period, at which point all the recidivists failed—all were rearrested for their current offense—no cases are censored. This length of nonoffending time until rearrest was also the length of follow-up time. The analyses model the time to failure from last release; this length is the nonoffending time for each offender until his rearrest for the current offense.

As previously discussed, social capital comes from relationships or social structures at the individual level and community level. Social capital at the individual level is specific to particular individuals and comes from his or her particular set of relationships. Social capital at the community level is typically in the form of community associations, organizations, and community programs, which are public resources and available to the community at large.

We measured social capital at the individual level with measures reflecting family relationships, interaction with neighbors, and trusting and seeking help from other members of the community. In the Chinese cultural context, we expected marriage to be a strong source of social capital because of the traditionally and generally high cultural commitment to family in the Chinese population (Whyte & Parish, 1984). A single or divorced person who lives alone would lack this source of social capital. Laub and Sampson (1993) were the first to point out that social capital exists in marriage (p. 144). They also suggested that the quality of the marriage matters. It would be preferred to have a direct measure of quality of the marriage; however, that is not available. However, using the absence of marriage to approximate the absence of social capital from marriage is feasible because the uniformly high cultural commitment to marriage creates a situation where the presence of marriage brings social capital to very high proportions of families. Even if the quality of marriage is an issue in some cases, being single certainly indicates the absence of social capital from this source. In addition, the quality of the measure is sometimes an empirical question: We are more confident about the effect when a weaker measure still shows a statistically significant effect. We combine the divorced with the unmarried to create an indicator

variable—single—to reflect the lack of social capital in these situations (1 = single, 0 = not single).

An individual's relational structure in a community is also reflected in the person's linkage to neighbors and other members of the community. A person more isolated from others would have less social capital from relationships with others. Two variables are used to measure the linkage from one person to others. One variable is from the question: Roughly how many neighbors do you talk to regularly? The other variable is from the question: When you are away from home, do you feel at ease to let a neighbor or a friend take care of your home? (1 = yes, 0 = no.) Again, similar to the case of marriage, direct measures of positive results from the relations would better indicate the presence of social capital. However, these measures, although far from ideal, do imply positive relationships between the individual and his or her neighbors.

Community-level social capital variables are measured by affirmative answers to questions about community-organized programs and resources; they are public good social capitals. One question asked if the neighborhood the offender lives in has legal education programs (3 = *regular program*, 2 = *occasionally have lectures*, 1 = *do not have legal education activity*). Another question asks if the neighborhood has arbitration programs (3 = *regular program*, 2 = *occasionally have arbitrations*, 1 = *do not have arbitration*). The third measure asks if there was a job arrangement program for the offender when he was last released from a correctional facility after serving their sentence (1 = yes, 0 = no).

The most typical disagreement among scholars in the prediction literature is about what variables should be included as predictors in a prediction model. Yet there is a general consensus that the most important predictors for recidivism for adult offenders are age, gender, past history of offense, and presence of criminal associates (Gendreau et al., 1996). To examine the effects of social capital variables, we controlled for the effects of these predictors. The analyses included age at last release in the models. Because all the recidivists in the current study were men, gender is not included as a predictor in the model.

Criminal history has been a major predictor of recidivism. Numerous studies show that past criminal behavior is consistently related to future criminal behavior. Three measures reflecting on criminal history are available in the data: age at first sentence, number of prior offenses, and length of last (most recent completed) sentence. The question asked for age at onset: What was your age when you were first sentenced by a court? Onset is frequently correlated with delinquency and criminal behavior (see, e.g., Farrington et al., 1990; Lattimore et al., 1995). The first sentence the offender received is a more reliable reflection of the criminal nature of the behavior reported, and thus a better indication of age at onset. The number of prior offenses is typically included in prediction models (e.g., Lattimore et al., 1995); in the current study, this variable was also included in the analytical models.

The third criminal history variable is the length of the last sentence by a court, indicating how long the sentence the offender received for his last offense was

(measured by number of months). For these Chinese inmates, the length of the last sentence is a reasonable approximation to the seriousness of the previous crime. The more serious the last offense was, the longer the sentence for the last offense would have been. The inmates' answers to three questions regarding the adequacy of sentence indicate that this approximation is quite reasonable. The first of the three questions asked, "Do you think that the judgment of the seriousness of your crime by the court is accurate?" Forty-seven percent responded that it is accurate; 40% responded that it is largely accurate; only 12.3% responded that it is not accurate. When asked, "Do you think that the facts used by the court for your sentence were accurate?" 44.2% of the inmates responded that they were accurate; 42.2% of the inmates responded that they were largely accurate; only 12.5% responded that they were inaccurate. When asked, "Do you think your sentence is adequate?" 63% answered that yes, it is adequate; 31.8% answered that it is harsher than I deserve; only 3.5% answered that it is mistaken. The very large portion of inmates that voluntarily agreed with the seriousness of their crime, with the accuracy of the facts the sentence is based on, and the adequacy of their sentences indicates that it is appropriate to measure seriousness of previous offenses by the length of sentence received. The inmates' attitudes toward their punishment and court sentence reflect the nature of the communitarian cultural context.

The prediction literature has also consistently shown that criminal association is an important predictor for recidivism. The data include variables indicating the most important criminal association, gang membership, which is included in our analyses as a control variable. In the sample, 38% of the recidivists are gang members. In Western prediction research, drug use has also often shown significant effects on prediction models. However, in the Chinese context, drug offense was not yet a widespread problem for Tianjin inmates in 1992. Therefore, the survey did not include any questions on drug use.

The measures, although not collected for the current study, do show acceptable face validity for all the measures, especially for the major concept of social capital. Thorough assessment of reliability and validity is difficult to conduct. Complete anonymous and pure academic assurance, as well as self-administration of questionnaires in a private setting, was used to guard against possible influences that may compromise the validity of the measures related to a respondent's being a prisoner. The anonymous nature of the survey prevented possible reliability checks against the prison records; however, there is no apparent reason for serious concerns for the validity and reliability of the measures used in the analyses.

RESULTS

The descriptive statistics for the sample are presented in Table 1.

The average duration of nonoffending was 39.8 months. The average age of offender at the time of receiving first sentence was 18.8 years. The youngest was 10 years old. The average age of offender when released from a correctional facil-

TABLE 1
DESCRIPTIVE STATISTICS

Variables	*Metric*	M	SD	*Range*	n
Nonoffense duration	# months	39.76	40.22	1 to 358	279
Age at the last release	Years old	23.95	8.2	14 to 80	279
Age at the first sentence	Years old	18.79	4.98	10 to 52	270
Length of last sentence	# months	33.45	27.26	6 to 180	279
Number of prior offenses	Counts	4.039	3.46	1 to 33	279
Gang membership	1 = yes, 0 = no	.38	0.48	0 to 1	279
Individual's social capital					
Single	1 = yes, 0 = no	.65	.47	0 to 1	279
# of neighbors regularly talk to	Counts	14.52	24.04	1 to 200	269
Ask others to help	1 = yes, 0 = no	.76	.42	0 to 1	269
Community social capital					
Legal education	3 = regular 2 = occasional 1 = no	1.39	.65	1 to 3	278
Arbitration	3 = regular 2 = occasional 1 = no	2.147	.89	1 to 3	279
Job arrangement	yes = 1, no = 0	.237	.44	0 to 1	275

ity for last offense is 23.9 years. The average number of prior offenses is a little more than four offenses for the sampled recidivists.

Table 2 reports the estimated results of the Cox proportional hazard models. Two separate models are estimated. Table 2 reports estimated coefficients β and e^{β}.

The first model includes only the predictors that the literature suggested would consistently show effects for recidivism. Age at last release shows a significant effect. The positive coefficient for age indicates some interesting features of the Chinese criminal justice system. It has been generally accepted that the Chinese recidivist rate is historically low (Liu, Messner, & Liska, 1997), largely due to the success of programs for young offenders. The major Chinese programs of *Bang Jiao* (help and educate) is mainly targeted at young offenders and has been found to be effective (Zhang et al., 1996) in reducing recidivism. Older offenders, perhaps, have made up their minds and are more resistant to the effect of correctional programs and thus quicker in committing another crime.

The effect of age at first sentence is negative and statistically significant; the younger the onset of offending, the quicker the rearrest for current offense. The length of last sentence is positive and statistically significant. The number of prior offenses is not statistically significant. Gang membership shows a positive and statistically significant effect, as expected. These results, with the exception of the

TABLE 2
ESTIMATION OF COX PROPORTIONAL HAZARD MODELS:
EFFECTS OF SOCIAL CAPITAL PREDICTORS FOR RISK OF REOFFENDING

	Model I			*Model II*		
Predictors	*b*	SE	e^{β}	β	SE	e^{β}
Age at last release	.03***	.009	1.03	.03***	.009	1.03
Age at the first sentence	–.06***	.015	.94	–.03**	.015	.97
Length of last sentence	.002**	.0009	1.002	.002**	.0009	1.002
Number of prior offenses	–.006	.019	.99	–.001	.024	.99
Gang membership	.14***	.064	1.154	.33**	.137	1.39
Individual's social capital						
Single				.85***	.144	2.35
# of neighbors regularly talk to				–.005**	.002	.99
Ask others to help				–.156^{+}	.132	.86
Community social capital						
Legal education				–.14	.097	.87
Arbitration			–.09^{+}	.072	.08	
Job arrangement			–.56***	.162	.57	
Likelihood ratio	24.3			82.5		
Degree of freedom	5			11		
p Value	.000			.000		
n	269			253		

**$p < .05$. ***$p < .010$. $^{+}p < .20$.

number of prior offenses, are the same as what have been found in Western contexts, suggesting the validity and generalizability of the consistent findings of Western prediction research.

In the second model, social capital predictors are included, and effects are estimated. All the typical predictors in Model 1 are retained; thus, their effects are controlled for. Their effects remain almost the same, suggesting very stable results for age, criminal history, and criminal association. The effects are not sensitive to the alternative model specification.

As for the effects of individual's social capital variables, single status has a highly significant positive effect on the risk of reoffending. The coefficient for single is 0.85; e^{β} is 2.35, indicating the hazard rate for an unmarried person is 2.35 times that of a married person. The finding indicates that family relationships are a very important source of social capital for Chinese. Its effect on reducing recidivism is statistically significant.

The variable for the number of neighbors respondents talk to regularly reflects the social interactions linking the individuals to others. The effect of social capital from this relationship is reflected in the statistically significant effect. The variable for asking others to help when away from home is statistically nonsignificant

by the conventional standard of $p < .05$; however, the direction of the effect was in the expected direction, and the size of the effect was not small. The results suggest limited effects of social capital. It would be significant if considered by the more liberal standard of $p < .20$. The nonsignificance of the results may be because released offenders' relationships with their friends in the community tend to produce less positive social capital compared to other conventional relationships.

The effects of social capital from the community are all in the expected direction. Legal education reduces the risk of reoffending. e^{β} is .87, indicating that criminals whose communities have more legal education programs on average have a 13% (1 – .87) lower hazard rate. The job arrangement program has the greatest effect. Those who were arranged a job after their last release have a 43% lower hazard of rearrest than those who were not arranged a job after their last release. The effect of the dispute arbitration program on reducing the risk of reoffending was not statistically significant; perhaps the effect of reflecting dispute arbitration for preventing disputes from arising into violent crime is less relevant for released offenders who have already passed that stage and are offenders. We should note that the direction of the effect is as expected, and the size of the effect is considerable. Overall, social capital variables have significant effects on the hazard of rearrest in the Chinese context.

Both models fit well. The first model has a likelihood ratio 24.3, with a degree of freedom of 5, and a p value of .000. The second model's likelihood ratio is 82.5 with a degree of freedom of 11, and a p value of .000. The highly significant likelihood ratio tests indicate that the models provide considerable predictive power compared with a naïve model.

SUMMARY AND DISCUSSION

Prediction research has been developed largely based on the Western experience. Little research examines the possible influence of features of non-Western social cultural contexts on recidivism. The prediction models have been implicitly regarded as culture independent. However, they are embedded and largely developed in an individualistic western cultural context. Ohlin (cited in Loeber & Farrington, 1998) criticized this general individualistic tendency in Western criminology for its lesser attention to identifying community and institutional differences that could become major targets for intervention and prevention strategies. Even in applying social capital, a concept with relational and community elements in its essence, the concept tends to be used with an individualistic flavor in the criminological literature. For example, it is individualized as "investment in the personal relations" (Sampson & Laub, 1992, 1993). Community social capital is especially not being sufficiently stressed in criminological research.

Communitarian societies provide cultural contexts that highlight the significance of social relationships among individuals and the impact of community institutions. A number of studies (Adler, 1983; Baumer, 1997; Baumer et al.,

2002; Bayley, 1976; Clifford, 1976; Clinard, 1978) have proved the importance of studying communitarian society. Braithwaite's work (1989) and recent developments in restorative justice grow out of his original study of communitarian societies (for review, see Braithwaite, 1999) and have found the irreplaceable influences of family, social networks, community in crime control, and regulation of human behavior, especially in these societies. In contrast, Western countries may have the similar organizational structure present at community level but still may be devoid the effect of community bonding and individual capital because of the individualistic social tradition. Clearly, a better understanding of communitarian society offers important insights and is a promising direction for research in criminology. Following this direction, this article is the first attempt to extend prediction research to urban China: a non-Western communitarian cultural context.

It is important to point out the limitations of the study and its findings. Because of well-known difficulties in collecting self-report data for criminological research, we cannot implement any more desirable research designs but only use secondary data collected by the Tianjin research team. The data used are the only data ever available to Western scholars. The original survey was not designed for the current study; more and better measures of key predictors would be desirable. Small sample size and missing values for some of the variables do not allow more in-depth explorations of models for specific crimes. Limited availability of the variables precludes more specific analyses and more statistical controls. Therefore, the findings of the current study can only be viewed as suggestive, not definite.

NOTE

1. Performing analyses only on recidivists raises the issue of sample selection bias. The most regularly used procedure for correcting this problem was developed by Heckman (1979) and Berk (1983). However, Stolzenberg and Relles (1990) found in their Monte Carlo simulations that the method could easily do more harm than good (p. 408). Given the methodological concerns and noting that the substantive interest of this paper is only in the recidivist subpopulation, this article does not apply the Heckman-Berk corrections.

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