When Formal Laws and Informal Norms Collide: The Case of China's Birth Control Policy

Yusheng Peng
Brooklyn College
CUNY Graduate Center
yushengpeng@yahoo.com

Abstract

Ancestor worship and the idea of carrying on the family bloodline through multiplication are the core norms of lineage in China. These cultural norms came into direct confrontation with the state birth control policy in contemporary China. On the one side, formal laws backed by the powerful and unyielding state apparatus, and on the other side, ancient cultural norms backed by reviving lineage networks. Even though the most draconian state policies did succeed in reducing the overall birthrates dramatically, analyses of village level data show that villages with strong kinship ties tend to have a higher birthrate. The study demonstrates how informal social networks bend the iron bars of the formal institutions.

INTRODUCTION

The core norm in the Chinese lineage culture is to perpetuate the lineage bloodline. The lineage bloodline is perpetuated if future generations multiply in number and prosper in wealth. Ancestor worship is the Chinese cultural construction through which descendants are united around the common goal and shielded from misfortunes by ancestral spirits. Ancestor worship is not simply popular culture but also codified in state ideology, Confucianism. By emphasizing filial piety (*xiao*) as a cardinal virtue, Confucianism reinforces the reproductive norm. Thus, the reproductive norm and state power coexisted in harmony for centuries.

Since 1980, however, the lineage norm of perpetuating the bloodline through reproduction and multiplication came into direct conflict, for the first time in Chinese history, with the state birth control policy. For the first two decades of the People's Republic of China (1950s and 1960s), total fertility rates[1] remained very high, hovering at 5-6, because Mao Zedong ignored warnings from demographers about the danger of overpopulation. With large improvement in public health and drastic reduction in infant mortality rates, China's population expanded rapidly from 550 million in 1950 to 830 million in 1970. Confronted with the reality of a population explosion and mounting unemployment, the Chinese leadership began in the 1970s to advocate birth control via a soft policy of "later marriage, longer birth intervals, and fewer children" and effectively reduced total fertility rates to less than 3 by the end of 1970s. From 1980 on a much harder policy was enforced and came to be known as the "one-child policy." Total fertility rates were further reduced from just below 3 in the late 1970s to below the replacement rate of 2.2 per woman by the 1990s (Greenhahgh and Winckler 2005:17-18;

X. Peng 2004:136; Zeng 1996).[2] The compulsory "one-child policy" has been both acclaimed for its effectiveness (Banister 1987; Zeng 1996) and criticized for its draconian nature (Greenhalgh 2005; Greenhalgh and Winckler 2005; Lee and Wang 1999). Both supporters and critics attribute the success of this policy to the effective grassroots organizations of the Communist government. It seems that state power has completely overwhelmed popular mores and peasant resistance in rural China. Or, has it?

Of interest here are not the social demographic implications of birth control policies, but the microscopic tug of war between an informal norm backed by the lineage and the formal rules enforced by the state apparatus. The question is not how effective state control is, but whether peasant solidarity, such as that embodied in the lineage networks, can bend the iron bars of state policies?

The following analysis draws insights from social capital theories, as developed in Coleman (1990), Portes and Zhou (1992), and Putnam (2000), which emphasize the normative capability of network density and group solidarity. Their basic argument is that groups or communities with dense interpersonal networks, strong solidarity, and high level of trust are better endowed to organize collective action and enforce informal norms. Peng (2004) have argued that kinship networks in China today constitute such normative capacities and have served to foster entrepreneurship when formal laws protecting property rights were absent. Extending the theoretical logic to birth control, we can derive the hypothesis that villages with dense lineage networks should be better positioned to resist or circumvent state birth control policies and therefore have higher birthrates than villages without such networks. In other words, the normative capacity embodied in lineage networks renders the state birth control policies less effective.

I will use a village-level data set collected in the early 1990s to demonstrate that kinship-networked villages tend to have higher crude birthrates. I then use the findings to illustrate the general theoretical point that when formal rules and informal norms collide, dense social networks function to increase the enforcement costs and reduce the effectiveness of formal rules.

FORMAL RULES VERSUS INFORMAL NORMS

The sociological contribution to the analysis of informal institutions is the insight that interpersonal networks function to maintain informal norms (Coleman 1990; Nee and Ingram 1998). Social relations generalize reciprocity and help overcome second order free rider problem. Thus, dense social networks imply strong normative control capacities. In my previous study (self-reference) I have developed the general thesis that social networks influence economic performance through enforcing informal norms. The influence can be large or small, efficiency-inducing or reducing depending on the nature of the informal norms and their relationship with formal institutions. In this section I will try to map out the specific roles that social networks play contingent upon the types of relationships between formal and informal norms.

The relationship between formal and informal institutions has long fascinated scholars (Ellickson 1991; Greif 2006; Hechter and Opp 2001; Huang 1996; Nee and Ingram 1998; Nee and Swedberg 2005; North 2005; Posner 2000). These studies focus on how informal norms provide legitimacy to formal institutions (North 2005), how daily social exchanges subsume the enforcement costs of formal laws (Ellickson 1991), or how formal laws and informal justice overlapped and intermeshed in Qing China (Huang 1993,

1996), or how social networks support informal property rights as a substitute for formal property rights institutions (Nee 1992; Nee and Su 1996; Peng 2004). Much less scholarly attention is paid to the conflicts between the formal and the informal. What happens when formal rules and informal norms collide? What roles will social networks play during such collisions?

Following the lead by Nee and Ingram (1998), I will first develop a typology of the relationship between formal and informal institutions and then map the corresponding roles played by social networks.

[Table 1a-1b here]

Institutions are formal or informal constrains imposed on actions. From the perspective of actions, there are three types of institutional constraints: prescriptive, proscriptive and neutral. Cross-classifying formal and informal constraints produces nine cells which can be combined into a five-category topology (Table 1a). Four scenarios in the relationship between formal rules and informal norms are of interests here: legalism (i.e., formal rules without the backing of informal norms), normativism (i.e., informal norms without the backing of formal rules), congruence, and conflict. The fifth scenario of free actions is either laissez-faire utopia or hell depending on whether the "free" actions incur externalities or not and if yes, whether the externalities are positive or negative. This scenario is not in our focus here.

Corresponding to the four types of relationship between formal and informal institutions, the normative roles and capacities of social networks are summarized in Table 1b and restated as the following four propositions:

(1) When informal norms are absent, neutral or ambivalent and formal rules alone define institutional environments, social networks become irrelevant. Formal enforcement costs remain high.

(2) When informal norms alone define institutional environment and the corresponding formal rules absent, neutral, or ambivalent, social networks play a major role in rule enforcement. The normative control benefits of social networks should be highest in this scenario.

(3) When informal norms are congruent with formal rules, social networks function to reduce the enforcement costs of formal rules. Normative control benefits of social networks obtain by subsuming the costs of formal enforcement.

(4) When informal norms are in conflict with formal rules, then social networks function to increase the formal enforcement costs by "bending the iron bars" of formal rules. Vice versa, the normative capacity of social networks is vitiated by the formal rule.

The first proposition can be dubbed as the legalistic approach to institutions. When informal norms are absent, social networks are rendered irrelevant and formal policing becomes the only means of enforcement. This is actually not an efficient solution because formal policing is costly and minor infractions hard to sanction. Weber is the most insightful and inspiring author in the analysis of formal institutions. He ingeniously observed that the development of capitalism is associated with increasing formalization and bureauractizaiton. However, his doomsday prediction that humanity will be trapped in a cold and impersonal "iron cage" of formal rationality has not and, in all likelihood,

will not ever come true. Even though modern life is governed by more and more formal rules, informal norms do not seem to be fading into oblivion. This is indeed a "Weberian ideal type" because it does not exist in reality.

Therefore, empirical research of this scenario is scanty. Firstly, formal institutions often evolve out of pre-existing cultural traditions or the need to eradicate some undesirable cultural norms. Secondly, even if a law is established in the absence of preexisting relevant norms, law-abiding norms usually evolve over time. Either way, purely legalistic scenario seems unusual. Nevertheless, it may be useful to imagine a hypothetical situation such as the introduction of a new highway traffic regulation (e.g., a new speed limit). If people are indifferent to the new regulation, then a town with dense social networks and a town of strangers will probably not differ in terms of obeying it.

Although purely legalistic scenario is hard to come by, cases in which formal institutions play dominant roles are quite common. Of relevance here is Greif's (2006, chapers 8-9) stylzed comparison of collectivist cultural tradition in the Muslim world (and other developing countries) versus individualist values in the West. Medieval Europe, such as the city-state of Genoa, inherited a "non-kin-based" social structure and individualist cultural beliefs. Genoese traders could gain from hiring overseas agents if they could figure out a way to reduce the risk of being cheated out of their capital. Their individualist cultural beliefs, however, did not prescribe collective punishment of dishonest agents. Thus they could not rely on network-based informal contract enforceability, such as that used by medieval Maghribi traders—discussed next. Through trials and errors, Genoese managed to build impersonal legal mechanisms of contract enforcement through a "third party" polity. Although legal enforcement was more costly

than network-based informal mechanisms, it was not limited by the boundaries of ethnic or religious groups and did support market expansion. Over the long run, the western world surpassed the Muslim world.

The second proposition pertains to the scenario of effective informal norms without the backing of formal rules. As a matter fact, all human societies evolve from normativist tribal societies. In a tribal society everybody knows everybody and every member lives under the watchful eyes of the others. There is not much need for formal laws. As human population grows and human social economic life becomes more and more complicated and anonymous, social networks are stretched thin and informal norms alone are ill-equipped to deal with the volume and scope of social exchanges. Formal laws evolve henceforth.

Thus, in the contemporary world, it is very difficult to find a purely normative society. More realistic scenarios are normative societies in which informal norms play a dominant role in defining the ways of doing things. Typically developing societies and transitional economies, such as China and Russia, are still in the process of institutional building or reform. Formal institutions are often lacking in these countries. And when formal rules do exist, they tend to be sidetracked or emasculated by informal routines, "hidden rules," and a pervasive web of intricate personal networks. In institutional economics, reliance on informal contracts and informal property rights is known as the "problem of private ordering" (Williamson 1985). For example, using game-theoretical analysis, Dixit (2004) explores various alternatives to legal governance in many developing countries where the central polity is disorganized or dysfunctional and property rights and contract laws are absent or ineffective.

Combining game-theoretical analysis with historical narratives, Greif (2006) shows that Maghribi merchants in medieval times were able to employ overseas agents for long distance trade in the absence of legal contract enforceability by developing reputation-based contract enforcement institutions. The reputation-based enforcement operated by creating a credible threat of collective punishment so that the long-term gain of honesty outweighed the short-term gain from opportunistic behaviors. This type of collective sanction was supported by an informal coalition—"a business network of members who belonged to the same ethnic and religious community" (p. 59).

Sociologists are intrinsically interested in the study of informal norms and the relationship between social networks and effective norms. One example is Nee and Su's (1996) analysis of informal privatization in China's transitional economy. Informal privatization refers to "a social transfer of rights over public property to private individuals that is not constitutionally recognized and therefore not backed by legal ownership" (p.114). Specifically, informal privatization takes the form of long-term lease of public/collective enterprises to managers, which usually gives the managers rights to residual control and residual income. Because these rights are not guaranteed by legal ownership, they constitute informal private property rights. "Informal property rights are, in essence, norms (or rules) governing the use of resources" that are sanctioned by social disapproval, ostracism and conflict (p.114). Thus, the security of informal property rights hinges on the stability and strength of the social networks in which these rights are embedded, most likely in this case, the personal ties between local officials and incumbent managers. Informal property rights are vulnerable to costly contestation.

When outright privatization of public properties was unconstitutional in the early stages of market reforms, informal privatization was the second best solution.

Peng's (2004) study of the relationship between kinship networks and rural entrepreneurs in China also lends support to the third proposition. Analysis of village-level data shows that villages with strong lineage networks tend to have a much higher level of entrepreneurial activities. Parallel to Nee's conception of informal privatization, Peng attributes the large impact of the kinship network mainly to the normative capacity of lineage networks to enforce informal norms of private property rights. Even during the collective era, Chinese peasants were allowed small pieces of private farmland. These private plots probably both resulted from and contributed to the tenacity of Chinese peasants' norm regarding private property. Peng argues that lineage solidarity and kin trust promoted rural entrepreneurship by protecting the entrepreneur's property and contractual rights. This "pay-off" was particularly large during the early stage of China's transition from plan to market, when the formal property rights institutions were ambiguous and ineffective.

Peng's analysis falls short, however, of demonstrating the correlation between social networks and normative control, as his interpretation of the normative capacities of kinship networks is mostly theoretical reasoning. Corroborative evidence comes from Lily Tsai's (2002, 2007) analysis of lineages and public goods provision. Weaving together ethnographical studies and statistical modeling, Tsai shows that lineage and temple associations in Chinese villages contribute positively to the provision of public goods such as running water, paved roads and school building maintenance. Informal norms can be conceived of as a type of public goods. If kinship networks help villagers

overcome collective action problems in public goods provision, they should also help enforce norms, including the norms of property rights.

In actuality, most institutional settings involve both formal and informal rules, coexisting either in congruence or in conflict. The third proposition points to a well-functioning institutional environment: “The close coupling between informal norms and formal organizational rules results in high organizational performance” (Nee and Ingram 1989:34).[3] Organizational effectiveness results from effective informal norms absorbing enforcement costs. The cooperation of formal and informal rules is best illustrated by Huang’s (1996, 2008) study of the Qing civil justice system in late imperial China. Despite popular belief of the contrary (e.g., Weber 1951/1916), the justice system of the imperial China did have codified statutes and procedures. Yet, in practice the Chinese legal system was a “Confucianized legalism” that interlaced legal codes with moral principles. “The Confucian political ideal was a moral society that would more or less govern itself. The state’s role would be mainly limited to setting an example through its morally upright officials. Therein lay the origin of the legal ideal that society would settle its disputes without government interference, that the state apparatus would defer to the societal mechanisms for dispute resolution” (2008: 26). Qing courts considered civil disputes “minor matters” and most such cases were handled by community/lineage based mediation. With communities and kin groups absorbing the bulk of dispute resolution costs, Qing emperors were able to keep the formal state bureaucracy to a minimum.

The Communist Party State of China did not change the patrimonial characteristics of its colossal bureaucracy. Even though all economic activities were centralized and bureaucratized, a patron-clientele network permeated the factory system (Walder 1986).

Walder characterizes the authority relationship in the state-owned factories as "principled particularism" that mixed political commitment with personal loyalty and blended organizational goals with clientelist ties.

Informal institutions are also important in a "rule of law" country like the United States, as demonstrated by Ellickson's (1991, 1986) analysis of trespassing disputes among cattle ranchers in Shasta County, California. Shasta County has a rather complicated set of laws of rights and liabilities regarding cattle trespassing, which most ranchers neither understand nor have ever to resort to. They go by a simple norm: ranchers should keep their animals from eating a neighbor's grass (1991:53). When trespassing does occur, the victims rarely demand compensation for losses. On the contrary, the Shasta ranchers usually abide by the norm of being good neighbors and board stray cattle until a convenient time for the animals to be retrieved or returned. Because these rural residents interacted repeatedly and on multiple fronts, accounts balance over time (pp. 53-56). Obviously the effectiveness of these "welfare-maximizing norms" is supported by the close neighborhood networks. By contrast, when livestock-vehicle collisions occur on the Pacific Coast Highway, formal litigations are much more likely to initiate. One of the reasons for this legalism is the "shallowness and shortness" of future relationship between parties involved (p. 94).[4]

The fourth proposition refers to the scenario when the formal conflicts with the informal. This is the most inefficient solution because formal rules are unpopular and costly to enforce. As Nee and Ingram (1998:36) put it: "When the organizational leadership and formal norms are perceived to be at odds with the interests and

preferences of the actors in subgroups, informal norms opposing formal rules will emerge to 'bend the bars of the iron cage' of the formal organizational rules."

The purpose of this analysis is to provide an empirical test of the fourth proposition by focusing on the case of China's one-child policy. On the one hand we have the birth control policy that is strictly enforced by the state and on the other the thousand years old belief in continuing the lineage bloodline through multiplication in numbers. We can derive from it the hypothesis that lineage networks should be able to raise birthrates by enforcing the reproductive norm and bending the iron bars of the state birth control policy. The relationship between birthrates and the reproductive norm is very specific and straightforward. An empirical verification of this hypothesis would corroborate the normative capacity of kinship networks as proposed in Peng (2004), as well as lending support to the fourth proposition

LINEAGE AND THE STATE IN CHINESE HISTORY

Lineage organization in Chinese history has gone through roughly three stages (Chang 2000; Feng 2005). The first stage started with the Western Zhou Dynasty (11th century BC) and lasted until the end of Warring States period (3rd century BC). Emerging from tribal societies, the Zhou state constructed a feudal hierarchy according to patrilineal agnatic principles. The Zhou King parceled up the land and people into fiefs and awarded them to his princes and relatives and, to a lesser degree, nonkin followers who made important contributions. The King was the head of both the feudal hierarchy and the royal lineage. Each feudal lord ruled his fief as an autonomous tributary kingdom within which to build his own lineage or branch lineage.[5] Thus, the first feature of this

period was the fusion between lineage and the state power. The second feature was that ancestor worship rites, just as many other rites,[6] conformed to the feudal hierarchical order: while the king could build seven ancestral temples and worship his founding ancestor, dukes (*hou*) were entitled to five ancestral temples and could worship forefathers up to the fifth degree; high-officials (*dafu*) three ancestral temples and forefathers up to the third degree; gentry only one temple and forefathers of the first degree (father); plebeians were not supposed to build any ancestral temples and could only venerate their fathers in the living room (Feng 2005:30; Wang 1923). Apparently, organizing lineages was the preserve for the royal families and nobilities.

This type of primitive agnatic political organizations ceased to exist some two millennia ago, when the Qin Emperor, driven by military competition, replaced the feudal hierarchy with a more efficient bureaucratic hierarchy. In his process of empire building, he strategically broke powerful lineages, especially those of the conquered states, by relocating tens of thousands of households to the proximity of the capital city for close watch. After the short-lived Qin Dynasty, however, powerful clans were to reemerge and contest control over the state bureaucracy. This ushered in the second stage of lineage evolution.

The second stage of lineage organization lasted from the Han Dynasty (the 3rd century AD) to Tang Dynasty (the 10th century AD). The Han Emperors inherited the Qin state structure by dividing up the empire into bureaucratic jurisdictions instead of feudal fiefs. Even though bureaucratization tended to replace agnatic principles with meritocratic principles, this stage was to see the conflict between these two types of principles. The most distinctive feature of this period was the rise and fall of "great

families"(*haozu*) and their fusion with the literati class (*shi*). Some of these great families came from old noble lineages that survived the cleansing by the Qin Emperor; some new families of bureaucratic or intellectual origins grew into powerful lineages; and some new landlord families accumulated economic wealth and acquired cultural learning for their offspring. These "great families" became the new elite boasting aristocratic pedigrees and vying for political power, with some outlasting, outgrowing, and outshining the royal families. They enjoyed many privileges that the imperial court came to recognize. First, as literati they had preferential accesses to bureaucratic offices. Even though official titles were not hereditary, only the literati class had the privilege of recommending "talented and morally upright" candidates for offices. Subsequently, nepotism and corruption thrived. Second, they were exempt from labor levies, as a distinction from the commoners. Third, they managed their own internal affairs within the lineages without interference from the state. Fourth, they controlled membership into the literati class. The power of the literati lineages started to decline with the formalization of official examinations in the Tang Dynasty. Throughout this period, lineage was mainly an upper class phenomenon and lineage activities in the populace seemed limited (Yan 2000, 2005; Zhao 2002).

The third stage started with the Song Dynasty in the tenth century. The lineage organizations that we observe today in rural villages were actually reconstructed by the Song imperial state under the influence of Neo-Confucians (Ebrey 1986; Metzger 1986; Qian 1994). The Neo-Confucian scholar-bureaucrats, with Zhu Xi as the leading figure, perceived an affinity between ancestor worship and their central concept of filial piety (*xiao*) and decided to encourage the congregation and organization of lineages, first

among the educated elite and then among the plebeians. Renowned Song scholars such as Fan Zhongyan, Ouyang Xiu started compiling genealogies, building ancestral halls, and managing communal estates. Lineage activities flourished quickly among the populace and reshaped the social fabric of the rural villages. By the 16th century (1563), the Ming royal court decreed to allow commoners to construct ancestral halls and to worship founding ancestors, thus formally recognizing a practice probably already widespread (Chang 2005:22). In 1726, a Qing Emperor (*yongzheng*) ratified the power of lineage elders to lynch lineage members such as caning or drowning of serious offenders of lineage codes or state laws. The imperial court even experimented with setting up semi-official liaisons (*zuzheng*) within large lineage groups and then abandoned the program because of abuse (Feng 2005: 51-70). Obviously, as the center of lineage activities shifted from powerful elite class to the common people, the royal families no longer perceived the lineage as a political threat. The relationship between the lineage and the state had transformed from tension and conflict to cooptation and cooperation.

Huang (2008) points out that the state bureaucracies in late imperial China represented a "centralized minimalist" strategy to governance, with a patrimonial ruler at the center, minimal bureaucratic machinery, leaving rural society largely in the hands of semi-officials, gentry, or lineages. For centuries, kinship organizations normally worked in harmony with rather than against the formal state bureaucracy. They performed some governmental functions such as mediating conflicts, administering justice, protecting the property and lives of its members, and even collecting taxes for the state (Huang 1993, 1996, 2008). Lineage groups normally try to avoid conflicts with the state. Lineage

codes often specifically stipulate that kinsmen should abide by all state laws and statutes (Wang 1991).[7] Weber (1951) was largely correct to observe that Chinese villages were basically autonomous and self-ruled. From this observation he concluded that it was the clan power that prevented the formal state bureaucracy from penetrating the rural society. Recent historical studies would suggest, however, that lineage power did not confront or counterbalance the power of the state bureaucracy, at least not in the late imperial period. Rather, it was the imperial rulers who decided to encourage kinship organizations to grow as a supplement to state administration to avoid exhaustion of administrative resources and overstretching of central control. For the populace, it may just be as well. Dynasties rose and fell; emperors came and went. Lineages were relatively stable and provided protection and security during turbulent times.

This period has also seen a shift of social economic center from the north to the south and a shift of political center in the opposite direction. Lineage activities also shifted from North China to South China after waves of massive southward migration (Wang 2006). In the barbarian, remote, and therefore peaceful South, the lineage became the only important "corporate actor" in villages, building ancestral halls, managing communal land, maintaining schools and extending cheap credits to kinsmen, as portrayed by early western observers (e.g., Weber 1951; Freedman 1958). In the war-ravaged North lineage culture survived in a more diluted and weakened form. Except shared ancestral gravesites and ceremonial rituals, kinship groups in the north usually do not own corporate properties and are not nearly as effectively organized as their southern counterparts (Watson 1982; Huang 1985:232-237; Cohen 1990, 2005; Feng 2005).[8] The only remnant of lineage congregation in the North one millennium ago is the cursory

observation that more villages in the North are named after a single surname than in the South. In my field trip to rural Jiangxi in 2006, I ran into inscriptions on ancestral halls claiming that their ancestral roots originated from some "great families of Shangdong." Apparently, Shangdong used to boast powerful lineages (Yan 2000).

Lineage system was to face the most serious and unprecedented challenges posed by the Communist Revolution. Since the 1950s the Communist Party waged deliberate assaults on lineages, especially in southeastern China where lineages remained strong and well-organized. The communist government confiscated lineage corporate properties, deprived lineage elders of their power, repealed lineage codes, and injected the ideology of class consciousness and class struggle to diffuse lineage identity. Consequently, the economic foundation and organizational structure of the lineage system were systematically dismantled and replaced with collective farms and grassroots administration (Wang 1991). During the collectivization campaign and the Cultural Revolution, ancestral halls, the shrine where tablets of ancestors are consecrated, were turned into offices, schools, or storage rooms, if not destroyed; genealogy books were burned as feudalistic remnants; and of course, the *fengshui* of ancestral graves was disturbed. Parish and Whyte (1978) observe that even during this period lineages were weakened but did not disappear. The state purposively broke up strong lineages into different collective units, but lineage influence was still present in the grass-roots administration, albeit in a more subtle way (pp. 301-16). Peasants in Guangdong kept the ancestral tablets at home and replaced those destroyed by Red Guards with new ones (pp. 263-4). Many genealogy books survived the Cultural Revolution in similar fashions (Wang 1991).

In 1978 Deng Xiaoping launched China on a long and arduous march toward a market economy. Collective farms were dismantled and households, again, became the basic units of economic activities. With a more liberal atmosphere following the market reform, ancestral halls were rebuilt, genealogy recompiled, and annual pilgrimage to the ancestral gravesites reactivated, usually with the ardent support of lineage members.[9] The ghosts of dead forefathers were revived, not to reinstitute the patriarchal power of the elders, but to create solidarity and identity among descendants, which can be used for new purposes. The new solidarity demonstrated a political manifestation when the village election was introduced in 1988 and created legitimate channels for large lineage groups to control village offices. Researchers and policy-makers are quite alarmed at the swaying of village election results by large kinship groups (Xiao 2001; Liu 2005). Lineage management also became more "democratized," e.g., with lineage councils replacing the personal power of elders (Wang 1991).

It should be noted that the revived lineage today is no longer an organized corporate actor, but a collective actor, i.e., a community endowed with "natural" social capital for collective action and normative control. All the structural features of today's lineage spell social capital benefits. Strong ties provide the bonds and obligations; cultural identity generalizes bilateral bonds and obligations into group loyalty; leadership and density help mobilize these resources into capacities for collective action and normative control. The normative capacities are to be tested by a new state policy—the birth control policy.

LINEAGE AGAINST BIRTH CONTROL POLICY

The reproductive norm is at the core of the patrilineal lineage culture in China. Keeping the bloodline going is so deeply ingrained in Chinese culture that it almost defines the very meaning of human existence, analogous to the pursuit of eternal salvation of the human soul in Christian culture. Human existence is essentially short, miserable, and throughout most human history, brutal. The biological limit of human existence is not only psychologically unsettling but socially disrupting. Human minds seek consolation in the idea of eternal life and eternal bliss after death (salvation) or the continuation of life through offspring (bloodline). Ancestral worship is a cultural construct through which descendants are united around this common goal. Ancestral halls, genealogies, and ancestral tombs are the cultural artifacts. Ancestral halls consecrate ancestral spirits. Genealogy reinforces identity and bonds among kinsmen. The Christian concepts of original sin and salvation are inherently incompatible with the genteel ideal of Confucianism (Weber 1951: 228-29). Although blended with the Buddhism since the Tang Dynasty, ancestor worship is philosophically at odds with the idea of a Western Paradise (Cohen 1988). The difference between salvation of the soul and continuation of the bloodline is best contrasted in the cultural meanings attached to the burial of the dead. Christians are buried in churches so that the souls of the deceased can go to heaven. Churches are not only places to worship God but also gates to heaven. Chinese are buried in good *fengshui* sites so that their offspring may prosper. The good *fengshui* of ancestor graves is for the blessing of the offspring as well as for the well-being of ancestors in the afterlife. A sinister spin of this idea is the report that sons abuse their old-aged parents by denying them food and care, only to give them an extravagant burial after death (Zhang 2004).

Good burial geomancy enables the dead ancestors to extend postmortem assistance to their progeny (Li 1976).[10] In both north and south China, good fortunes or misfortunes of rural folks, including not being able to give birth to a son, are invariably attributed to the auspicious or ominous *fengshui* of ancestor burials. One ethnographic narrative from southern Jiangxi is particularly interesting and pertinent. In one thriving lineage branch a legend goes that there were once five brothers in the lineage eighteen generations ago. A *fengshui* master pinpointed a single golden burial spot for the brothers, who agreed that whoever would die first would be buried there. When the youngest brother fell deathly ill, one elder brother committed suicide to beat his younger brother to the grave. As a result, his descendants proliferated and prospered (Liu 2000:14). The story is likely apocryphal. But it does make the point that the essence of ancestor worship is the continuation of bloodline.

The reproductive norm and the official Confucian ideology had been mutually reinforcing. As pointed out earlier, lineage culture was reconstructed by new Confucian scholars and officials. The affinity between ancestor worship and the Confucian virtue of *xiao* is demonstrated in the famous quote of Confucius: "Of the three heinous unfilial acts, failure to produce posterity is the worst." In other words, the best way to perform obeisance to one's ancestors is through producing a male heir. Even today, some old people still believe that a broken patriline is worse than death itself.

Thus, when the Communist government contravened the fundamental norms of bloodline continuation of the lineage system by implementing the birth control policy, conflict between lineages and the state power, open or covert, is inevitable.

Son-preference is the most important factor behind Chinese farmers' resistance to birth control policies. Farmers have their good reasons. Culturally, the Chinese lineage is patriarchal and patrilineal. Only male descendants can carry on the family name. The genealogy of lineage groups only records the names of sons and daughters-in-law, but not daughters who will marry out of the lineage, given the sweeping exogamy norm, produce heirs for their husbands, and will be buried in the ancestral gravesites of the husbands' lineage after death. Pragmatically, sons are responsible for taking care of old-aged parents, their economic well-being and daily life. Married-out daughters may help, but their main responsibilities are for their husbands' parents.[11] Adopted sons, unless from within the same lineage, can perform the economic function of old-age care, but not the cultural function of carrying on the family name. Often adopted non-agnate sons are not recorded in genealogy (i.e., the line is broken), have to endure ridicules and face restrictions in inheriting property such as land, and may not even be buried in the ancestral gravesites after death (Szonyi 2002; Wolf and Huang 1980; Watson 1975; Qian 1994).[12] Uxorilocal marriages encounter similar hurdles in lineages with corporate holdings (Cohen 2005:163-164).

The Chinese Communist Party has been propagating gender equality for decades. Great strides have been made in urban and rural areas (Greenhagh and Winckler 2005; Zhang forthcoming). Yet, the many routine practices and policies during and after the collective era inadvertently reintroduce or reinforce gender bias in the villages. For example, the Party encourages women to shoulder up "half of the sky" by participating in field labor alongside with men, but they were paid less. Their labor force participation did not produce economic independence as expected, because payments were distributed to

households as a whole. Patrilocal residence and virilocal marriages were still the norm, making daughters temporary residents in their natal homes (Parish and Whyte 1978). Old age care is still the responsibility of the families (therefore, sons) especially after decollectivization when rudimentary collective welfare is gone. Even the practices of birth control itself perpetuate gender bias, such as assigning the unpopular and unrewarding job of family planning to woman cadres (Murphy 2004).

The Chinese government tries to accommodate the pervasive son preference in rural areas by allowing rural couples a second child if their first born is a girl. For urban couples, the one-child policy is enforced to the letters. Even if we assume that all peasant couples were content with one son, 25% of farmer couples will end up with two girls and may want to have a third, fourth, or more pregnancies until they get a boy.[13] This is where peasants and the state power clash. Dramas and tragedies abound. Against the backgrounds of suspected and reported female-infanticides and egregious mistreatment of baby girls, the numerous abandoned baby girls seem to be the lucky ones. While international human rights groups are concerned with forced abortion on the part of the Chinese government, Chinese farmers have been quietly engaging in sex-selected abortions since ultrasound tests became available in the late 1980s. In the early 1990s scholars in China began to warn of looming unbalanced sex-ratios (Zeng et al. 1993). Official statistics show that sex-ratios at birth have been increasing since the early 1980s. In 1982, the sex-ratio at birth was 108.5 boys for every 100 girls, slightly higher than the normal range of 103-107; by the year 2000 the ratio jumped to 116.9 (National Statistical Bureau 2002; Banister 2004; Lavely 2001). It should be noted that the sex-ratio of the first birth group in 2000 was 107 whereas that of the second and higher birth order is

dramatically off chart, more than 3 boys for every 2 girls (National Statistical Bureau 2002; Banister 2004; Greenhagh and Winkler 2005:266).

The absolute numbers of "missing girls" are staggering: the cohort born between 1980 and 2000 is short of girls by 12.8 million (Cai and Lavely 2003). Not all of these women are truly missing as some are simply hidden from official statistics. Cai and Lavely (2003) estimate that roughly one third of the 12.8 millions are only nominally missing. That leaves about 8.5 millions truly missing. Most of the truly missing girls are due to sex-selected abortion and the impact of female-infanticides should be negligible (Chu 2001). The unbalanced sex-ratio is obviously caused by son preference and exacerbated by the birth control policy (X. Peng 2004; Banister 2004; Li, Jiang, and Feldman 2006).[14]

The birth control policy is carried out via a multilevel bureaucracy down to the village level. In order to push the highly unpopular policy through, the central government made birth control a "one-vote-veto" criterion in cadre evaluation and promotion. That is, if a region could not meet its fertility control targets, its chief administrator would be held accountable regardless of other performance indicators, jeopardizing his/her job and career (Greenhalgh 2005; Zeng 1996). Despite the pressure, violations are daily routine. County and township officials have to resort either to high-handed means of forced sterilization and forced abortion, or alternatively to the more "humane" methods of manipulating statistical reporting. Zhang's (1999) ethnographic study of a north China village in Hebei portrays a vivid picture of the microscopic dynamics of birth control. The implementation of birth control regulations tended to be arbitrary and depended upon the negotiations of village cadres with township cadres on

the one hand and villagers on the other. Village cadres, from the same village, were usually sympathetic to villagers who wish for a son and tended to go soft with violators. Cadres from higher levels such as the township family planning agency were more inclined to implement the policy to the letters, but they only came to the village during periodical campaigns and crackdowns. Thus, the policy implementation was a process of negotiations, compromises, and varied from family to family.

If the argument that lineage networks help enforce informal norms is correct, we should expect the lineage to be able to bend the iron bars of the birth control policy and help its members to have more children. I propose that kinship networks may increase birthrates via both internally reinforcing the reproductive norm and externally resisting the state's effort to limit fertility. Institutions restructure incentives (North 2005). Likewise, the normative capacities of the lineage include reinforcing the incentives to fertility. The cultural practices of patriarchal ancestor worship, patrilineal genealogy, and discrimination against adoption and uxorilocal marriages combine to portray male heirs as not just a preference but almost a necessity. Daily interactions and competitions between lineages or lineage branches transform reproductive behavior into a power play. It is conceivable that young people who grow up in villages without lineage pressure will be more likely to internalize the one-child policy.

Lineage may help farmers to resist the state power through policy circumvention or collective resistance. Policy circumvention refers to the scenario when the largest lineage group gets control of the village administration. Village leaders with kinship ties "would be less likely than leaders elsewhere to push a campaign which some kinsmen may oppose" (Parish and Whyte 1978:152). They may pay lip service to the policy and try to

implement it to the minimum degree their superiors in the township demand of them, and turn a blind eye to the policy-breaching but "norm-abiding" behaviors of their kinsmen. Apprehension of accusation of being unfair may oblige them to extend the same courtesy to non-kin villagers.

Collective resistance refers to the scenario when village offices are controlled by members of other lineage groups. In such a scenario, the lineage may still stand united behind its members against family planning agencies and village cadres. When dealing with policy-violators who are not their own kin but belong to some other lineage group, village cadres have to think twice before employing high-handed measures for fear of retribution. In Zhang's (1999) account of a crackdown on birth violations, township cadres picked one couple from a "small clan" to make an example of and forced the wife to be sterilized (p. 227). Even if the cadre belongs to a larger lineage group, his/her own group probably would not stand behind him implementing an unpopular policy through distasteful means such as dragging women to clinics for abortion or sterilization. I would not be surprised, however, if lineage feuds occur due to such causes.

One story that I picked up during my field trip to Jiangxi is particularly telling. One woman with "unauthorized" pregnancy was pressured for abortion by township family planning officials. She went hiding in her mother's home in a different township. Her natal family happened to belong to a large lineage group. When the officials from her husband's township tracked her down to her natal village, her lineage brothers and cousins united behind her and beat up pretty badly the "outside" officials who, in the eyes of the kinsmen, did not really have jurisdiction in their township and therefore they were not really beating up "officials."

DATA, MEASUREMENT AND METHOD

My unit of analysis is administrative villages. I use two sample data sets collected by sociologists at the Chinese Academy of Social Sciences in 1993 and 1994. The timing of the surveys is pertinent for the current analysis because peasant resistance to the one-child policy was still at its peak level in the early 1990s. In recent years more and more young rural couples start to embrace the birth control policy and want a smaller family (Zhang 2007).

The 1993 survey sampled 259 villages from 15 counties and the 1994 survey sampled 119 villages from 7 counties. The 22 counties were selected by "experts" with an eye to representativeness, and the villages in each county were randomly sampled on a proportional basis (for a description of the survey, see Shen et al. 2000).[15] After deleting 12 villages with missing or outlying values on key variables, 365 valid cases remained for analysis.[16]

To give an idea of an administrative village, there are on average 439 households in the sample villages, with a mean population of less than two thousands. The largest village in the sample has a population close to 10,000, and the smallest village 194 people (Table 2).

[Table 2 about here]

Measurement

Nearly identical questionnaires were used in both surveys, and they included questions regarding the number of rural enterprises in the village and the number of households

belonging to each lineage group. The key variables are defined in the following, and basic statistics are reported in Table 2.

Births refer to the count of reported live births, male or female, in the whole village in the current year (1991 for the 1993 survey and 1993 for the 1994 survey). The ratio of births over population measures crude birthrates.[17]

It is worth noting that the sex-ratio in the sample villages is 114.5 boys per 100 girls in these two years (Table 2). This is slightly higher than what we would interpolate from the national figures of 111.3 from the 1990 population census and 115.6 from the 1995 1% national sample (National Statistical Bureau 2004). Considering that official statistics tend to under-report female births and that the sex-ratio is higher in rural areas than in cities, the sex-ratio in our sample data is credible.

Population is the total number of people in the administrative villages. Unfortunately the data set does not report age-sex breakdown of population. Therefore we do not have the number of child-bearing age women, which would allow the calculation of total fertility rates.

Number of newly weds is the total number of married couples in the current year. This variable is used as a proxy for the fertility potential of the village population.

Density of kinship networks is measured by the proportion of households that belong to the largest lineage group in the whole village. In the current sample of 366 administrative villages, at one extreme five villages uniformly share the same surname (i.e., the whole village belongs to the same common descent group) and another 10 have over 90% of the households belonging to the same lineage group; at other extreme about a quarter of the sample villages (95 cases) do not have any lineage groups and therefore

report zero on this variable. On average, 22% of the households belong to the largest lineage group and 40% belong to the top three groups. As lineage system is patrilineal and patriarchal, it excludes marital ties of wives and daughters, which are another important source of social capital in rural China.

[Table 3 here]

Ancestral hall is measured by three categories: (1) never existed, (2) existed before 1977 (the ending year of the Cultural Revolution) but no longer exist, (3) currently standing. Table 3 gives the basic frequencies of the presence of ancestral halls and genealogies. Only 12% of the 366 villages currently have ancestral halls and another 15% had one or more before 1977. 16% of the sample villages current have genealogies and 20% had one or more before 1977. Two dummy variables for ancestral halls and genealogies are used in regression, one for present before 1977 and the other for currently present.

The following defines control variables that may be relevant for birthrates but not key for the current analysis.

Total rural labor force is the number of all able-bodied laborers who are registered residents in the administrative villages.

Human capital stock is measured as the proportion of people with at least junior high school or equivalent education in the village labor force. On average, 22% of the village labor force had completed junior high school. We expect education to reduce birthrates by weakening son-preference.

Urban proximity is measured by the log distance between the village and the nearest city. This variable is included as a proxy for urbanization. Presumably farmers live near

cities may take on more urban attitudes about the ideal number of children or may be less biased against female babies.

Land-labor ratio is the total amount of farmland divided by the total rural labor force. This is a proxy for population pressure on farmland. Land-labor ratios vary greatly from village to village. In an average village, each peasant has slightly more than half an acre of farmland (one acre = six *mu*), with a minimum of one-twentieth of an acre per peasant and a maximum of nearly three acres per peasant.

Income level is measured as the gross value of output per capita for the current year (1991 for the 1993 survey and 1993 for the 1994 survey). Economic development may reduce birthrates by changing people's values or increase birthrates by providing farmers with more financial resources (to pay fines or bribes). As log output data is typically lognormal, this variable enters the regression in logarithm.

Fixed county effects are included in the regression to control for regional variations in the implementation of the birth control policy and to correct for the two-stage sampling design of villages nested within counties. There are substantial regional variations in birth control policies and practices, reflecting differences in population density, ethnic composition, and administrative capacities. Ethnic minorities with small population sizes are allowed less strict fertility rules. The county government is an important actor both on the national stage and in peasant daily life and including fixed county effects should control for most of the regional variations.

Statistical Modeling

In this paper, instead of directly examining birthrates, I model (log) numbers of births as the dependent variable with log population as a control variable. Count data are usually estimated with either a Poisson model or a negative binomial model. Poisson distribution is more restrictive than negative binomial distribution because it assumes that the variance equals the mean. As the count of births in Chinese villages is skewed (with many zeros) and therefore may be overdispersed, I assume negative binomial distribution. The negative binomial regression model is specified as

$$\ln \hat{Y} = \alpha + \beta\mathbf{K} + \boldsymbol{\gamma}\mathbf{X} + \delta C,$$

in which $\hat{Y}$ stands for predicted number of births; **K** is a vector of three measures of kinship networks (i.e., the proportion of households belonging to the largest lineage group, presence of ancestral halls, and genealogies); ***X*** is a vector of controlled variables including log population, log number of newly-weds, proportion of villagers with at least junior high schooling, log distance from the nearest city, log farmland per laborer, and log current labor force size; **C** stands for a vector of 21 dummy variables for counties. Note that subtracting both sides of the equation by log population, the left-hand side becomes log predicted crude birthrates. The negative binomial models were estimated in SAS.

RESULTS

Results of three negative binomial models are reported in Table 4, with different combinations of lineage network measurement. The first model contains proportion of households belonging to the largest lineage group only. The second model adds two dummy variables for the existence of an ancestral hall. The third model adds two more dummy variables for the existence of a genealogy.

[Table 4 here]

First of all, the proportion of the largest lineage group exhibits a small but consistently significant impact on births in all three models. Controlling for ancestral hall presence reduces its impact somewhat. According to the estimates in Model 1, for every 10% increase in the percentage of the largest lineage group, the number of births can be expected to increase by 3.6%. A village with all households belonging to the same lineage is expected to have 43% [$\approx e^{.036\times 10}$-1] more births than villages without lineages, other things equal. On average, lineage networks have increased crude birthrates in the sample village by about 8% [$\approx e^{.036\times 2.18}$-1], *ceteris paribus*.

Second, the presence of an ancestral hall at the current time has a fairly large impact on the number of births. Pre-existing ancestral halls that have been destroyed have a smaller and weakly significant effect ($p < 0.01$, two-tailed). According to estimates in Model 2, villages with ancestral halls, either preserved or newly-built, on average have 38% more births than villages without ancestral halls, other things equal.

Third, past or present presence of genealogies does not have any impact on birth. There may be two explanations for this null-finding. The first explanation is that genealogies are usually compiled at supra-village level, often jointly by all lineage branches in the whole county or wider areas, and therefore the presence of genealogies

does not necessarily imply the existence of a strong lineage in a particular village. Ancestral halls, on the other hand, are usually constructed at the village level and indicate the organizational strength of lineages within the village. The second explanation, less probable, is that it is not the mere symbolic reconstruction of the bloodline that matters, but the strength of the lineage group in terms of numerical sizes and financial resources that count.

Fourth, regarding control variables, population size and number of newly-weds both show positive and significant impacts on births, as expected. Since we do not have information on the age structure of the village population, the number of newly-weds is the next best proxy for the fecundity of the village population. Controlling for these two variables allows us to interpret the negative binomial models of birth counts in terms of birthrates. Note that if we subtract both sides of the equation by the log population (so that the left-hand side becomes the predicted crude birthrates), the coefficient for the log population on the right-hand side becomes negative, indicating that larger villages tend to have lower birthrates, probably because of stronger grassroots administrations and closer monitoring of these villages.

Please also note that (1) the proportion of high school graduates shows a significant positive impact on birthrates; (2) the land-labor ratio, the gross value of output per capita, and distance from the nearest city do not have significant effects on birthrates. The positive impact of education on birthrates is unexpected and needs further investigation.

CONCLUSION

Tentatively, we can have the following conclusions. First, kinship networks enhance a village's capacity for normative control. The key elements in normative control are solidarity and trust. All Chinese farmers want to have more children, especially a son, both because of the cultural belief in carrying on the family line and because of more practical consideration such as old age care or household economics. But they differ in the degrees they can resist the fertility control policies. Villagers with the support of lineage networks are in a better position to resist, circumvent, and delay "embracing" the family planning laws whereas villagers without such support may have to be more compliant, willingly or unwillingly, with state power. A caveat of this finding is that villagers with lineage buffering the blunt of state power would be less likely than villagers without such buffering to resort to desperate measures such as prenatal abortion or postnatal female infanticides. This may allay the impact of a stronger son preference among lineage groups. A possible topic for future investigation.

Second, compared with the large impact of lineage networks on entrepreneurship reported earlier (self references), the impact of kinship on birthrates is relatively small. This difference reflects the differences in the effectiveness of state policies and rigor in enforcement. In terms of the rights of private entrepreneurs, the state's policies were ambiguous, inconsistent, and conciliatory. Thus, peasants' informal norms regarding private property had a large role to play and its effectiveness depended on social networks. In the case of family planning policy, the state has been unambiguous and unwavering and has used "an iron hand" in implementing it. Any impact found here reflects the effects of lineage bending the "iron bar" of the one-child policy.

Theoretically, the efficacy and impact of the normative control capacity depend on the relationship between informal norms and formal rules. When informal norms and formal rules are congruent, then the most efficient results obtain. Formal rules provide strong support for informal norms and social networks subsume the costs of formal enforcement. When informal norms and formal rules are in conflict, social networks increase the costs of formal enforcement and formal rules vitiate the normative capacities of social networks. In China's birth control scenario, even though the state power is overwhelming and state policy prevails over farmers' fertility preferences, lineages increased the enforcement cost of family planning. To the extent family planning has been successful, the cost to the state is not only the huge administrative costs but also the loss of legitimacy in the eyes of the peasantry (Wang 2005).

The normative control benefits of social networks are highest when formal rules are absent, neutral, or ambivalent and cultural norms alone define institutional environment. By contrast, normative control benefits of social networks would not obtain when cultural norms are absent, neutral, or ambivalent and formal rules alone define institutional environment. In terms of organizational effectiveness, the "normativist" institution may not be as efficient as "legalistic" institutions.

Third, the analysis presented in this paper also calls for a distinction between social networks (i.e., social capital) and cultural norms (i.e., symbolic capital). Coleman (1990) and Woolcock (1998) define social capital as social networks and effective norms. I think the two should be kept separate conceptually because the same kind of networks may support different norms and the same norms may be supported by different types of networks. I would suggest defining cultural capital as systems of values and behavioral

codes carried in a society, including both informal norms and formal rules, and social capital as the normative capabilities inherent in interpersonal networks that help maintain and support informal norms and customs. This aggregate level definition of social capital focuses on the normative control aspects of social networks while leaving out bridging ties or structural holes which are the key component of social capital at the individual level (Burt 1992; Granovetter 1985).

All societies believe in honesty, trustworthiness, and fairness. But these norms are enforced to greatly varying degrees. A cultural norm can be effective or ineffective according to the degree it is actually enforced. In a community of "strangers," many norms are hard to enforce (due to lack of social networks), just as written laws can be ineffective if the police force is weak and judicial system corrupt. It is social networks that make a norm effective or ineffective. Good norms are useless unless they are enforced, just as good laws are toothless unless enforced.

Cultural norms can of course constrain human behaviors without the presence of external sanctions. Nothing is more efficient than internalization of norms. Reward in heaven or punishment in hell do not cost much in this world, except donations to Churches. If sanction by heaven and hell is an individualistic approach to normative control, then sanction by social networks is a more collectivistic approach. The individualistic approach has its limitation because God's will can be interpreted in many self-serving ways. The collectivist approach also has its limitation because social networks can easily be abused. The point here is not to debate external sanction vis-a-vis internal sanction, but that norms can be enforced with or without social networks. Social

networks may enforce some norms but not others. Lumping together social norms with its enforcement mechanisms in one concept leads to confusion.

Finally, the question of whether social capital is functional or dysfunctional should be phrased in the light of the cultural norms that it supports. While acclaiming the social capital benefits of networks, researchers tend to equate social capital with functional norms or efficiency-inducing norms (Woolcock 1998; Putnam 2000). But social networks can be a double-edged sword. It can enforce both the good and bad, functional and dysfunctional informal norms. Is a strong state good or bad for the economy? The answer depends on the laws and policies the state is implementing. The functional judgment of the normative capacity of social networks also depends on what it is used for. The data in this analysis show that the lineage can be mobilized to counteract an unpopular law and enforce an ancient cultural norm. Its normative capacity has reduced the administrative efficiency of the state, but is welcomed by Chinese farmers.

FOOTNOTES

---

[1] Total fertility rates are computed as the weighted average of age-specific birthrates for woman in a given year. It indicates the average number of children borne by a woman over her child-bearing age. A total fertility of 2.2 is considered population replacement rate.

[2] According to China's fifth population census in 2000, the national TFR of that year has dropped to 1.22 per woman, a figure generally believed to be too low (due to under-reporting). Using primary school enrollment data, Wang Guangzhou (2006) estimate that TFP in 2000 should be between 1.7-1.8 per woman. Greenhagh and Winkler (2005:155) believe it should be around 1.6 (see also Retherford et al. 2005).

[3] Effective institutions are not always good institutions. If the informal norm is racial prejudice, social networks simply enhance racial discrimination.

[4] Even though Ellickson (1991) dubbed his obvervation of Shasta county "order without law," the Shasta county story really unfolds in the larger context of a well-established property rights laws.

[5] In order to maintain the stability of the feudal hierarchy, primogeniture was practiced. For example, the first-born son by the queen was the first in line to inherit the throne and principal lineage whereas other princes could only become vassal lords and build minor lineages. The relationship between the throne and the lords was modeled after the relationship between father and son or elder brothers and younger brothers. (This was very different from the practice of relatively equal inheritance rights among male heirs in the later imperial times) The idea was to keep the vassals and their subjects in their places and prevent them from overstepping their ranks. Nevertheless, as the number of

kingdoms proliferated, the Zhou royal family gradually lost control of the vassal states. Fraternal love gave way to political rivalry and some vassal states started expanding and annexing neighbors. Eventually the Dynasty sunk into chaotic warring states (Qu 2005/1936; Hsu 1965).

[6]The Zhou rites were elaborate and strict. For instance, according to the official book of rites (*Yili: Wangdu Ji*), the number of horses on chariots were clearly defined for each feudal rank: the kings were entitled to six horses; dukes four; officials three; literati two; and commoners were limited to one horse. Recent archaeological finds in Luoyang confirm that these rites were actually practiced.

[7] This may not have been purely patriotic or voluntary as many imperial laws stipulate that the whole clan (typically association by nine generations) could be punished for crimes committed by one clan member.

[8] Watson (1982) calls for clarification of terminology such as lineage, common descent groups, and clans. Kinship is a generic term. Lineage only refers to kinship groups that own corporate properties. Common descent groups refer to those kinship groups united by a common ancestor without communal properties, characteristic of north China. Clans refer to the association of several lineage groups under a real or fictive common ancestor. In Chinese language, the concept of family (*jia*) has two meanings: (1) the nuclear or extended family under the same roof and (2) a metaphor for lineage (*zu*).

[9] In my field trips to Jiangxi (2006), a township official complained to me that they (the officials) experience great difficulty organizing public projects, lineage have no difficulty at all collecting donation for building ancestral halls, compiling genealogy, or renovating ancestral graves. Indeed, ancestral halls are usually the best structures in those poor

villages.

[10] The idea of *fengshui* is rooted in the correlative thinking of the ancient times, i.e., cosmic forces (stars, mountains, and rivers etc.) and human affairs are correlated. The geomancy of ancestral tomb is important because cosmic energies can channeled through ancestral bones for the benefits of the living offspring.

[11] According to Wolf' (1974) observation of rural of Taiwan, if an unmarried daughter dies, she faces the pathetic prospect of becoming a wandering ghost. Her name tablet will not be placed alongside her natal ancestors, because it is considered shameful and unsightly. By contrast, if son dies young, his name tablet will be placed in the ancestral hall and venerated (pp 147-150). Similar practices are reported in other parts of southeast China.

[12] There are regional variations and "modern adaptations" regarding adoption practices. For instance, Feng (2005) reports that in one lineage Zhejiang did keep entries of adopted non-agnate sons in its genealogy, but marked with different ink (p. 191). In my own visit to a lineage in Zhejiang (Wenzhou), I was also told that adoption was recorded but noted in genealogy.

[13] In 2006 in rural Jiangxi I ran into a family with six children, five girls and one boy at last. Zhang (1999) reports observing two families with five girls in one north China village.

[14] Son preference is observed in many East and South Asian countries such as India, South Korea, Vietnam, Pakistan, and Bangladesh (Das Gupta et al. 2003; Banister 1995; Clark 2000; Park and Cho 1995). Thus, the problem of missing women is not unique to China. It is reported over 100 million women are missing worldwide (Sen 1990; Croll

2001).

[15] The 22 counties are *Zhangwu, Haicheng (Liaoning); Huichun (Jilin); Anda (Heilongjiang); Zhangjiagang (Jiangsu); Tianchang (Anhui); Tongxiang (Zhejiang); Xingguo, Gaoan, Xunwu (Jiangxi); Sangzhi, Yizhang (Hunan); Yichang (Hubei); Xinhui, Xingnin, Meixian (Guangdong); Xichang (Sichuan); Lunan (Yunnan); Tongguan (Shaanxi); Wuzhong, Guyuan (Ningxia); and Huocheng (Xinjiang)*.

[16] I excluded the 1991 sample of the same survey because it did not collect any information on fertility.

[17] Ideally I would like to measure birthrates by counting the number of births over a number of years and by the age-cohorts of child-bearing age women in the village. But the data does not have the information. Instead, I control for the number of newly weds in the previous year.

REFERENCES

Banister, Judith. 2004. "Shortage of girls in China today." *Journal of Population Research*, 21(1):19-45.

------. 1995. "Son Preference in Asia--Report of a Symposium." Paper presented as the Annual Meeting of the American Populatin Association, San Francisco, April 1995. Also at www.census.gov/ipc/www/ebspr96a.html (accessed March 18, 2008).

------. 1987. *China's Changing Population*. Stanford, CA: Stanford University Press.

Burt, Ronald. 1992. *Structural Holes*. Cambridge, MA.: Harvard University Press.

Cai, Yong, and William Lavely. 2003. "China's missing girls: Numerical estimates and effects on population growth." *China Review*, 3(2):13-29.

Chang Jiahua. 2000. "Zongzu zhidu de lishi guiji" (The historical trajectory of the lineage system). Pp. 293-335 in Zhou Jiming and Song Dejin (eds.), *Zhongguo Shehuishilun (A Social History of China)*. Hubei, China: Hubei jiaoyu chubanshe.

------. 2005. *Mingdai Zongzu Yanjiu (A Study of Lineage in the Ming Dynasty)*. Shanghai: Shanghai Renmin Chubanshe.

Chu, Junhong. 2001. "Prenatal sex determination and sex-selective abortion in north central China." *Population and Developmentn Review*, 27(2): 259-281.

Cohen, Myron. 1988. "Souls and salvation: conflicting themes in Chinese popular religion." Pp. 180-202 in James L. Watson and Evelyn S. Rawski, ed. *Death Ritual in Late and Modern Imperial China*. Berkeley: University of California Press.

------. 1990. "Lineage organization in North China." *The Journal of Asian Studies*, 49(3):509-534.

------. 2005. Kinship, Contract, Community, and State: Anthropological Perspectives on China. Stanford, CA: Stanford University Press.

Coleman, James S. 1990. *Foundations of Social Theory.* Cambridge, MA: The Belknap Press of Harvard University Press.

------. 1993. "Rational Reconstruction of Society: 1992 Presidential Address." *American Sociological Review* 58:1-15.

Croll, Elisabeth. 2001. "Amartya Sen's 100 million missing women." *Oxford Development Studies*, 29(3): 225-244.

Das Gupta, Monica, Jiang Zhenghua, Li Bohua, Xie Zhenming, Woojin Chung, Bae Hwa-Ok. 2003. "Why is son preference so persistent in East and South Asia? a cross-country study of China, India and the Republic of Korea." *The Journal of Development Studies,* 40(2): 153-187.

Dixit, Avinash K. 2004. *Lawlessness and Economics: Alternative Modes of Governance*. Princeton: Princeton University Press.

Ebrey, Patricia B. 1986. “The early stages in the development of descent group organization.” Pp 16-61 in Patricia B. Ebrey and James L. Watson, eds., *Kinship Organization in Late Imperial China 1000-1940*. Berkeley, CA: University of California Press.

Ellickson, Robert C. 1991. *Order Without Law: How Neighbors Settle Disputes*. Cambridge, Massachusetts: Harvard University Press.

------. 1986. “Of Coase and cattle: Dispute resolution among neighbors in Shasta County.” *Stanford Law Review*, 38(3):623-687.

Feng Erkang. 2005. Shiba shiji yilai zhongguo jiazu de xiandai zhuanxiang. Shanghai: Shanghai renmin chubanshe.

Freedman, Maurice. 1958. *Lineage Organization in Southeastern China.* London: The Athlone Press.

Granovetter, Mark. 1985. “Economic Action and Social Structure: the problem of embeddedness.” *American Journal Sociology* 91(3): 481-510.

Greif, Avner. 2006. *Institutions and the Path to the Modern Economy*. Cambridge: Cambridge University Press.

Greenhalgh, Susan. 2005. “Missile Science, Population Science: The Origins of China’s One-Child Policy.” *The China Qaurterly* 182: 253-276.

Greenhalgh, Susan, and Edwin A. Winckler. 2005. *Governing China’s Population.* Stanford, CA.: Stanford University Press.

Hechter, Michael, and Karl-Dierter Opp, (editors). 2001. *Social Norms.* New York: Russell Sage Foundation.

Hsu, Cho-yun. 1965. *Ancient China in Transition*. Stanford, CA: Stanford University Press.

Huang, Philip C.C. 1985. *The Peasant Eocnomy in Social Change in North China*. Stanford, CA: Stanford University Press.

------. 1993. "Between informal mediation and formal adjudication: The third realm of Qing civil justice." *Modern China* 19(3): 251-298.

------. 1996. *Civil Justice in China.* Stanford, CA: Stanford University Press.

------. 2008. “Centralized minimalism: Semiformal governance by quasi officials and dispute resolution in China.” *Modern China* 34(1):9-35.

Lavely, William. 2001. “First Impressions from the 2000 Census of China.” *Population and Development Review*, 27(4): 755-769.

Li Shuzhuo, Jiang Quanbao, and Marcus Feldman. 2006. *Xingbie Qishi Yu Renkou Fazhan (Gender Discrimination and Population Development)*. Beijing: Shehui kexue wenxian chubanshe.

Liu Jingfeng. 2000. *Studies of Lineage Society and Taoism in Gannan*. Hong Kong: International Hakka Studies Association, Ecole Francaise D'Extreme-Orient, and Overseas Chinese Archives.

Li, Yih-yuan. 1976. "Chinese geomancy and ancestor worship: A further discussion." Pp. 329-338 in William H. Newell ed. *Ancestors*. The Hague: Mouton Publishers.

Liu Liangqun. 2005. "Zonzu dui nongcun shequ gonggong quanli de yingxiang" (The influence of lineage on the administrative power of rural communities). *Zhongguo Xiangcun Yanjiu* (*Rural China)*, Vol. 3. Beijing: Shangwu yinshuguan.

Metzger, Thomas A. 1986. *Escape from Predicament*. New York: Columbia University Press.

National Statistical Bureau. 2002. "Woguo chusheng yinger xingbiebi jugao buxia" (Sex-ratios at birth hovered high in China). (at www.chinapop.gov.cn/rkzh/rk/tjzlzg/t20040326_2836.htm)

Nee, Victor and Richard Swedberg. 2005. "Ecnomic sociology and new institutional economics." Pp. 789-818 in *Handbook of New Institutional Economics,* edited by Claude Menard and Mary M. Shirley. The Netherlands: Srpinger.

Nee, Victor and Paul Ingram. 1998. "Embeddedness and beyond." Pp. 19-45 in *The New Institutionalism in Sociology,* edited by Mary Brinton and Victor Nee. New York: Russell Sage Foundation.

Nee, Victor and Shijin Su. 1996. "Institutions, social ties, and commitment in China's corporatist transformation," pp. 111-134 in John McMillan and Barry Naughton (eds.), *Reforming Asian Socialism: The Growth of Market Institutions.* Ann Arbor: The University of Michigan Press.

North, Douglass C. 1994. "Economic performance through time." *American Economic Review* 84(3): 359-368.

------. 2005. *Understanding the Process of Economic Change.* Princeton: Princeton University Press.

Parish, William, and Martin Whyte. 1978. *Village and Family in Contemporary China*. Chicago, IL: University of Chicago Press.

Park, Chai Bin and Nam-Hoon Cho. 1995. "Consequences of Son Preference in a Low-Fertility Society: Imbalance of the Sex Ratio at Birth in Korea." *Population and Development Review*, 21(1): 59-84

Parsons, Talcott. 1937. *The Structure of Social Action*. New York: McMgraw-Hill Book Company.

Peng, Xizhe. 2004. "Is it time to change China's one-child policy." *China: an International Journal,* 2(1): 135-149.

Peng, Yusheng. 2004. "Kinship networks and entrepreneurs in China's transitional economy." *American Journal of Sociology* 109(5): 1045-74.

------. 2005. "Lineage Networks, Rural Entrepreneurs, and Max Weber." *Research in the Sociology of Work*, 15:327-255.

Portes, Alejandro and Min Zhou. 1992. "Gaining the upper hand: economic mobility among immigrant and domestic minorities." *Ethnic & Racial Studies* 15(4):491-522.

Posner, Eric A. 2000. *Law and Social Norms*. Cambridge, MA: Harvard University Press.

Qian Hang. 1994. *Zhongguo Zongzu Zhidu Xintan (Exploring the Lineage System in China)*. Hong Kong: Zhonghua shuju.

Qu Tongzu. 2005/1936. *Zhongguo Fengjian Shehui(The Feudal Society of China)*. Shanghai: Shanghai shiji chuban jituan.

Retherford, Robert, Minja Kim Choe, Jiajian Chen, Li Xiru, and Cui Hongyan. 2005. "How far has fertility in China really declined?" *Population and Development Review,* 31(1):57-84.

Sen, Amartya. 1990. "More than 100 million women are missing," New York Review of Books, 20 December 1990, pp. 61-66.

Shen Chonglin, Chen Yingying and Gao Yong. 2000. *Zhongguo Baixian Diaocha: Diaocha Baogao he Ziliao Huibian (Survey of 100 Counties in China: Reports and Data Compilation)*. Beijing: China Encyclopedia Press.

Tsai, Lily. 2002. "Cadres, Temple and Lineage Institutions, and Governance in Rural China." *The China Journal* 48: 1-27.

------. 2007. "Solidary Groups, Informal Accountability, and Local Public Goods Provision in Rural China." Forthcoming in *American Political Science Review*.

Walder, Andrew. 1986. *Communist Neo-Traditionalism: Work and Authority in Chinese Industry*. Berkeley: University of California Press.

Wang Gouwei. 1921. "Yin Zhou zhidu lun" (On the institutions of Yin and Zhou). *Guan Tang Ji Lin*, vol. 10.

Wang Huning. 1991. *Dandai Zhonguo Cunluo Jiazu Wenhua (Lineage Culture in Contemporary China).* Shanghai: Shanghai Renmin Chubanshe.

Wang Guangzhou. 2006. "Zhong chang qi renkou yuce fenxi jieguo" (an analysis of long and medium-range population trends). Pp. 80-103 in Cai Fang ed. *Report on China's Labor and Population, No. 7.* Beijing: Shehui kexue wenxian chubanshe.

Wang Xun. 2006. "Gudai zongzu jiju de lishi bianqian he nanbeifang zongzu jiju de chayi." *Fazhan Yanjiu Cankao*, vol. 56. (At http://academy.dufe.edu.cn/)

Watson, James L. 1982. "Chinese kinship reconsidered: Anthropological perspectives on historical research." *The China Quarterly*, 92:589-622.

------. 1975. "Agnates and outsiders: adoption in a Chinese lineage." *Man*, 10(2):293-306.

Weber, Max. 1951 [1916]. *The Religion of China*. New York: Free Press.

Whyte, Martin K. 1995. "The Social Roots of China's Economic Development," *The China Quarterly* 144: 999-1019.

------. 1996. "The Chinese Family and Economic Development: Obstacle or Engine?" *Economic Development and Cultural Change* 45(1): 1-30.

Wolf, Arthur P. 1974. "Gods, Ghosts, and Ancestors." Pp. 131-182 in Arthur P. Wolf (ed.) *Religion and Ritual in Chinese Society*. Stanford, CA: Stanford University Press.

Wolf, Arthur P., and Chieh-shan Huang. 1980. *Marriage and Adoption in China, 1845-1945*. Stanford, CA: Stanford University Press.

Xiao Tangbiao. 2001. *Cunzhi Zhong De Zongzu (Lineage Organization and Village Administration)*. Shanghai: Shanghai shudian chubanshe.

Yan Aimin. 2005. *Han Jin Jiazu Yanjiu*. Shanghai: Shanghai renmin chubanshe

------. 2000. "Wei jin nanbeicao shiqi de shijia dazu." Pp. 147-176 in Zhou Jiming and Song Dejin (eds.), *Zhongguo Shehuishi Lun (A Social History of China), Vol. 2*. Hubei, China: Hubei jiaoyu chubanshe.

Zhang, Hong. 2007. "From resisting to 'embracing?' the one-child rule: Understanding new fertility trends in a central China village." *The China Quarterly,* 192:855-75.

Zhang, Weiguo. 1999. "Implementation of state family planning programmes in a northern Chinese village." *China Quarterly*, 157:202-230.

------. Forthcoming. "'Married out daughter as split water'? Women's increasing contacts with their natal families in post-reform rural North China." *Modern China*.

Zhang Xinguang. 2004. "Pingfen yundong yu zufendi sihui furan" (The campaign to level graves and the re-emergence of ancestral gravesites). (Available at www.zhinong.cn/data/detail.php?id=2712)

Zhao Pei. 2002. *Liang Han Zongzu Yanjiu*. Shangdong: Shangdong daxue chubanshe.

Zeng, Yi. 1996. "Is fertility in China in 1991-92 far below replacement level?" *Population Studies*, 50(1):27-34.

Zeng Yi, Tu Ping, Gu Baochang, Xu Yi, Li Bohua, Li Yongping. 1993. "Causes and Implications of the Recent Increase in the Reported Sex Ratio at Birth in China." *Population and Development Review*, 19(2): 283-302.

Table 1a__Developing a typology of the relationship between formal and informal institutions

		Informal Norms		
		Prescriptive	Proscriptive	Absent/ambivalent
Formal Rules	Prescriptive	**Congruence**	**Conflict**	**Legalism**
	Proscriptive	**Conflict**	**Congruence**	**Legalism**
	Absent/ Ambivalent	**Normativism**	**Normativism**	**Free actions**

Table 1b__Enforcement mechanisms, organizational effectiveness, and the normative control benefits of social networks

Relationship between formal and informal rules	Enforcement Mechanisms	Impact of social networks	Organizational Effectiveness
Legalistic	Rules are effective only if policed; social networks have no valency	Low	High
Normative	Rules are only supported by social networks	Strongest	Medium
Congruent	Social networks subsume costs of formal enforcement	Strong	Highest
Conflictual	Social networks increase costs of formal enforcement	Medium	Low

Table 2: Descriptive Statistics of Chinese Villages (1991/1993; N=365 villages)

	Minimum	1st quartile	Median	Mean	3rd quartile	Maximum
Population	194	1098	1587	1844	2405	9663
Number of births in 1991/1993	0	10	20	25	33	173
Female births	0	5	9	11.66	15	78
Male births	0	5	10	13.36	18	95
Crude birthrates (per 1,000)	0	9.11	13.27	12.95	17.11	30.75
Number of marriages	0	1.79	2.46	2.37	3.04	4.58
% lineage group	0	0	14.9	21.8	29.3	100
% finished senior high school	0	3.4	6.7	9.4	11.3	63
Farmland per laborer (*mu*)	0.3	1.5	2.2	3.5	4.1	19.3
Gross value of output per capita	13	668	1,003	1,621	1,712	52,120

Table 3__Ancentral halls and genealogy in different time periods
(1991/1993, N=365 villages)

	Ancestral hall	Genealogy
Never had	255 (72.5%)	223(63.4%)
Present before 1977	54 (15.3%)	73(20.7%)
Present at current time	43 (12.2%)	56(15.9%)
Total	352(100%)	352(100%)

Table 4_Negative binomial regression of infant birth count in Chinese villages (1991/1993, N=365 villages)

	(1)	(2)	(3)
(Intercept)	-2.810***	-2.623***	-2.607***
	(0.558)	(0.55)	(0.553)
% largest lineage group (×10)	0.036*	0.027*	0.028*
	(0.011)	(0.011)	(0.011)
Presence of ancestral hall before 1977		0.120	0.157
		(0.785)	(0.086)
Presence of ancestral hall at current time		0.323**	0.349***
		(0.100)	(0.104)
Presence of genealogy before 1977			-0.079
			(0.074)
Presence of genealogy at current time			-0.064
			(0.082)
Log total village population	0.752***	0.752***	0.745***
	(0.006)	(0.006)	(0.006)
Log number of marriages in current year	0.262***	0.265***	0.270***
	(0.031)	(0.031)	(0.031)
% labor force finished senior high(×10)	0.059	0.063*	0.062*
	(0.032)	(0.031)	(0.031)
Log land-labor ratio	-0.062	-0.055	-0.052
	(0.054)	(0.053)	(0.053)
Log gross output value per capital	-0.006	-0.010	0.565
	(0.032)	(0.053)	(1.13)
Log distance from city	0.003	-0.008	-0.009
	(0.027)	(0.027)	(0.027)
Fixed County Effects (χ^2, d.f.=21)	(110.1)***	(118.3)***	(116.2)***
-2 Log Likelihood	22703.1	22708.5	22709.1

Notes: † figures in parentheses are the absolute values of z-ratios; *, **, and *** indicate significance at p<0.05, 0.01, and 0.001, two-tailed.