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Guanxi, Networks and Economic Development: The Impact of Cultural Connections

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Guanxi, Networks and Economic Development
The Impact of Cultural Connections

by

Patricia A. Weeks

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Government and International Affairs
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DEDICATION

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ABSTRACT

The purpose of this study is to explore the mechanics of guanxi in an organizational setting, focusing on the use of interpersonal relationships within Chinese firms to discover how firms initiate, build and use guanxi networks. Two richly detailed case studies document changes that take place over time in two distinct networks with respect to key actors and their contacts. This research also investigates patterns of social structure that emerge over time in these two distinct cases looking at brokerage relationships, network density, and dyadic redundancy in three waves at six month intervals. The cases are dissimilar in all aspects except absolute size demonstrating the universal use of guanxi across time, geographic location, specific industries, and firm experience. Dynamic network visualization is used to highlight the sequence and rate of activity in each network to identify salient changes.

The findings show that firms seek to improve their organizational guanxi by improving existing employees' guanxi quality within the firm and by recruiting new actors from outside the firm. Additionally, firms use organizational guanxi to expand their networks by forming cooperative partnerships with complementary organizations that enhance the attributes or potential of both organizations. And finally, firms initially exploit brokerage in organizational guanxi, then attempt to stabilize the network by fostering new ties to exclusive contacts.

CHAPTER I INTRODUCTION

China's emergence as an economic power has placed it in an increasingly prominent role in the international community. Shedding centuries of political isolation and economic instability, China is claiming its place among the world's most developed nations. Once removed from the technological and economic advances made during the First Industrial Revolution, then isolated from the more recent atomic, space and digital aged Second Industrial Revolution, China has made great strides in modernization sufficient to merit the world's attention. In response, the international community is increasingly yielding to its political and economic interests while maintaining a degree of caution as its leaders "cross the river by feeling for the stones." This strategy, voiced by Deng Xiaoping in the early days of the post-Mao economic reforms acknowledges China's bold move into unfamiliar territory. Free from the aristocracy and bureaucracy that defined its dynastic economy, and untethered by the rigid and unyielding Maoist era socialist planning that devastated China's post revolutionary economy, China has embarked on a new path to development, navigating uncharted waters while continuing to embrace its ancient traditions.

As China moves toward modernization, it brings with it a unique culture deeply embedded in thousands of years of history that both define and regulate interpersonal relationships. Inculcated from birth, Chinese conform to the tenets of Confucianism, creating a hierarchy of privilege tempered by the obligation of benevolence forming an intricate web of

social relations that creates a framework for all social, political and economic interaction. These complex particularistic ties, commonly known as “guanxi,” remain the currency for valuable resources in every social strata. Although Mao Zedong attempted to eradicate these paternalistic ties, this tenacious and deeply embedded system endures and continues to hold a dominant position in Chinese society.

Today, scholars debate the significance of guanxi in the era of economic reforms. While some argue that the use of guanxi is in decline (Weber 1951; Guthrie 1998; Yan 1996b; Fock and Woo 1998), others argue that it is flexible and adaptable and its use is on the rise, albeit colonizing new areas of operation (Jacobs 1979; Gold 1985; Hwang 1987; Davies *et al.* 1995; Boisot and Child 1996; Lovett, Simmons and Kali 1999; Wood, Whiteley and Zhang 2002; Yang 2002; Lo and Otis 2003; Hammond and Glenn 2004). Max Weber (1951) argues that a cash economy erodes particularistic ties removing any personal bonds that may exist. Doug Guthrie (1998) echoed these sentiments in his assertion that in the face of institutional and economic structural changes, the use of guanxi will diminish and as formal institutions replace informal distribution channels, the need for guanxi will erode. Critics note that even basic concepts integral to guanxi are under attack by modernization. Yunxiang Yan (1996b) contends that *renqing* (“human feelings” or “sympathy”) has been replaced with instrumentalism and money within relations while Fock and Woo (1998) take a more focused approach arguing that while guanxi is still prevalent among Chinese, its importance is waning. However, generalizing these findings across populations and regions meets with some difficulties.

The flexibility and adaptability of guanxi has been demonstrated and reported upon in more than a few instances. Jacobs reminds us that the two lines of argument that suggest a

decline of guanxi use in China have not come to fruition. Directing critics' attention to political attempts to eradicate guanxi, Jacobs notes that these attempts have only given rise to new types of guanxi. Similarly, the growth of institutional organizations thought to supplant guanxi have not precluded the use of guanxi in politics (Jacobs 1979, 269). Gold observes that while the CCP has tried unsuccessfully to eradicate the "four olds"; "old ideology, thought, habits, and customs, the re-emergence of traditional patterns will reappear unless something viable is offered to fill the void" (Gold 1985, 674). Hwang concludes that patterns of change are uneven with variation from place to place as many pockets remain resistant to change (Hwang 1987, 696).

Far from its demise, some note that guanxi is making a resurgence. After a decades-long attempt to eradicate guanxi, Chinese have found that in the absence of guanxi, "one simply cannot get anything done" (Davies *et al.* 1995, 212). Contrary to conventional wisdom, the Chinese economy is not moving toward a market capitalism system as many Western academic's believed, but a relationship-based "network-capitalism" (Boisot and Child 1996). Lovett, Simmons and Kali (1999) find that "guanxi-type systems, despite having evolved under different circumstances and being based on different ethical principles, can be legitimate alternatives to our Western market system (245). Wood, Whitely and Zhang support Lovett, Simmons and Kali exploring the different ways that guanxi is used and how its "adaptive behavior appear[s] to be related to the changing business environment" (2002, 265). Yang argues that while the use of guanxi may no longer secure scarce resources, its effectiveness in facilitating business linkages cannot be underestimated (2002, 464). Lo and Otis (2003) support these findings in their study on how the markets have shaped guanxi demonstrating that guanxi is flexible and adaptable.

Hammond and Glenn echo these sentiments suggesting that “guanxi will change with the forces of globalization, but will also remain as a source of order and stability” (2004, 29).

Perhaps one of the most interesting ways in which guanxi has adapted to the changing environment is manifest in the emergence of private firms (Wood, Whitely and Zhang 2002). Recognizing the benefits and power that guanxi offers, entrepreneurs have turned to informal networks to establish new firms and to grow existing ones. For them, Guanxi is the grease that lubricates the wheels of progress. Yet we know very little about how guanxi works in practice.

Research Question and Unit of Analysis

This research seeks to understand the mechanics of guanxi focusing on the use of interpersonal relationships within Chinese firms, leading us to the research question: How do firms initiate, build and use guanxi networks? What patterns of social structure emerge over time? These seemingly simple questions have eluded researchers who have come to realize the inherent complexity of guanxi as firms parlay these culturally based social networks into vehicles of economic development. These highly structured informal institutions function concurrently with emerging governmental institutions and are proving to be more capable of regulating transactions in the new global economy.

Level of Analysis

Social network data are often gathered at a level different from the level in which they are analyzed (Wasserman 1994, 43). This study focuses on the networks that operate within Chinese firms necessarily encompassing actors that extend beyond the immediate boundaries of the firm’s employment. Individual actors within the firm and their contacts outside the firm are necessary subunits central to the composition of the network. Consequently, this study employs a multi-

level analysis with a degree of attention devoted to individual actors although it is the network as a whole that remains the focused unit of analysis (Wellman, Chen and Dong 2001, 238). As the unit of observation, actors are the entities from which measurements are taken and network information elicited (Wasserman 1994, 43).

Substantive Focus

This research is situated within the political science literature's growing focus on China's political economy and explores Chinese networks of interpersonal relationships as one of the more salient aspects of Chinese society. The purpose of this study is to provide a better understanding of the role that guanxi plays in contemporary Chinese society and the nuances of its use. This study employs relevant guanxi concepts, rational choice theory, and social network analysis as the conceptual framework and tools of analysis to examine how firms initiate, build and use guanxi.

Theoretical Framework

The literature on guanxi is interdisciplinary and derives from various sources reflecting a theoretical perspective as diverse as its sources. This research seeks to understand the use of guanxi and is informed by a normative approach to rational choice theory. The cybernetic theory of decision-making lends insight where rational choice falls short in complex and collective decision-making. While these theories offer a solid foundation for understanding the complexity of guanxi, a grounded theory approach to the micro and macro level issues will be used to address the mechanics of guanxi and how it functions within the context of economic exchange.

Rational Choice Theory

Rational choice, as a normative theory, offers conditional imperatives emphasizing rationality devoid of morality (Hausman and McPherson 2008, 236). In its strictest form, it is descriptive, revealing patterns of behavior that yield predictive capabilities while lacking explanatory capabilities (Tversky and Kahneman 1986). That is to say, the theory is useful for predicting what an actor might do, but falls short of being able explain why. “For explanatory purposes, rational-choice theory must be supplemented by a causal theory that specifies the mechanism — perceptual salience, habit and the like — by which one of the alternatives that have not been eliminated by rational-choice considerations is singled out for realization” (Elster 1986b, 20). Hence, rational choice offers a framework for understanding and modeling social and economic behavior with many variants appearing across a broad spectrum of social science disciplines that incorporate variant specific assumptions in addition to those fundamental assumptions common within the rational choice tradition (Coleman and Fararo 1992).

Rational choice has been the core theory of modern microeconomics since the 1940s. For mainstream economists, rational choice occupies a privileged position as a powerful, positive-scientific approach to understanding economic behavior. By the early 1950s, the release of Kenneth Arrow’s *Social Choice and Individual Values* had unleashed an explosion of rational choice scholarship within political science.

Basic Assumptions

The concept of instrumental rationality forms the basis of rational choice and enjoys a well-established definition. Instrumental rationality “refers to our capacity to engage in effective means-ends deliberation or reasoning aimed at maximizing our chances of success in pursuing an

already set end or goal” (Friedman 2001, 541). Instrumental rationality enters rational choice theory in two ways. First, an actor must have rational goals, then act in a way to achieve them. Hence, the unit of analysis begins with the individual.

While “there is no single rational choice theory or unambiguous standard for assigning the label ‘rational choice’ to a theory” (Green and Shapiro 1994, 13) rational choice theorists advance three fundamental assumptions; methodological individualism, utility maximization, and self-interest.

Methodological individualism, or the discrete purposeful actor assumption maintains that in the social world, humans are discrete entities “capable of considering several different possible courses of action, and deliberately selecting and carrying out (or attempting to carry out) one or more of them” (Lovett 2006, 240; also see Elster 1986b, Abell 1991, and Arrow 1994). The theory holds that all human actions are fundamentally “rational” and that actors calculate the costs and benefits of their actions prior to committing to a specific course (Scott 2000a). That is, individuals anticipate outcomes based on choices, then calculate the best possible outcome in anticipation of a specific goal with utility maximization and self-interest as primary objectives (Heath 1976, 3; Carling 1992, 27; Steinbruner 1974, 8; Coleman 1973).

Because rational choice theorists identify the individual as the unit of analysis engaged in “rational” decision-making behavior, some difficulty emerges with group decision-making. Additionally, the normative theory of rationality links actions to desires and beliefs, and groups or organizations possess neither desires nor beliefs precluding them from being able to express “rational behavior.”

Rational choice also meets with some difficulty in explaining cooperation between individuals in groups and organizations. When there exists a decision-making apparatus through which individual intentions are aggregated or policy formulated it is legitimate to speak of collective actors (Hindess 1988; Cook, O'Brien, and Kollock 1990). Members, or rational actors within an organization who benefit from collective action without having to invest would have no incentive to participate actively. If all potential members made the same calculation arriving at the same conclusion (that benefits are attainable without investment), then collective action would be unattainable due to "free-rider" effect. However, some supporters argue that collective action exists through "selective incentives," where benefits bestowed upon members alone eliminate the free-rider effect (Olson 1965; also see Oliver, Marwell, and Tiexeira 1985, Oliver and Marwell 1988, and Marwell, Oliver, and Prael 1989). Free-rider effect is also overcome when associations monopolize resources through the exclusion of nonmembers (Hechter 1987). "There are cases where norms exercise an independent power, not reducible to adjustment costs" and "newly created possibilities for free-rider behavior are not always taken up" (Elster 1986b, 24).

A second issue concerns rational choice as an individualistic theory and questions both the existence of a larger structure, and whether its existence can be reduced to the actions of individuals. The methodological individualism adopted by rational choice theorists holds that all social phenomena are reducible to statements about individual action (Scott 2000a). Yet, where resources flow through extensive chains of interconnected exchange networks, there exists an autonomous social structure independent of the actors that imposes constraints on their behavior. Some rational choice theorists explain these social structures as the unintended consequences of

individual action (Cook, O'Brien, and Kollock 1990). While this conflict is not inherent in rational choice theory *per se*, the adoption of methodological individualism by its advocates as a philosophical unpinning creates difficulty in the exclusion of independent social structures from the theory's assumptions (Homans 1961, 1967; Coleman 1973).

Utility maximization is a generally accepted assumption in rational choice and is coterminous with consistency and continuity. Consistency of rational patterns of behavior are essential to a science of rational action (Rothschild 1946, 50). However, empirical evidence demonstrates that humans do not always act as if they had consistent preferences, nor do they exhibit continuity in their choices (Tversky and Kahneman 1986, 137-139). Similarly, and inextricably linked, is the assumption of rationality. Rational choice assumes that humans are rational beings and make decisions based on deliberate calculative strategies based on all available options. Difficulty arises in determining whether an actor has, or can have, knowledge of all available options. This leads to constraints where limited knowledge and computational capacity is "bounded" by both endogenous and exogenous factors (Simon 1990, 15). Empirical evidence shows that humans do not always conform to the rules of rationality (Lovett 2006, 256; Steinbruner 1974, 12). And in organizational decision making, "assumptions of perfect rationality" are found "contrary to fact" and "do not even remotely describe the processes that human beings use for making decisions in complex situations" (Simon 1979, 510).

A second and related issue involves the question of why people seem to accept and follow norms of behavior that lead them to act in altruistic ways or to feel a sense of obligation that overrides self-interest. Rational choice theorists argue that individuals, once socialized, will act rationally and in accordance with their value commitments; helping others is an "act of rational

self-interest” (Scott 2000a). Reciprocity emerges as another plausible explanation where repeated interaction leads to cooperation and mutual advantage (Ridley 1997). And while many reciprocal relationships encounter unequal exchange, adherents address these imbalances by suggesting that long chains of actions can be traded in for a counterbalancing profit at some time in the future when long-term relationships are anticipated (Blau 1964). This requires trust, a point made clear in Parson’s (1937) argument claiming that rational actors have no incentive to build trust (also see Coleman 1990 and Cook and Emerson 1978). Others suggest that shame and guilt, not trust, are the drivers in rational choice (Elster 1989a, 119 and 1989b, 98). Since instrumental rationality cannot offer a complete explanation of social order, social norms and emotional commitments are thought to coincide with rational choice (Coleman 1990, 292-299). Heath was the first to recognize that rational choice theory is limited to explaining the actions taken by rational actors and not the internalized values that drive the actions (1976, 64). Consequently, established values coincide with rational choice theory to explain the psychological mechanisms that drive rationality (Heath 1976, 64; Coleman 1990, 292-299; Granovetter 1985; Moody 2008, 96-97, 100; also see Parsons, Bales and Shils 1953).

Self-interest is another fundamental assumption and points to the individual as concerned entirely with their own welfare. An individual focused on obtaining the maximum utility based on the choices available does so with a view toward their own interests (Smith [1776] 2005). This does not mean that self-interest excludes cooperation, altruism, self-sacrifice, or charity as an individual may seek the approval of others or even their own self esteem by choosing these types of actions.

While the literature attacking and defending rational choice theory is enormous, critics have moved beyond core criticisms of the generally accepted assumptions to address the theory's empirical applications and predictive capabilities. It is here that dissimilar interpretations between the theory's normative approach and positive-scientific approach emerge. One of the difficulties of rational choice is that it is multidisciplinary, with a broad range of disciplines adopting unique assumptions and interpretations. Much of the debate can be attributed to the dichotomy between positivist and normative interpretations. In the positive-scientific tradition, the theory is subjected to empirical testing. In this respect, as critics have pointed out, the theory has failed miserably. However, proponents of the normative approach argue that people do not always behave as they should, and question whether the failure is related to the theory itself, or simply identifies those individuals who fail to act rationally. Critics and proponents alike often conflate these contending interpretations resulting in what appears to be the failure of the theory. That is to say, rational choice viewed as a normative theory and devoid of morality, addresses how people should behave, not what people actually do (Hausman and McPherson 2008, 236). Critics argue that by placing rational choice within the rubric of normative theory instead of positive-scientific theory simply removes the risk of empirical testing where disconfirming evidence might discredit the theory.

Current Debates

Taking a positive-scientific approach to rational choice, Green and Shapiro assert that “very little has been learned by way of nonobvious propositions that withstand empirical scrutiny” (1996, 236). Their work, *Pathologies of Rational Choice Theory* (1994) provides a critical analysis of rational choice focusing on its empirical failures and empirical ignorance with

a lively debate the following year compiled in Friedman's edited work, *The Rational Choice Controversy* (1996). Green and Shapiro argue that empirical applications of rational choice theory "have been marred by a syndrome of methodological shortcomings" that are "rooted in the ambition[s of social scientists] to come up with a universal theory of politics" (1996, 202). The methodological failings of rational choice include post hoc theory development, or "curve fitting" where rational choice theorists first examine the data, then design a model to fit (Green and Shapiro 1996, 34-35). Closely related, is the tendency to ignore competing explanations in favor of rational choice (Green and Shapiro 1996, 37).

Rational choice theory suffers from criticisms that may be more appropriately tied to methodology and interpretive approaches. While some consider rational choice analysis a theory in and of itself, others view it as an analytic technique within a larger theoretical system (Keohane 1984; Roemer 1986a, 1986b; Elster 1986a, 1986b; Levine 1987). Lovett argues that "rational choice models should be seen as contributing to the construction of ordinary causal explanations," not as intentional explanations of social phenomena (2006, 256). If rational choice theory were attempting to provide intentional explanations of social phenomena, then the "existence of inconsistent or discontinuous preferences would indeed be troubling: it would suggest that at least some social phenomena cannot be shown to arise from the deliberate or intentional effort of human beings to maximize their utility" (Lovett 2006, 255). However, Lovett contends that most of the debate is simply "fruitless" since "critics and defenders fail to correctly understand, or at least fail to sufficiently appreciate, the role that rational choice theory plays in developing explanations of social phenomena" (2006, 238). There is seldom a singular explanation for social phenomena and rational choice, best understood, should be viewed as

contributing to the construction of straightforward causal explanations. It is from this perspective, that “much of the literature on either side of the rational choice controversy [is] simply besides the point” (Lovett 2006, 266).

Cybernetic Theory of Decision-Making

The cybernetic theory of decision-making supports rational choice where it falls short in two distinct areas; complex decision-making and collective decision-making. Cybernetic decision-making eliminates variety, ignores elaborate calculations concerning the environment, then tracks just a few simple feedback variables that trigger behavioral adjustments (Steinbruner 1974, 66-68). Complex situations are reduced to a small set of critical variables where their principal value is to reduce uncertainty by keeping variables within tolerable ranges (Steinbruner 1974, 68; also see Dougherty and Pfaltzgraff 1997, 470). This is achieved by limiting responses to previous experiences “from which there emerges an almost intuitional approach to problem solving” (Dougherty and Pfaltzgraff 1997, 470).

Steinbruner turns to theories of organizational behavior to extend the cybernetic paradigm from individual decision-making in relatively simple situations to collective decision-making designed to cope with a highly complex environment through the work of Cyert and March (1963) and March and Simon (1968)(Steinbruner 1974, 71-78). Cybernetics holds that individuals with diverse goals continue to operate as single decision-makers in an organizational environment in “subunits,” or as a coalition of separate individuals that produce “a coherent set of products as a result of the collective individual efforts” (Steinbruner 1974, 71). While decisions are made “wholly within the context of the subunit” this coordinated effort culminates in a unified organization where “sequential attention to goals” results in productive and

cooperative interaction (Cyert and March 1963). Here, actors make decisions in isolation within the context of their own environment, yet maintain the integrity of the larger structure. “In brief, cybernetics provides an analysis of extremely simple decision-making mechanisms which are nonetheless highly successful in the proper environments” (Steinbruner 1974, 13). “The basis for expanding cognitive theory to the collective level,” Steinbruner argues, “is provided by the fact that the principles are assumed to hold across the idiosyncratic features of men and cultures” (Steinbruner 1974, 124). “If stable features of the mind encounter stable features of organizational settings, it should produce coherent, recurring patterns of behavior in the organizational decision process, other things being equal” (Steinbruner 1974, 124).

Rational choice provides a framework for decision-making within Chinese guanxi networks. As rational actors, Chinese employ guanxi to facilitate the acquisition of goods, services, position, and advantage while reducing the uncertainty inherent in undeveloped or underdeveloped formal institutions. As decision-makers, Chinese make deliberate choices based on the best possible outcome in anticipation of their primary goals with a view toward self-interest. The cybernetic theory of decision-making addresses two important weaknesses in rational choice theory. First, cybernetic theory explains how “complex calculations” are made simple through reliance on previous experiences, and then how individuals alone or within “subunits” (personal guanxi networks) produce collective efforts that result in a “harmonious society” (see Zhan, Wang and Wang 2007). The stability inherent in Confucianism provides the “proper environment” required of cybernetics (both social and organizational) to produce recurring patterns of behavior that result in a predictable model of behavior in Confucian societies.

Grounded Theory

Few studies trace the initiation, development and use of guanxi (Chen and Chen 2004, 321) resulting in a paucity of research that addresses the mechanics of guanxi. “It is notoriously difficult to get an insight into such guanxi relationships or transactions as they are shrouded in secrecy and are not shared with an outsider” (Fan 2002a, 375). Consequently, very little is known about the dynamics of guanxi, how it functions in everyday situations, and how it is used by those who possess it. However, cracks are beginning to appear in the veil that shrouds these complex guanxi networks. China’s rise has given it the confidence to promote its economic successes and political partnerships publically, albeit in domestic media, for the consumption of its citizens whose patriotism and pride feeds and supports its political leaders. This has allowed researchers unique opportunities for in-country data gathering that would otherwise remain inaccessible.

While both rational choice and the cybernetic theory of decision making provide the foundation for understanding the complexity of guanxi, answers to both the micro and macro-level issues addressed in the research questions will assist in grounded theory explanations of the phenomena.

Research Design

This study examines how firms initiate, build and use guanxi networks by employing an exploratory-explanatory case study approach while simultaneously analyzing the structural composition and dynamics of the network in a mixed-method research design. Longitudinal data is collected from similarly sized guanxi networks, then coded for analysis using UCINet software. The detailed narrative provides a context to analyze the data within the environment

from which it functions. Mathematical analysis complements qualitative analysis to present a holistic view of the dynamics of guanxi networks over time.

Methodological Justification

Although the case study may be the oldest methodological approach to social inquiry, its use has come in and out of favor over the past fifty years. The past three decades however, have witnessed the systematic development of case studies for the cumulative building of social science theory, a relatively new phenomenon in social science (George and Bennett 2005, 5). Still, methodological tools remain specific to the research question and the use of one approach over another can only be justified by its usefulness in answering the research question at hand.

Scientific assertions must have both logical and empirical support. While quantitative methodologies focus primarily on statistical analysis to verify hypotheses, measure correlations, and identify predictor variables, the strength of qualitative analysis lies in its thick descriptions, ability to identify new variables and establish causation. Similarly, confirmatory and exploratory research designs employ different strategies although the epistemological underpinnings differ little. Confirmatory research is best explained as binary and seeks to either confirm or disconfirm hypotheses focusing on the relationship between theory and evidence. Conversely, exploratory research goes through a process of mutual adjustment where theory and evidence are closely intertwined, but iterations of adjustment continue and “by the end of the process — concepts, theories, and evidence are properly aligned” (Gerring 2001, 231). Although quantitative methods have long dominated the field, qualitative methods are making a resurgence and a mixed method approach is receiving increased attention.

Exploratory-Explanatory Case Study Approach to Guanxi

Both the phenomena under investigation and the framing of the research question determine the relevant strategy used in research design. The case study is an ideal methodology when a holistic, in-depth investigation is needed (Feagin and Sjoberg 1991). A holistic approach to the phenomenon does not imply that the case study design is holistic. In fact, guanxi networks lend themselves to an embedded design where each person in the network is analyzed first as a single unit, and then as a subunit in the larger network. The case study is the preferred method when approaching “how” and “why” questions in an explanatory context, and is reflected in the research question; “how” do firms initiate, build, and use guanxi networks? These types of questions (“how” and “why”) deal with operational links rather than frequency or incidence (Yin 2009, 9). Single-case studies are useful in “captur[ing] the circumstances and conditions of an everyday or commonplace situation” (Yin 2009, 48). They are also ideal for revelatory cases where an observer may have access to phenomena that were previously inaccessible. Here, the “study is worth conducting because the descriptive information alone will be revelatory” (Yin 2009, 48-49). This is a fitting and appropriate approach to the study of guanxi and guanxi relationships where access to information is not only guarded, but also thought to be so typical and commonplace that little attention is paid to the phenomenon. To supplement the qualitative data, a mathematical approach to the structural aspects of each network will be considered.

Case Selection: Comparing the Two Cases

One of the most significant considerations in undertaking a meaningful comparative exercise is to ensure that case selection is appropriate to the research. The two cases selected in this study demonstrate the use of guanxi in unrelated industries and in different regions of the

country, the first being based in a manufacturing firm in the south of China, and the second being based in the aviation industry in the north of China. They are also temporally unique, with approximately ten years time separating the two cases. So then, in what ways do these two cases provide a meaningful basis in examining how firms initiate, build and use guanxi networks?

I will argue that while the two cases are distinct in all but absolute size, it is the uniqueness of these two cases that is theoretically interesting. The research questions focus on the discovery of how guanxi networks operate. Hence, comparing and contrasting dissimilar cases casts the spotlight on the methods, strategies and tactics that actors employ in the use of guanxi and away from industry, region, and temporal specific variables.

Consequently, the two cases provide sufficient diversity in geographical location, situational circumstance, and time frame to provide interesting comparisons that form useful foundations for analysis.

Concepts and Definitions

Table 1 Guanxi Concepts and Definitions

Term/Concept	Definition
Mianzi	“Face” or “Prestige”
Renqing	“Human Feelings” or “Sympathy”
Ganqing	“Sentiment” or “Emotional Attachment”
Bao	“Reciprocity” or “Obligation to Repay”
Guanxi Bases	Source of guanxi. The basis for the relationship

Guanxi Quality: Reciprocity, Intensity, and Durability

Guanxi quality is dependent upon the development and maintenance of separate, yet interrelated concepts that comprise guanxi relationships. The four key cultural concepts used to establish guanxi quality are *mianzi*, *renqing*, *ganqing*, and *bao*.

Mianzi, or “face” can be likened to the Western concept of “prestige” although the concept is uniquely Eastern in its sociocultural understanding and use. *Mianzi* remains a crucial element in building and maintaining guanxi relationships. The second concept, *renqing*, can be rendered as “human feelings” or “sympathy” in Western terms although its significance should not be underestimated when approaching its importance with respect to interpersonal obligations in guanxi relationships. *Renqing* is multidimensional and “contains an emotional aspect, which is expressed in daily life by the term *ganqing*, another important indigenous concept” (Yan 1996b, 139). *Ganqing* is more difficult to translate forcing at least one researcher to leave the term in its Chinese form (Jacobs 1979, 259). However, others have translated the term into English as “sentiment” or “emotional attachment.” *Ganqing* and *renqing* are similar with respect to their obligation to adhere to social form, although *ganqing* involves a greater degree of affection (see Yang 1994, 122). *Bao* is generally translated as “reciprocity” or “obligation to repay” although these terms do not capture the essence of the transaction, which is tied more to human sentiments and social interconnectedness than to impersonal transactions.

While *mianzi*, *renqing*, *ganqing* and *bao*, are perhaps the more salient aspects of guanxi, they do not fill the repertoire of distinguishing characteristics. Four fundamental bases have been identified as sources for guanxi relationships (Jacobs 1979, 243; Chen and Chen 2004, 311; King 1991; Yang 1994, 111-119) and reflect the durability of the relationship. The first base, kinship

is preordained; every Chinese is born into a family of existing ties beginning with parents and siblings and extending to grandparents, aunts, uncles, and cousins (King 1991). The second base, common social identities, is voluntarily constructed on commonalities such as birthplace (*tong xiang*), school (*tong xue*), or work (*tong shi*) (Jacobs 1979). Next, there exists a common third party base that is also voluntarily constructed on distant or loose ties where two individuals who do not know each other establish a relationship through a common third party. Finally, there exists an anticipatory base where promises to engage in future exchanges, collaborations, or joint ventures creates a tie between two or more parties to be consummated at a later date (Yang 1994, 114-118). Once a relationship is formed, *guanxi* takes on characteristics specific to its context that nuance its use.

Actor Value / Brokerage

Although *mianzi*, *renqing*, *ganqing* and *bao* affect an individual's *guanxi* quality, an actor's value is determined through one's position relative to other actors within the network. That is to say, a network actor's capability of assuming the position of a broker within a firm connecting contacts or organizational subunits to the host, possesses unique value based on the benefits that the contact or organizational subunit lends to the host. (Yeung and Tung 1996, 61).

From the perspective of brokerage, tension exists between personal *guanxi* and organizational *guanxi*. Exclusivity of an Actor's contacts outside the firm increases an actor's value. Each actor has a unique value based on their personal *guanxi* that becomes diluted when others within the network establish similar relationships with the same contact or a new contact that can secure the same resources. Consequently, an actor will attempt to retain exclusivity while the firm will attempt multiple bridges to the contact or organizational subunit.

Table 2 Network Concepts

Term/Concept		Definition
<i>A</i>	Actor	Narrative term for any person within the network
<i>F</i>	Firm	A political or economic/commercial organization that employs Actors
<i>OS</i>	Organizational Subunits	Firms that operate within the network, but outside of the primary firm under investigation
<i>C</i>	Contact	An actor within the boundaries of the network, but outside the primary firm
<i>n</i>	Node	Representation of any actor in the network in a diagram
<i>L</i>	Line	Representation of the ties that exist between actors in a network diagram

Organizational Guanxi

Although it is generally agreed that guanxi can be transferred from one actor to another, there is ongoing debate as to whether one can speak of guanxi independent of an actor. Some critics argue that guanxi is personal and cannot be transferred to a firm (Yeung and Tung 1996, 61; Fan 2002a, 374; Fan 2002b, 553), while others examine empirically the link between guanxi at the individual level and the organizational level (Xin and Pearce 1996; Peng and Luo 2000; Park and Luo 2001, 457; Tsang 1998, 69; Wank 1996). Fan rejects the notion of organizational guanxi outright, but concedes that firms certainly enjoy the *use* of their employee's guanxi as long as that person is employed (Fan 2002a, 374-375; Fan 2002b, 553-554). Zhang and Zhang expound on the relationship between individual guanxi and organizational guanxi acknowledging that guanxi, as a personal asset, becomes an organizational asset upon employment, although it is lost when an employee leaves (2006, 389). Tsang supports this argument noting that

“organizational guanxi has to be based on individual guanxi; all business transactions are initiated and implemented by individuals” (1998, 69). Luo expounds on this explaining that guanxi is both personal and transferable (2007, 10-11) allowing firms to benefit from the guanxi of their employees and their employee’s contacts. Consequently, while guanxi may be personal, it can also be consolidated at the organizational level reflecting the guanxi of actors within the firm with varying levels of regard toward ownership. This brings to the fore two important points; first, that firms seek benefits from the use of their employee’s guanxi networks; and secondly, an individual’s guanxi network not only lends value to the actor, but to the firm as well.

Park and Luo found that “guanxi becomes an asset at the organizational level as personal relationships are dedicated to and used by the organization” (2001, 457). Firms recognize and encourage their employees to use their personal networks to further the objectives of the organization. “There are substantial rewards, such as commissions, bonuses, and promotions, for managers’ personal guanxi utilized for organizational purposes to source key inputs and marketing products” (Park and Luo 2001, 458). Zhang and Zhang support Park and Luo’s findings noting that “organizations wishing to maintain the important Guanxi with governmental officials or key customers need to hold onto this key individual” because “the benefits brought by interpersonal Guanxi usually greatly exceed the cost of holding onto that individual” (2006, 388). Consequently, firms seek out and employ actors that possess requisite guanxi then attempt to retain these valuable actors cognizant that their departure may result in the loss of valuable organizational guanxi.

While this research acknowledges the ongoing debates concerning organizational guanxi, is also transcends the discussion arriving at a point of general agreement among critics on both sides of the debate; firms recognize and utilize the collective guanxi of their employees.

Organizational Subunits

For the purpose of this study, an organizational subunit is an outside “firm” (and in some cases, an individual) that operates within the network, but outside the direct control of the firm under investigation. Fei describes egocentric networks as having concentric rings similar to those that come from throwing a stone into a lake (Fei 1992, 62-63). Here, the firm under investigation represents the center while organizational subunits may overlap the concentric circles that emanate from its center of influence. While the organizational subunit remains part of the network, it resides outside the immediate environ of the firm.

Hypotheses

- a. **H₁** — *Firms* continually seek to improve their **organizational guanxi** by improving existing employees’ **guanxi quality** within the firm and by recruiting new actors from outside the firm.
- b. **H₂** — *Firms* use **organizational guanxi** to expand their networks by forming cooperative partnerships with complementary organizations that enhance the attributes or potential of both organizations.
- c. **H₃** — *Firms* initially exploit **brokerage** in organizational guanxi, then attempt to stabilize the network by fostering new ties to exclusive contacts.

The first hypothesis focuses on the dynamics of **organizational guanxi**. First, I establish a baseline for **guanxi quality** by measuring three separate but closely related variables,

Reciprocity, **Intensity** and **Durability** as key indicators of guanxi quality. **Reciprocity** measures the frequency of interaction between actors, while **Intensity** measures the strength of the relationship and **Durability** reflects the underlying commitment to the relationship. Specific to

individual actors, these three measures reflect the collective quality of organizational guanxi. Using UCInet software, I will construct a series of matrixes to compare longitudinal data on guanxi quality. Since firms actively recruit new actors to increase guanxi quality, I include these new actors as they are introduced to the network. If my hypothesis is true, then the data will demonstrate an upward trend in the quality of organizational guanxi over time.

$$H_1 \text{ --- } (n_b \uparrow \Rightarrow n_q \uparrow)(n_i \uparrow \Rightarrow n_q \uparrow)(n_d \uparrow \Rightarrow n_q \uparrow)$$

In the second hypothesis, I test the use of **organizational guanxi** as a tool for expanding and enhancing networks by running a series of UCInet routines that identify an actor's relative position in the network and the contacts attributable to that **actor**. Cooperative partnerships are accomplished through individual **actors** within their respective firms linking complementary organizations for mutual benefit. **Brokerage** occurs when an actor occupies an exclusive position in the network linking **contacts** or **organizational subunits** to the host organization. **Brokerage** relationships exhibit singular dyadic ties to a **contact** or **organizational subunit**. If my hypothesis is true, then data will demonstrate the presences of single **actors** linking **contacts** or **organizational subunits** to the host expanding or enhancing the host network.

$$H_2 \text{ --- } (A)BR \Rightarrow (C)OS$$

The third hypothesis focuses on an actor's relative position in the network and the dynamics of **Brokerage** over time. While this exclusive position brings benefits to both the individual actor and the host organization, it also threatens network stability. Absolute exclusivity creates a tenuous link where the loss of a single actor may result in the loss of that actor's contacts, including the organizational subunit(s) linked to the host. Actors who enjoy **brokerage** strive to retain their exclusivity and relative value, while networks dependent on the

organizational subunits attempt multiple bridges to other actors within the subunit to dilute exclusivity. If my hypothesis is true, then the data will show an upward trend in *dyadic redundancy* where brokerage relationships occur, increasing the number of ties from the host organization to the organizational subunit. Alternately, where *dyadic redundancy* does not increase, data will demonstrate the formation of alternate subunits capable of securing the same or similar resources.

$$H_3 \text{ — } BR \Rightarrow DR \uparrow$$

Network Analysis

Social network analysis has proven a valuable tool in exploratory-explanatory research allowing for “explicit mathematical statements of structural properties, with agreed upon formal definitions [that] force researchers to provide clear definitions of social concepts and facilitate development of testable models. Furthermore, network analysis allows measurement of structures and systems that would be almost impossible to describe without relational concepts, and provides tests of hypotheses about these structural properties” (Wasserman and Faust 1994, 17). This research employs the tools of network analysis to tease out the similarities and differences across guanxi networks and to explore the changes that occur within them to better understand the structural composition of the network and the dynamics between actors over time (Feld, Suitor and Hoegh 2007). Network analysis is also useful in exploring tentative empirical generalizations and by identifying patterns that may be present in the data. “The techniques of graphing and the rules of mathematics themselves suggest things that we might look for in our data — things that might not have occurred to us if we presented our data using descriptions in words” (Hanneman 2005,15-18).

The collection of longitudinal data will allow the analysis of the network at specific intervals providing markers that record changes in the network over time. In isolation, this data has limited value. However, carefully documented observations will be used to create a narrative of the context in which network changes take place and will supplement the mathematical data providing valuable descriptive insights that would otherwise be lost.

Partial Networks

The networks under investigation are ego networks that are inherently partial. Ego networks do not contain every possible actor within an Actor's network, nor do they contain all of the actors within an Actor's contacts' network. The logic in this is found in the infinite number of possible actors that would encompass a "whole" network. This is easy to understand when one considers the boundless number of connections that exist between people, each linking one to another (see Barabasi 2002; Watts 2003). That is not to say that partial networks are incomplete. Partial networks are generally bound by membership in a specific organization, particular events, or specific time frames. They can also be bound by fixed geographic regions or their proximity to a specific actor. This study necessarily limits the boundaries of the network by the role that each actor plays in promoting the objectives of the firm under investigation.

Table 3 Variable Definitions and Measures

Variable	Definition	Measure
n_q (DV)	Guanxi Quality reflects an actor's potential to secure resources or favor and is determined by degree of reciprocity (n_r), intensity (n_i) and durability (n_d)	The sum of Reciprocity, Intensity, and Durability. Weakness: Unweighted vis-à-vis each variable
n_r (IV)	Reciprocity measures the degree to which transactions are reciprocated (frequency) and is rooted in renqing and bao .	Full Rank Ordinal (Valued) 2 - Repeated (<3/month) 1 - Limited (>2/month) 0 - Absent
n_i (IV)	Intensity measures the strength of the relationship and is rooted in ganqing (Emotional feeling) Ganqing is a key determinant of the guanxi quality	Full Rank Ordinal (Valued) 3 - Emotional 2 - Emotional/Instrumental 1 - Instrumental
n_d (IV)	Durability reflects the underlying commitment to the relationship and is rooted in one of four fundamental guanxi bases	Full Rank Ordinal (Valued) 4 - Kinship 3 - Social Identity 2 - Voluntary Constructed 1 - Anticipatory
AV (DV)	Actor Value reflects the sum of individual Guanxi Quality , Dyadic Redundancy and placement of the actor in the network.	$AV = (n_q)(DR)(BR)$
DR (IV)	Dyadic Redundancy measures the degree of overlap between actors	$DR \uparrow \Rightarrow n_v \downarrow$
NS (IV)	Network Size is bounded by the employees of a firm and their immediate contacts outside the firm.	Total Number of Actors in a network
SH (DV)	Structural Holes Benefits from social capital stem from the brokerage opportunities created by disperse ties—that is, by the lack of network closure	UCInet routine
BR (IV)	Brokerage occurs when a single actor occupies the exclusive position of linking organizations/actors	UCInet routine
N_d (IV)	Network Density is expressed as the ratio between the actual number of total connections (L) between nodes (n) and the maximum possible number of connections. Perfect completion exists at 1.0	Nominal, Undirected $\Delta = \frac{l}{n(n-1)/2}$

Data Collection

Table 4 Data Collection and Analysis

Method	Data	Analysis
Existing Primary Data	Existing data will be used to demonstrate the construction and use of two distinct guanxi networks in three waves: T-1; T2; T3	Network variables will be coded and quantified; creation of cross tabulation tables and charts; UCINet software routines
Participant Observation (Wasserman 1994, 49).	Observation of televised interviews, press conferences, publicity events, and marketing promotions. (Frequency of interaction, basis of relationship, type of tie, timing)	Longitudinal data for comparison of guanxi networks. Network variables will be coded and quantified; UCINet routines for longitudinal comparison
Document Analysis (Wasserman 1994, 50)	Review of news articles, public records, legal corporate documents, advertising brochures, business literature, and scholarly journals for a discussion of the business firm	Confirmation of observed data; Reconstruction of historical data;

Existing Primary Data

I will use existing primary data collected through in-country participant observation supplemented by document analysis in three waves at six month intervals. These waves will provide longitudinal data for the construction of a network using UCINet software. Variables have been coded and quantified for the creation of cross tabulation tables and charts. Both sets of existing data are coded as T1, T2, and T3 and have an $n=34$. The data will be used to construct a matrix of similarly sized networks using UCINet, first testing the hypotheses that form the basis for the construction of a network model, and then in an exploratory manner to identify similarities and differences in the network for use in further investigations.

Participant Observation

In-country participant observation provides unusual opportunities for insight on political and socioeconomic networks. This type of data, while frequently available through domestic

media presentations, printed company histories, press conferences, televised interviews and other public events, is extremely difficult to plan as investigators seldom know when or where an opportunity will present itself and whether the data collected will be useful in constructing a viable network. Generally, this type of data collection requires an understanding of the industry in which the network operates allowing the researcher to recognize and record key contacts within the network. Further, guanxi networks are dynamic and any inquiry into the construction and use of these networks requires longitudinal data to reflect the changes that take place over time, an expensive and time-consuming endeavor. This undoubtedly contributes directly to the paucity of data on guanxi networks. Hence, investigators must be vigilant and poised to seize the opportunity for data collection when it arises, while properly disciplined to take finely detailed field notes with a view to the subtleties inherent in both the human interactions and economic transactions that take place in order to avoid overlooking valuable data collection opportunities (See Kipnis 2002, 22; He 2006, 168-188; Fenno [1978] 2003, 1986, 3)

Document Analysis

Document analysis is a secondary and confirmatory source of data providing past and present network associations and is derived from printed media including news articles, public records, corporate documents, advertising brochures, business literature, and scholarly journals. Written sources will be surveyed for discourse on the history and philosophy of all associated firms, references posted to public websites, and notices of all public and private events. These documents will serve to confirm observed behavior while allowing the reconstruction of historical events. All data will be cross-checked through public channels, notated as confirmed, and recorded in a series of matrices.

Institutional Review Board (IRB)

In keeping with the ethical standards for research on human subjects, under the requirements of the U.S. Department of Health and Human Services (HHS) regulations at 45 CFR Part 46, this research qualifies for exemption under 45 CFR 46.101(b)(4), Existing Data, Documents, and Specimens. Exemption status is based on the following criteria; 1) The research involves existing data as defined in Chart 5 as illustrated on U.S. Department of Health & Human Services website (<http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html#c5>) defining “existing” as “existing before the research is proposed to an institutional official or the IRB to determine whether the research is exempt; 2) Although the sources may or may not be publically available, the “information has been *recorded by the investigator* in such a manner that the subjects *cannot be identified*, directly or through identifiers linked to the subjects.” All identifiers have been removed anonymizing data. Having met these two tests, the research complies with the criteria under 45 CFR 46.101(b)(4) for exemption status from all 45 CFR Part 46 requirements. This research also complies with the requirements for exemption set forth by the Division of Research Integrity and Compliance at the University of South Florida.

The University of South Florida’s Institutional Policies require the completion of two courses offered by the Collaborative Institutional Training Initiative (CITI). Both the “Human Research Curriculum” and the “Social and Behavioral Responsible Conduct of Research Curriculum” completion certificates can be found in Appendix F: Research Certifications, validating compliance with this requirement.

Strengths, Weaknesses and Limitations of the Design

Within the single-case study tradition, the exploratory-explanatory approach utilizing participant-observation as a source of evidence has its own strengths and weaknesses. While this mode provides insight into interpersonal behaviors and motives, it also creates bias due to the participant-observer's opportunity to manipulate events (Yin 2009, 102). The manipulation of events is a two-edged sword. While it can alter the details in a case, it can also provide opportunities to "produce a greater variety of situations for the purpose of collecting data" (Yin 2009, 112). In investigating how firms initiate, build and use guanxi, participant-observation promises unusual opportunities to gain insight on otherwise inaccessible phenomena and is arguably the most appropriate method for collecting the nuanced data inherent in guanxi networks in everyday settings.

Case studies exhibit strength precisely where statistical methods and formal modeling fail making qualitative and quantitative approaches complementary rather than competitive (George and Bennett 2005, 19). George and Bennett identify four strong advantages that make case studies valuable in hypotheses testing and theory development; "their potential for achieving high conceptual validity; their strong procedures for fostering new hypotheses; their value as a useful means to examine the hypothesized role of causal mechanisms closely; and their capacity for addressing causal complexity" (2005, 19). Conceptual validity is extremely difficult to achieve in statistical studies. However, "case studies allow a researcher to achieve high levels of conceptual validity, or to identify and measure the indicators that best represent the theoretical concepts the researcher intends to measure" (George and Bennett 2005, 19). Some concepts simply do not lend themselves to statistical analysis and when contextually situated demonstrate

varying characteristics. These nuances require “a detailed consideration of contextual factors, which is extremely difficult to do in statistical studies but is common in case studies” (George and Bennett 2005, 19). Case studies also have the powerful advantage of identifying new variables and hypotheses that may have gone unnoticed in statistical analysis where existing databases leave the researcher unaware of potentially important missing variables demonstrating another unique strength in this approach (George and Bennett 2005, 21).

The ability to examine causal mechanisms provides another strength to case study research. Brady and Collier argue that “the strength of causal-process observations lies not in breadth of coverage, but in depth of insight. Even one causal-process observation may be valuable in making inferences” (2004, 12; also see George and Bennett 2005, 32). “Within a single case, we can look at a large number of intervening variables and inductively observe any unexpected aspects of the operation of a particular causal mechanism or help identify what conditions present in a case activate the causal mechanism” (George and Bennett 2005, 21). Statistical studies omit intervening and contextual variables compromising the ability of researchers to identify causal mechanisms. Equifinality presents another challenge to statistical analysis whereas case studies not only reveal multiple explanatory paths, but uncover combinations or sequences leading to the same outcome that may, or may not exhibit common variables (George and Bennett 2005, 20).

Exemplifying the complementary application of a mixed method approach, George and Bennett write that “case studies can also explore the possible causal mechanisms behind the correlations or patterns observed in statistical studies providing a check on whether correlations are spurious or potentially causal and add details on how hypothesized causal mechanisms

operate” (2005, 34). And while statistical analyses are useful in determining correlations, correlations do not imply causation, “the principal means by which we are able to order and make sense of the humanly constructed world” (Gerring 2001, 128). A mixed method approach offers the best of both worlds where iterations of case study inquiry and statistical analysis provide researchers the tools to both test and tease out new variables thereby sharpening our understanding of the empirical world. One method is not necessarily better than another and there is a growing sentiment that scholars should employ a mixed method approach in order to obtain as authoritative findings as possible (Gerring 2004, 341-354).

Methodological Tradeoffs and Limitation of the Study

Case studies are not without their weaknesses and researchers must weigh these tradeoffs. Notable limitations include case selection bias, tradeoffs between parsimony and richness, tensions between internal validity and generalizability, an inability to judge the frequency or representativeness of a case, and difficulty in estimating the average causal effects of a variable.

The most common critique is selection bias which occurs when a researcher chooses a case to “substantiate a preconceived position” (Yin 2009, 72). This bias should not be outright rejected. In some instances, choosing cases on the dependent variable “can help identify which variables are not necessary or sufficient conditions for the selected outcome.” Additionally, in the early stages of research, this bias can help identify potential causal paths as well as other variables that may lead to the dependent variable of interest (George and Bennett 2005, 23). Representativeness poses another problem for case study researchers. Achieving greater explanatory richness within a case results in the tradeoff of achieving explanatory power across cases. With respect to generalizability, scholars tradeoff parsimony and the broad applicability of

theories in exchange for explanatory richness. Variable gradations are another inherent weakness in case studies. Determining the level of intensity for a variable to sufficiently effect an outcome can be difficult. However, “[c]ase study researchers are more interested in finding the conditions under which specified outcomes occur, and the mechanisms through which they occur, rather than uncovering the frequency with which those conditions and their outcomes arise” (George and Bennett 2005, 31). As a result, “[c]ase studies are much stronger at identifying the scope conditions of theories and assessing arguments about causal necessity or sufficiency in particular cases than they are at estimating the generalized causal effects or cause weight of variables across a range of cases” leaving case studies “much stronger at assessing *whether* and *how* a variable mattered to the outcome than at assessing *how much* it mattered” (George and Bennett 2005, 25, italics added for emphasis). All of these weaknesses have converged into a skepticism over the value of case studies in general and single-case studies specifically (King, Keohane, and Verba 1994, 208-212). However, George and Bennett dismiss such skepticism citing several influential works in comparative politics where single-case designs were used “to good effect” (2005, 33).

Assuring Rigor and Quality in Case Studies

Four tests are commonly used to establish the quality of empirical social research; construct validity, internal validity, external validity and reliability (Yin 2009, 41). Construct validity concerns itself with operational measures for the concepts under investigation and is especially challenging in case study research. However, multiple sources of evidence based on well defined concepts and the use of well established operational measures allow investigators to overcome these challenges. Internal validity is a concern primarily for explanatory case studies when a researcher is attempting to explain the relationship between the dependent and

independent variables. Difficulties arise when an unknown interceding variable affects the causal relationship between known variables. However, this logic does not apply to descriptive or exploratory studies where causal explanations do not apply. A second concern over internal validity arises when an investigator makes inferences that cannot be directly observed. Strategies for dealing with internal validity include pattern matching, explanation building, addressing rival explanations and using logic models, and can be employed during the data analysis phase of the project. The third concern for case study research is external validity and should be addressed during the design phase of the project. External validity concerns itself with generalizability and has been a major barrier in the case study approach, especially for single-case studies. However, this has not precluded case studies from being generalized. “[A] case may be generalized to the type or class of cases (e.g., deterrence) of which [it is] a member” depending on the “precision and completeness with which the class of cases has been defined and the degree to which the case exemplified the class” (George and Bennett 2005, 110). Reliability, addresses concerns with being able to produce the same results if the same procedures are followed within the same case. Using case study protocol and developing a database where procedures can be logged is an effective strategy for dealing with issues of reliability. Yin (1994) has designed protocols for conducting case study research that enhance the reliability and validity of the investigation. In designing case study protocol, Yin suggests that the researcher either possess or acquire the following skills: the ability to ask good questions and to interpret the responses, to be a good listener, to be adaptive and flexible so as to react to various situations, to have a firm grasp of the issues being studied, and to be unbiased by preconceived notions.

Guanxi, is both prevalent and deeply embedded in Chinese society. Attempts to understand its contemporary use require its study in both a contextual and natural setting. In the investigation of how firms initiate, build and use guanxi networks, exploratory-explanatory, single-case methods that employ the participant-observer mode of data collection provide appropriate tools of inquiry.

Network Data: Accuracy, Validity, and Reliability

Three concerns emerge when collecting network data: accuracy, validity and reliability. Accuracy becomes an issue when collecting data solely through interviews. Respondents may not accurately report information for a number of different reasons. Concerns about the accuracy of self-reported interaction have led to studies that compare respondents verbal reports to researcher's observations and found that nearly half the information that people report about their own interactions is incorrect (Bernard and Killworth 1977; Bernard, Killworth, and Sailer 1982; Bernard *et al.* 1985). Some social network analysts argue that self reported interaction reflects a respondent's long term, stable patterns of interaction, not the particular interactions of individuals (Romney and Faust 1982; Romney and Weller 1984; Freeman and Romney 1987) and since social network analysis concerns itself with "prolonged and stable patterns of interpersonal relations" it is "the true structure of the network, relatively stable patterns of interaction, [that] are of most interest" (Wasserman 1994, 56). Although this study analyzes the structure of the network through a series of "snapshots" at specific intervals, its primary focus is on the dynamics of the network over time. Hence, data collection through participant observation reduces the risk of incomplete or incorrect information while accurately capturing the dynamics of the network.

Validity is another concern when considering network data and elicits questions such as, “Are the concepts valid to the extent that they measure what they intend to measure?” Mixed method research designs that employ case studies allow researchers to achieve high levels of conceptual validity through thick descriptions. While this weakness is inherent in statistical analysis, it is diminished when network data is supplemented by the rich contextual detail of the accompanying case study narrative (George and Bennett 2005, 19).

The nature of sociometric data creates some difficulty with traditional concepts of reliability. Traditional measures of reliability are assessed in a test-retest framework and seek similar conclusions. However, “this assumption is likely to be inappropriate for social network properties, since social phenomena cannot be assumed to remain in stasis over any but the shortest spans of time” (Wasserman 1994, 58). Consequently, alternate approaches to reliability ensure the integrity of the data. While data collected through interviews and questionnaires continues to be problematic, sociometric data using full rank orders are more reliable than fixed choice design, and aggregate measures remain higher than the choices made by individuals actors (Wasserman 1994, 59).

Significance of the Study (Rationale)

Understanding how guanxi networks are initiated, built and used will provide insight on China’s remarkable economic growth. Chinese social networks, embedded in the stable belief systems of its cultural histories, inculcated from birth and employed throughout life, continue to provide the framework for social, economic, and political transactions. While the West relies on the rule of law and governmental institutions to support its market economy, China commands a

passive system embedded in the psyche of its citizens. The implications that arise from the intersection of these two systems are fascinating.

Adherence to the rule of law presupposes acceptance of its legitimacy by those who are bound by it, whereas culturally embedded Confucian belief systems become “written on the hearts of the people.” This seemingly innocuous distinction has profound implications. Codified laws remain rigidly fixed in constantly evolving environments, frequently outliving their usefulness or applicability. Incompatible or inconsistent laws tend to be ignored or “bent” to suit the situation leading to criminalization with litigation as the predominant means to resolve disputes. Conversely, Chinese who subscribe to the tenets of Confucianism, either actively through their affiliations or passively through their upbringing, rely on the flexibility inherent in those philosophical teachings, limiting the number of “acceptable” responses while the threat of ostracization provides incentive for compliance with established social norms. This creates a more stable environment, reducing transaction costs.

Adherence to the tenets of Confucianism also provides a stable foundation for the continued existence of the Chinese Communist Party and its ability to respond quickly to the economic environment. There exists a hierarchy where each person, content to remain in his assigned role, brings harmony to oneself, ones’ family, and society. Disruption creates disharmony and must be corrected. The CCP exists at the top of the pyramid, a position predicated on continued economic growth and continually improving living standards. As long as its subject are content, the CCPs legitimacy remains unchallenged and the Party is free to use its political power to respond quickly and decisively to changing macroeconomic conditions. This has allowed China to retain its communist political system while developing its market

economy turning on its head the commonly held belief that democracy and capitalism are inextricable linked.

China's political legitimacy, coupled with its increasingly capitalist markets, brings to the fore some very important questions about China's meteoric rise in particular, and the path to economic development in general. While quantitative analysis plays an important role in understanding growth patterns, it fails to illuminate the more salient question of "how." This research looks at empirical evidence to provide insight on China's recent rise, redirecting the spotlight away from "hard" statistical analysis and refocusing on the "soft" cultural aspects of international transactions through ethnic networks to explore some fundamental questions.

How have China's newly emerging industries so quickly gained near equal footing with foreign competitors who possess decades of experience, advanced technology, and refined management systems so quickly? What impact will the prevalence of guanxi networks have on foreign enterprises that do business or invest in China? Further, is it necessary for the host to subscribe to the tenets of guanxi for the networks to be effective? What are the implications for those who fail to understand the mechanics of guanxi? Finally, how do non-Chinese benefit or protect themselves from guanxi practices?

More generally, is it possible for states that share similar cultural network systems to promote economic development by exploiting the strengths inherent in their own cultural histories? Do Western political and economic systems disrupt stable, self-regulating cultural institutions by supplanting an otherwise functional system? Has China provided an alternate model of economic growth for emerging economies that have limited resources or who are unable to build the institutions required to support Western systems? This study lays the

groundwork for further exploration into these fundamental questions. Understanding the mechanics of cultural network systems and their impact on economic development from a more humanistic approach may allow undeveloped and underdeveloped nations to grow their economies while enabling developed nations to protect their industries.

CHAPTER II CHINESE SOCIAL NETWORKS

This chapter explicates the concept of guanxi as the basis of Chinese social networks while discussing the foundational roots from which guanxi emerged. The discussion focuses on Confucianism, Taoism, and Buddhism as the philosophical underpinnings of Chinese society. It also brings to the fore the relationship that exists between China's built environment and its philosophical underpinnings to examine how China's physical and psychological worlds intersect and reinforce one another. An extensive literature review considers existing research on guanxi outlining the fundamentals of the concept while considering its uniqueness by highlighting the tenets and rules of guanxi and its use. A discussion of guanxi's historical rise and use throughout the centuries is followed by an examination of its continued use in contemporary society demonstrating both its persistence and the foundational basis for the internalized values that drive action in guanxi relationships. The effects of guanxi can be either positive or negative, and the questions that arise concerning its impact on contemporary society and its fate in social, political and economic situations are addressed in this chapter.

The Concept of Guanxi

Used nearly a century ago in colloquial Mandarin, the written word "guanxi" does not appear in any of the Chinese classics (King 1991, 65) or in either of the classic Chinese

dictionaries, *ci yuan* (1915) or *ci hai* (1936).¹ The word first appeared as the topic of systematic study in the United States in the late 1980s, albeit with contending claims to its first use in the written form.²

There is no single English word that accurately translates the Chinese word “guanxi.” Contemporary literal translations render the word “relation; relationship; be related to; concern” (*Xuexi Hanying Cidian* 1998). In its verb form, the two characters are separately rendered “shut” or “close” and “system” or “tie” while its noun form is rendered as “gate,” “pass,” or “strategic position” (*Concise English-Chinese Chinese-English Dictionary*, 1986; also see *A Concise English-Chinese Chinese-English Dictionary*, 1994). And while the word *guanxi* generally refers to relationships or connections based on mutual interests and benefits (Yang 1994; Yan 1996b, Kipnis 1996; Gold, Guthrie and Wank 2002), it does not begin to define its complex meaning or the variations in usage (see Alston 1989; Jacobs 1979; Pye 1982; Hwang 1987; King 1991, 68; Hamilton and Zheng 1992, 21; Fei 1992; 1992, 21; Bian 1994; Yang 1994; Fan 2002a; Zhang and Zhang 2006; and Chen and Wu 2011). *Guanxi* is a multidimensional concept with expressive, instrumental, and mixed tie dimensions that directly impact the nature, strength and stability of a particular type of *guanxi* (Hwang 1987).

Analyzing the expressive aspect of *guanxi*, Duran Bell argues that rendering the character *guanxi* as “connections,” substantially alters both the meaning and characterization of the concept (Bell 2000, 132). In an analysis of the structure of *guanxi*, Bell considers the hierarchal relationships dictated by Confucian philosophy to first organize the levels of relationship

¹*Ci yuan* translates as “source of words” while *ci hai* translates as “word sea.”

²In the Chinese classics, the word “lun” was used where the word “*guanxi*” might have been used to describe human relations. See King 1991, 65-66; Luo 1997, 44; and Fei 1992, 65.

between the categories of individuals (*wulun*) and then demonstrates how individuals act as placeholders owning a share (*fen*) in the “network” where specific behaviors (*li*) lend themselves to the harmony of the group through ritual obligations (*liwu*) entitling members to shared resources in time of need based on moral obligation (*zhanguang*). Bell argues that the unfortunate translation of *liwu* as “gift” in place of the more appropriate “customary obligation of a virtuous man” has lead ethnographers to a distortion “that is comparable to glossing *guanxi* as ‘connections’” (Bell 2000, 135; also see Yang 1994, 70). This distortion mutes the salient aspects of *guanxi* that place it in a more humanistic context while emphasizing the more popular notion of reciprocity and instrumental ties commonly associated with favoritism, backdoor deals, and outright bribery.

The second usage of the term *guanxi* defines an instrumental/utilitarian concept that binds two or more people, generally outside of the family group through the exchange of favors rather than through sentiment (Dunning and Kim 2007, 330; Yang 1994, 130-132). Here, the relationship is established to attain some other objective, stands in direct opposition to expressive *guanxi*, and is both temporary and unstable (Fan 2002b). This type of *guanxi* is viewed in the pejorative sense where bribery and graft take place among corrupt officials, thugs and businessmen (Gong 1994; Fan 2002a; Wank 2002; Granovetter 2004; Becker 2008; Fisman and Miguel 2008; Luo 2008; Link 2008; Hwang *et al.* 2009).

Finally, the third use of the term *guanxi*, or the “mixed tie,” employs *renqing* (personal feelings) and *mianzi* (face) to create a particularistic tie in which individuals seek to influence other people generally among relatives, neighbors, classmates, colleagues, teachers and students (Fried 1953; Jacobs 1979; also see Hwang 1987). These ties, at once personal and instrumental,

seek to exchange favors through personal connections in order to obtain public or private goods (Walder 1986; also see Yang 1994, 132-134). Mayfair Mei-hui Yang's seminal work, *Gifts, Favors, and Banquets: The Art of Social Relationships in China*, (1994) provides an in-depth study of China's gift economy demonstrating how power structures in socialist, redistributive economies are manipulated by individuals seeking their own advantage. While guanxi remains prevalent in Chinese culture, its uses have changed throughout time to accommodate prevailing sociopolitical conditions (Kipnis 1997).

Guanxi developed out of necessity against the backdrop of an increasing population and a fixed landmass, frequent floods and famine, strife and starvation, and the arbitrary will and grandiose dreams of China's dynastic rulers (Bell 2000, 132). Ethical laws served the patrimonial rulers' political goals well, as they were malleable and expedient in effecting the wishes of the ruler. Since the laws were designed primarily to protect and further the states' interests, local residents found themselves severely restricted by China's ruling powers. Additionally, a complex web of social obligations and responsibilities attached at birth further limited personal freedoms and rendered Chinese virtual slaves to both family and state. Chinese succumb to the domination of three systems of authority from birth; secular control ranging from township, county, province and central (national) governments that exercise political authority, theocratic authority where the King of Hell, city gods, local deities, and other supernatural beings comprise a system of gods and spirits (ghosts) that exercise supernatural control (into this category we can appropriately add superstition, beliefs based on the powerful forces of the entities previously mentioned), and hereditary membership into the clan system under the domination of the head of household based on ancestral lineage that fixes a person's position in

society. For women, a fourth system exists: domination by men throughout their entire lives beginning with their fathers, then husbands, and finally their sons (see Eastman 1988; Wolf and Witke 1975).

Burdened with a lack of personal freedom and an obligatory web of responsibilities, peasants struggled to secure goods and services that were frequently restricted or denied. Reliance on ones' family members was not always sufficient, so support was often sought through membership in a village or work group (Bell 2000, 132). Establishing and maintaining cooperative relationships with those in a position to help, or by having a connection to someone who knew someone else that could help, became a way of life and an interdependency based on "reciprocity" became crucial to survival (Yang 1994, 91-108).

Lien-Sheng Yang's work supports the historical continuity of guanxi by tracing the concept of "reciprocity" in Chinese society from ancient times to late imperial times in his work, *The Concept of Pao as a Basis for Social Relations in China* (Yang 1957).³ Expounding on its origins, Ming-Cheng M. Lo explains in his work *Guanxi Civility: Processes, Potentials, and Contingencies*, that "traditionally, guanxi was rooted in the ideology of Confucianism, which prescribed the nature and content of the ties that sustained and regulated court hierarchy, friendships (largely among the elite strata), and an extended web of kinship," always "particularistic, fixed by the specific positions of the people involved" and "confined to a community knit together through blood ties, the feudal court, or in some cases a long history of personal association" (Lo and Otis 2003, 132). Hence, the very foundation on which guanxi

³*Pao* is also rendered *bao* in some texts.

relationships are based creates a complex network rooted in Confucian social theory (King 1991, 79).

Confucianism

Confucius (551-478 B.C.E.) lived during the decline of the Zhou dynasty (c. 1100-256 B.C.E.) when China's borders were contracting and the *fengjian* system, established centuries earlier, was undergoing a gradual breakup.⁴ Wu Wang had established the Zhou dynasty after overthrowing the last of the Shang Dynastic rulers, then divided the conquered lands into a series of vassal states ruled by the relatives who assisted him in his rise to power. This created a sort of enlarged family-ruled empire with a sense of filial responsibility to the head.⁵ Under the Western Zhou, the *fengjian* system created a social order that in many ways reflected the medieval European feudal system emphasizing social status distinctions, honoring blood relations and the bonds of obligation based on kinship (Huo 2007).⁶ But as the original rulers died off, their successors and their successors' subordinates pursuit of their own self-interests, gave way to uncooperative relationships resulting in bitterness, usurpations, war, and the breakdown of the family system (*The Philosophy of Confucius*, 7; also see de Bary 1960, 140). Finally, non-Chinese tribes sacked the capital in 771 B.C.E. leaving Zhou dynastic rulers to struggle with finding a way to achieve stability. It was against this backdrop, now recognized as one of the most intellectually creative eras in Chinese history, and commonly referred to as the "100

⁴Confucius is rendered as *K'ung Fu Tze* in Mandarin Chinese.

⁵See *The Philosophy of Confucius*, 7 for a discussion on filial responsibility.

⁶*Fengjian* and feudalism are terms often conflated in the West. Yan Fu first confused *fengjian* and feudalism in his 1904 translation of *E. Jenks*, 'A History of Politics.' In this book, Yan translated *fengjian* as feudalism. Thus, the feudalism of Western Europe came to be associated with Chinese traditional society throughout the end of the Qing Dynasty (1912) and even up to today. See Huo 2007. While distinct, these two systems share similarities including decentralization, hereditary fiefs (*zhūhóu*), a structured hierarchy with peerage ranks below the royal ranks in descending order with common English translations: *gōng* translated as "duke," *hóu* translated as "marquis," *bó* translated as "count," *zǐ* translated as "viscount," and *nán* translated as "baron," along with a hereditary class system. Also see Morton and Lewis 2005, 25.

Schools of Thought” period, that Confucius rose to become the most stabilizing force in Chinese history.

Confucius descended from a lesser aristocracy and his family had sunk into a position of poverty by the time of his birth. Fatherless at a young age, he was left to struggle with the difficulty of securing an education and making his own way in an unstable world where violence and disorder among the ruling classes left no recourse for men who sought justice. Resolved to bring order and peace, Confucius chose politics and sought a position with any ruler willing to retain him. He eventually secured an office in his native state of Lu and although he achieved a fairly high position, enjoyed only short-lived success (de Bary 1960, 15-16). Confucius was driven from his home by feudal lords who were jealous of the fame he received as a “righteous” judge and moral teacher (Wilson 1982, 6). Overall, Confucius’ political career was thought to have been a failure and he turned ever more toward teaching the young men whom he hoped would succeed him in public life.

The teachings of Confucius sought to promote the restoration of filial piety and unity. Confucius emphasized a return to virtue based on the restoration of the old system where social status distinctions, honoring blood relations and the bonds of obligation based on kinship, prevailed. Further, he sought to link the individual to the state in a hierarchical, organized manner. His teachings emphasized the actions of men on earth and were devoid of any reference to an afterlife. He was convinced that men were basically good and easily led by example. He taught that a model ruler would be assured of a model populace (de Bary 1960, 16-20). By the “mandate of heaven,” the emperor was appointed to serve as father and mother of those ruled, and it was an emperor’s responsibility to lead the people by example (Liang 2010, 215).

However, the emperor-subject relationship was only one of several hierarchical relationships dictated in the Confucian tradition.

In addition to promoting the emperor-subject relationship, the husband-wife, father-son, friend-friend and teacher-student relationships dominated Confucius' teachings (Bell 2000, 133).⁷ When one of his students asked him to define the one word to "serve as a rule of practice for all one's life," Confucius was said to have answered with the single word "reciprocity." He then went on to explain "what you do not want done to yourself, do not do to others" (Kong Fuzi's *The Analects of Confucius*, 1524). This single rule was to govern all relationships as both dominant and submissive participants strove for virtue; the dominant party through benevolence and the submissive, through obedience.⁸

During the Han dynasty in the second century B.C.E., King Wu gave Confucianism a privileged position declaring it the official creed of the nation. Confucianism became the ideological basis of imperial rule and only Confucianists could serve as officials. The Five Classics became the principal, if not the sole study of all scholars and statesmen, and a National University was instituted to train them. The Classics have been inculcated into the hearts and minds of every Chinese school boy and have had a profound influence on the thoughts and culture of East Asian people for hundreds of years.⁹ The official theory was that education (in

⁷The five cardinal relationships found in Confucianism are: ruler and subject, father and son, husband and wife, elder and younger brother, friend and friend, also known as *wulun*. See Hwang 1998a, 27, 31; Hwang 1999, 168; Chen and Chen 2004, 307; Nuyen 2004, 434-435; and Weber 1951, xxxi.

⁸"The ethics of Confucianism are based on the following theories: 1) The Universe is regulated by an Order which is moral in its essence. 2) Man is morally good by nature, and it rests with him to remain so. 3) Man errs from ignorance and the force of bad example. 4) The remedies are education of the official classes and good example set by them. 5) The individual must rectify himself before he can rectify others. 6) Above all it is essential to cultivate the Five Virtues viz., benevolence, justice, propriety, wisdom, and sincerity" (Williams 1976, 86).

⁹Presently, China proper and Taiwan observe Confucius' birthday as Teachers' Day.

principle, available to all), not birth (the luck of the draw), should be the decisive factor in determining a person's status. "Liberty" was a concept neither understood nor sanctioned. Everyone knew their rank and behaved accordingly.

Later, as China's dynastic system crumbled under the pressures of the 1911 Republican revolution, Confucianism reemerged in modified forms. Politically, Confucianism was dead. However, Confucianism had more than a political foothold on the populace. The Confucian ethic was prevalent in Chinese culture from the rural peasants in the countryside to the urban Chinese in coastal cities. Confucian ideology had survived throughout imperial China, the period of Warlordism, the Republican era, the Communist era and into the Era of Reform. Although Confucianism was subject to continuous reinterpretation throughout these periods, the fundamental philosophical tenets remained strong motivators of "correct" behavior (Yau and Steele 2000, 148-149). Confucian values dictate norms of behavior where an individual is "not only answerable to himself, but also everyone related to him including his superiors, his family, and his colleagues" emphasizing compliance to the rules in order to maintain stability and harmony; each individual within society ceases to exist as an individual, capitulating to the whole in order to occupy a position in a greater society (Lim and Lay 2003, 321-322). Confucianism however, was not the sole ideological influence on the Chinese.

Taoism and Buddhism

Taoism filled the void that Confucianism left behind in matters of spiritual concern. Confucianism concerned itself with the here-and-now, devoid of mention of an afterlife, spirits, or other supernatural beings. This made way for Taoism, although barely tolerated, to establish a foothold by providing the Chinese with what Confucianism had failed to supply; a view to the

spirit world beyond. Lacking any scientific basis at all, Taoism grew to become an organization of magicians who, in line with their Buddhist brothers, existed along side Confucianists to provide a spiritual retreat into a more peaceful and serene place where the poor and suffering Chinese sought refuge from daily life. Rife with portents, spirits, magic, idolatry, ancestor worship and superstition, Taoism and Buddhism were viewed more as a religious component due to their supernatural elements.¹⁰ Taoism stressed the harmonious relationship between men and nature, complementary opposites in the form of yin and yang from which *feng shui* emerged, and that life was transitory — death was just another chapter in man's experiences. Buddhism complemented Taoism and reinforced the tenets of Confucianism by stressing avoidance of excesses in all things, acceptance of reality as it was and to resist all desires, and that karma would ensure that one's deeds would be revisited upon them and their household. The secular bureaucracy tolerated these religions as an unavoidable evil necessary to tame the masses, albeit serving a subordinate position to Confucianism. Like Confucianism, Taoism and Buddhism became deeply rooted within Chinese culture and continues to influence Chinese today.¹¹

Reinforcement of Social Norms

Confucianism, Taoism and Buddhism are reinforced in China's built environment where hierarchical and organizational structures dictate social norms. This influence is reflected in traditional Chinese architecture still prevalent in rural China, briefly replaced with Soviet style housing in China's cities in the mid twentieth century, but making a resurgence in China's larger cities. Traditional Chinese architecture has embodied, protected and promoted social

¹⁰See Weber 1951 for a full discussion of religion in China.

¹¹As a matter of course, *fengshui* (lit. wind and water), rooted in Buddhism, has even made its way into Western society. Literature can be found on the practice of *fengshui* shelved in the "interior design" section of many popular bookstores.

relationships within the family, grounding people in both the built environment and society. “In attempting to capture the totality and the interrelatedness of both the artifactual and experiential elements of any dwelling . . . one realizes that there is indeed, an “archiCulture” manifested in the full range of elusive interrelationships linking house, home, and family” (Knapp and Lo 2005, 2). Indeed, the family and home are inextricably linked as expressed in the language. The Chinese character *jia* translates as house, home, residence and family.

Constructed in true post-and-beam tradition, Chinese building practices are vastly different from the West. Chinese structures begin with the common denominators, *jian*, *kaijian*, and *jia*, spacial units of measurement that reflect modular building practices with specific lengths that are considered fixed and inextricably connected to the wealth and happiness of its occupants. The *jian* is a measure of width that represents the span between two lateral columns constituting a bay; *kaijian* is used interchangeably with *jian* to describe the horizontal compartmentalization or sectioning of the building across the facade; and *jia* refers to one of the stepped roof purlins that support the common rafters of a rising roof (Knapp 2000). This modular style of construction is employed in the design and layout of traditional housing. All traditional dwellings begin with these common denominators, and these three measures give traditional dwellings their proportion. A single *jian* represents the nucleus of living space and has always been the home of relatively poor villagers or workers with insufficient resources to meet larger housing needs. A single *jian* can also represent a new household awaiting the addition of family members and the prosperity necessary to grow. It is not uncommon for many *sanheyuan* and *siheyuan* to have begun with a single *jian*, with additions through the years until it has surrounded itself on three or four sides. The arrangements of *jian* take on a human form, with

outstretched arms representing the side *jian* and the head representing the main hall. Feng shui, rooted in Taoism, follows this analogy between man and home inextricably linking the man to the structure.

A mix of sound construction practices and pure superstition are employed in the construction of traditional dwellings. Craftsmen use a *lu ban chi* (measuring device) to ensure that unfavorable units of measure are avoided. *Jian* and *jia* are normally found in odd multiples, such as three, five, and seven. Odd numbers are earthly and desirable on the horizontal plane. The numbers four and six are to be avoided since they are regarded as asymmetrical. Four should never be used as it is a homonym for “death” and will likely bring the same to any family that occupies the home. Two *jian* are considered neutral, perhaps so as not to deprive a poor family of additional space if they are unable to afford the third. Even numbers are reserved for height as they are heavenly. “These sumptuary regulations, while formulated to preserve Confucian status distinctions, also contributed to the standardization, modularization, and stylization of Chinese houses” (Knapp 2000, 23).

Within the home, the interconnectedness is hierarchal and expressed in the architectural design. Knapp expounds, “In traditional China, a house or home was a humanized space, structured to family organization, and an instrument for weaving the web of Chinese social and ethical norms. The layout of fully formed Chinese dwellings creates a matrix where space is designated according to a patriarchal system in which there are hierarchies defined by generations, gender, and age. The degree to which spatial divisions are apparent in any dwelling is a function of its scale as well as the wealth and status of the household living within it” (Knapp 1999, 8).

Rural villages and small towns reflect a myriad of hierarchal relationships that are at once, defining and restricting. Knapp explains, “There is an additive quality to peasants houses, guided by notions of hierarchy and precedence, that gives spacial definition to the human relationships which it contains and expresses” and “goes beyond mere shelter to express shared values within folk culture” (Knapp 1986, 51). C.A.S. Williams expounds on the mixture of tradition and superstition that dictates the hierarchy of buildings within the village. Limiting residential homes to two-storied buildings protects the owners from towering over their neighbor and depriving the humbler dwelling of heaven’s guardianship. Temples should rise above the rooftops of homes, and towers should rise above the temples. The height limits are set at 100 feet, as this is the altitude in which good spirits fly through the air. Further, good spirits blow from the south and to benefit from these, proper siting and orientation is necessary (Williams 1974, 52; Williams 1976, 24). The same fundamental principles are followed in all traditional Chinese dwellings including the octagonal shaped courtyard homes known as *Bagua* found in Fujian (Wang, 2000).

The courtyard house is the quintessential representation of the social organizational structure and hierarchy of the traditional Chinese family. Within the walled complex of attached and semi-attached rooms, exists a “means of socializing family members by applying rules of propriety and giving shape to their values” (Knapp 1999, 10). These social meanings are found in the form and arrangement of space and the manner in which those spaces speak to an axiomatic set of relationships as defined by Confucian thought. Longitudinal routes from the front of the compound to the rear reinforces a spacial hierarchy, a layering of etiquette as one moves front to back and side to side. This hierarchy is to be respected. While casual visitors

may be invited into the entry vestibule, friends and family are often welcomed into the courtyard and the first level of adjacent halls. Further inward, is the realm of privacy afforded the women in the family. Occasionally, raised terraces are employed to delineate space in a hierarchal manner. “In terms of their elemental design principles, Chinese dwellings are typically inward-looking, framed by balanced structures, hierarchically organized and ritually centered — like the family units occupying them and the imperial state writ large” (Knapp 1999, 10-11).

The imperial city of Peking was by no means a city of men, but an *axis mundi*, “a conduit through which the power of Heaven was focused and channeled” (Campanella 2008, 94). This transcription of heavenly order in urban form had as key elements, astral counterparts; Peking’s “central axis replicated the celestial meridian” while the Purple Forbidden City “referred to a royal constellation near the polestar known as the ‘Purple Hidden Enclosure.’” Additionally, “star groups were evoked in the names of city gates, while the placid centrality of the polestar, apparently motionless in the night sky while all others circle worshipfully about, was a symbol of the emperor himself” (Campanella 2008, 95). The city’s design followed highly specific guidelines to ensure its fitness as the grand altar for the imperial liturgy, principles established more than a thousand years before the establishment of the Ming Dynasty and codified in the *Kaogong Ji* (Record of Trades), as part of a Confucian text from the Eastern Zhou Dynasty (770-476 B.C.E.)(Campanella 2008, 95). Peking exceeded the splendor of its predecessor, the *Dadu*, which closely followed the *Kaogong Ji*, and “was an even more exquisite manifestation of its key principles, which included orientation to the cardinal compass points; symmetrical rectilinear layout with a palace complex at the center; a north-south cardinal axis or ‘ritual way’; a gridiron of streets and blocks; and a defensive wall with gates positioned along each side” (Campanella

2008, 95). In essential diagrammatic form, the imperial city plan, an enclosed square pierced with a central axis, calls to mind one of the most important Chinese characters — 中 *zhong* — , and is translated as “middle” or “center,” illustrated as a line bisecting an enclosure, perfectly representing the “Middle Kingdom.” Peking was the archetypical imperial city where the Sons of Heaven reigned supreme over subjects compelled by Confucian doctrine inculcated from birth for hundreds of generations and firmly embedded within the Chinese psyche. While the end of China’s dynastic system in 1912 would significantly alter China’s history setting it on a trajectory away from its ancient historical roots, it had limited affects on the hearts and minds of Chinese who were tied to its Confucian value system.

For centuries, Confucianism, Taoism, and Buddhism, combined with local customs, allowed Chinese peasants to survive the harshness of everyday life and served as a stabilizing force in society; a legacy that resulted in a unique set of ground rules for the functioning of a society based on specific relationships between people (Redding 1990, 44-49). These relationships are expressed as *guanxi*, a complex network of interpersonal relationships dictated by Confucian values.

Existing Research on Guanxi

The literature on *guanxi* and Chinese ethnic networks is enormous, ranging from the uniqueness of *guanxi* in Chinese culture and the role it plays (Walder 1986; King 1991; Fei 1992; Yang 1994; Pye 1995; Yan 1996a; Kipnis 1997; Luo 1997; Bell 2000; Gold, Guthrie and Wank 2002), to the use and fate of the phenomena (Guthrie 1998; Yang 2002). Simply attempting to define *guanxi* can raise lively debates in academic circles.

Aihwa Ong argues that the word “guanxi” is a construct of Western academics in an attempt to define Chinese culture (Ong 1997, 181). Andrew Kipnis questions whether the word distinguishes something Chinese from something non-Chinese or whether it distinguishes one kind of Chinese thing from another admitting a general aversion to the “oversimplistic” question (Kipnis 2002, 21). Duran Bell argues that the Chinese word *guanxi* has been incorrectly translated as “connection” when “relationship” is a more accurate translation more closely defining the concept (Bell 2000, 132).

Addressing the uniqueness of guanxi, Jean Oi argues that guanxi is neither “inherently Chinese nor traditional” and can be found in other societies where structural causes underlie the use of personal ties to secure scarce resources (Oi 1989, 228). Andrew Walder supports this view by asserting that Chinese [guanxi] networks thrive in the modern communist enterprise as “a substitute for impersonal market transactions in a setting where such markets are restricted and scarcity prevails” (Walder 1986, 26). They are also a response to the dependence on superiors for housing, promotions and other rewards and can be found in like societies where similar structural conditions exist (Walder 1986, 26). Doug Guthrie contends that there is “nothing fundamentally Chinese about the concept of guanxi, as it is dependent on the structure of distribution systems, the structure of opportunities in the market, and the formality and stability of market institutions themselves” (Guthrie 2002, 37). Scholars argue similar concepts can be found in other societies; *wa* in Japan, *inhwa* in Korea, *jeiinho* in Brazil and *wasta* in Jordan and other Arab nations (Smith *et al.* 2011).

Chinese people view the role that guanxi plays in society quite differently. Lucian Pye suggests that the very basis of a Chinese person’s understanding of the world is viewed from

within the web of relationships in which a person is embedded (Pye 1992). Mayfair Yang found variance in the characterization of the use of guanxi ranging from pejorative to morally neutral with some interviewees expressing mixed feelings (Yang 1994). Amy Hanser extends the continuum by adding skepticism “bordering on disdain” (Hanser 2002, 156). Both Yang (1994) and Hanser (2002) agree that these attitudes are attributed to the structural position that an actor holds in society although Yang expands on the point by arguing that China is undergoing specific social changes or a historical shift from one worldview to another and one set of habits and interpretations to another. Attitudes about the social and strategic cultivation and use of guanxi have also changed, resulting in situations where one may possess guanxi, yet not use it, while others aspire to ever widening networks where guanxi can be parlayed into economic and political gain. Guanxi may be used to promote personal goals with both positive and negative effects ranging from transactional efficiency, open informational flows, and the acquisition of business licenses, to expropriation, graft, bribery, violent crime, and collateral damage to society as a whole (Gold 1985; Davies *et al.* 1995; Fock and Woo 1998; Lovett, Simmons and Kali 1999; Leung and Wong 2001; Fan 2002a; Cheung *et al.* 2005; Provis 2008; Zhang *et al.* 2009; Li 2011). Guanxi is a very powerful tool and its use, whether virtuous or nefarious, is dependent on the influential power of the actors, their disposition, and the goals or objectives sought.

Contemporary research on guanxi is not without its critics. Fan addresses fundamental issues concerning the quality of current research arguing that there are problems with the definition, conceptualization, classifications, reciprocity characterizations, and research findings concluding that “guanxi is a typical backstage culture” and “people would be reluctant to share their guanxi secrets with an outsider unless the researcher succeeds in being accepted as an

insider” (Fan 2002b, 24). This point is well taken in light of the negative attention that guanxi has generated and the potential for government investigations into transactions where guanxi may have afforded an unfair advantage. Nevertheless, scholars find unique ways to gather data and conduct research on guanxi (see Kipnis 2002, 22 and Xin and Pearce 1996, 1650).

The study of guanxi is distinctly interdisciplinary with scholars from sociology (Fei 1992; Bian 1997; Hamilton 1977, 1996; Hwang 1987, 1998; Gold 1985, 1989, 2002; Guthrie 2002, King 1980, 1991; Wank 1996, 2001, 2002), anthropology (Duran Bell 2000; Kipnis 1996, 1997, 2002; Liu 1998; Smart 1993, 1998; Yan 1996a, 1996b; Yang 1989, 1994, 2002), economics and business management (Fan 2002a, 2002b; Provis 2008), psychology (Smith *et al.* 2011), and political science (Dittmer 1995a, 1995b; Nathan 1976, 1993; Pye 1982, 1988, 1992, 1995; Solomon 1985, 1999; Guo 2001) adding to the body of knowledge. As Fan succinctly notes, “Guanxi is such a unique Chinese social concept based on its cultural values as well as political and socioeconomic systems that it cannot be studied alone from economic or financial perspectives” (Fan 2002b, 23). Hence, the multidimensional nature of guanxi demands an interdisciplinary approach. Any attempt to isolate guanxi or confine its study to a single discipline will result in a skewed, unbalanced understanding of the concept and its use.

Prominent sociologist Xiaotong Fei, lays the foundation for guanxi in his seminal work entitled, *From the Soil: The Foundations of Chinese Society*. Fei likens the egocentric Chinese social structure to the concentric rings that come from throwing a stone into a pond noting that “each circle spreading out from the center becomes more distant and at the same time more insignificant” (Fei 1992, 65). The individual remains at the center of his social world with all others placed in various distances around him. Each concentric ring represents a certain type of

relationship with specific responsibilities and privileges entertaining overlapping circles when relationships between individuals intersect. Cultivating and maintaining relationships that expand ones' network is a lifelong endeavor bestowing honor, wealth, and power on those who are successful in building, maintaining, and employing their *guanxi*.

Later studies conducted by Mayfair Yang (1994), Yunxiang Yan (1996a), and Andrew Kipnis (1997) focus on understanding *guanxi* (social relations) and *guanxixue* (the art of social relations) each considering different aspects of the phenomena. Mayfair Yang examines *guanxi* with a view toward the political economy of gift relations. Yang focuses on the “gift economy,” from a position of power relations that effectively subverts China’s socialist state redistributive economy (Yang 1994, 2002). Yunxiang Yan looks at *guanxi* through the lens of rural peasants who perceive their *guanxi* networks as the very foundation of the society in which they live, rather than merely as instrumental webs of particularistic ties (Yan 1996a). Andrew Kipnis grounds his research in the more recent past focusing the structure of *guanxi* and its meaning to villagers by conducting a detailed ethnographic study of gift giving as it relates to *guanxi* (Kipnis 1996).

Dittmer looks to the political realm with respect to *guanxi* to discuss the differences between informal and formal politics arguing that they continue to operate alongside one another, with the former supplanting the latter in times of crisis. Dittmer notes that “the structural circumstances most conducive to informal politics are those in which the leadership is beset by a crisis not resolvable through standard operating procedures, permitting the existing hierarchical monopoly to break down into a more open competition among elites” that resort to informal structures (Dittmer 1995a, 1995b 1996). Lucian Pye acknowledges the nuanced ways that *guanxi*

plays out in political settings, but disagrees with the dichotomy between “informal and formal” politics pointing out the difficulty in distinguishing one from the other as “. . . there are no neat boundaries between what might be thought of as official and unofficial politics” (Pye 1995, 36). Guo echoes these sentiments opening his essay by acknowledging that, “Political alliances in elite politics, while usually linked with ideological commitments and policy preferences, also rely greatly on guanxi” moving on to outline the four dimensions that comprise the basis for guanxi in elite politics: instrumental, etiquette, moral and emotional. “In elite politics, these four dimensions are often intertwined, undergirding the dynamic and quality of guanxi. When these dimensions coexist harmoniously, they will complement and reinforce one another; but when they coexist in tension, they undermine and weaken one another” (Guo 2001; 69, 72).

More recent studies develop new scales for measuring guanxi in the wake of criticisms of existing measures. The accuracy of existing scales calls into question levels of reliability (see Xin and Pearce 1996 and Song and Werbel 2007) and varying types or degrees of guanxi behavior (see Leung and Wong 2001; Tinsley, *et al.* 2004). Latham and Gordon note that in “measuring guanxi, researchers can take different approaches” that “produce very different research outcomes” (Latham and Gordon 2009). Hence, researchers need to be aware of the Chinese indigenous constructs of guanxi when they develop measurement scales. Yen, Barnes and Wang acknowledge these constraints and turn to survey data to develop a scale for measuring guanxi based on three Chinese relational constructs – ganqing, renqing and xinren as a starting point for business practitioners to assess their guanxi and at the same time provide academics with a scale for operationalizing the measurement of guanxi (Yen, Barnes and Wang 2011). Due to the various aspects, components and approaches to guanxi, many researchers simply construct

case specific scales and measures to ensure both reliability and validity in the absence of universally applicable measures. As researchers grapple with constructing universal measures of guanxi, others propose research models to employ in the future study of guanxi (Chen and Chen 2004; Taormina and Gao 2010; also see Jacobs 1979).

While the literature on the concept of guanxi is extensive, there is limited research that addresses the actual *practice* of guanxi and the specific ways that it functions in China today. Additionally, specific case studies addressing the manner in which Chinese social networks operate internationally and their effect on political and socioeconomic issues have not been sufficiently explored. Willis and Quan point this out noting that “despite the amount of research undertaken to date, it remains unclear as to how guanxi really operates within a business context *today*, in a rapidly changing, globalized China” (Willis and Quan 2009, 58). Still fewer studies reveal how firms initiate, build and use guanxi networks, and how they change over time (Chen and Chen 2004, 310). Further, “there is little attention paid to its possible use and relevance amongst today’s younger generations of Chinese businesspeople who come from a very different world than that of their parents” (Willis and Quan 2009, 58). Gold, Guthrie and Wank offer the following comments on the progression of research on social connections in China; “A step forward in the research on guanxi will come from an examination of new types of data and heretofore-unexamined contexts in which guanxi can be found. The interesting challenge before us now lies in figuring out the specific way and under what set of circumstances guanxi matters in China’s transforming economy, and it is only through an in-depth examination of new research sites and new cases that we can begin to uncover the ways that guanxi matters in China today”

(Gold, Guthrie and Wank 2002b, 18). While the role of guanxi and the transaction networks created by its use are changing, the fundamentals have remained unchanged.

Fundamentals of Guanxi

Guanxi is transferable, reciprocal, intangible, utilitarian, and personal (Luo 1997, 44). And while a primary network is inherited at birth, sophisticated networks must be consciously produced, cultivated, and maintained over time (Kipnis 1997; Yan 1996; and Yang 1994). Building and maintaining guanxi networks is an art that requires situational awareness and an acute understanding of key concepts. These concepts define the different aspects of guanxi that are related to the development and maintenance of guanxi relationships and define the responsibilities of the parties.

Mianzi or “face” is a concept closely related to guanxi and deeply rooted in Chinese culture. As early as 1894, Arthur H. Smith wrote about face, placing it as the first chapter in his work, “*Chinese Characteristics*.” Smith recognized both the importance and complexity of face noting that the word face “does not in China signify simply the front part of the head, but is literally a compound noun of multitude, with more meanings than we shall be able to describe, or perhaps to comprehend” and also, the “key to the combination lock of many of the most important characteristics of the Chinese” (Smith 1894, 16-17; also see Smith 1903, 107; MacGowan 1912, 301). Hu Hsien-chin explicates the concept of face separating *lien* and *mianzi* as two distinct concepts, the former as temporal and situational with the latter as a more permanent character trait. *Mian* isolates the deed as a single event separate from the person themselves, while *Lien* reflects the very substance of an individual and their moral integrity (Hu 1944). More recent attention to “face” attempts to define the concept concisely. David Ho

defines *mianzi* or “face” as “the respectability and/or deference which a person can claim for himself from others by virtue of the relative position he occupies in his social network and the degree to which he is judged to have functioned adequately in that position as well as acceptably in his general conduct” (Ho 1976, 883). King adds that “it is no exaggeration to say that *kuan-shi* [guanxi], *jên-ch’ing* [ganqing], and *mien-tsū* [mianzi] are key sociocultural concepts to the understanding of Chinese social structure” (King 1991, 63). Face is a dynamic concept and one can utilize face, earn face, save face, give face, and lose face (Hwang 1987, 944-974). Willis and Quan agree that “Face, like money, can be earned, lost, given or taken away. Face can also be measured, altered, exchanged and influenced” (Willis and Quan 2009, 53). The handling of face can take the form of compliments, gifts, and favors or insults, subtle snubs and outright rejections. Face is inextricably tied to guanxi. Buckley, Clegg and Tan emphasize the importance of *mianzi* as a “key component in the dynamics of guanxi,” and because they operate on a reciprocal basis, “saving *mianzi* has to go hand in hand with nurturing guanxi” (Buckley, Clegg and Tan 2006, 276).

The second concept, *renqing*, can be rendered as “human feelings” or “sympathy” and “connotes a set of social norms by which one has to abide in order to get along well with other people in Chinese society” (Hwang 1987, 954; also see King 1980 and Chen and Chen 2004). “In essence, *renqing* provides the moral foundation for the ideals of reciprocity and equity that are implicit in all guanxi relationships” (Luo 1997, 45). Yen, Barnes and Wang assert that while English language dictionaries render *renqing* as “sensibility,” “human sympathy,” “human kindness,” “favor,” “favoritism,” and “gift,” in practice, “*renqing* often incorporates humanized obligations such as gift[s] or favor.” According to the authors, when placing *renqing* in an

English context, it could be understood as “owing a favor” (Yen, Barnes and Wang 2011, 99). However, the concept is not quite as straightforward as it appears. *Renqing*, like *guanxi*, is an art whose rules are implicit in the exchange; the “gift” need not be repaid immediately (Hwang 1987), repayment should exceed that which was received (Kipnis 1997), failure to repay is immoral and will cause a loss of face (Luo 2001), and it is better to give that which is needed instead of that which is desired (Yen, Barnes and Wang 2011, 99). In Chinese culture, “*renqing* is much more highly elaborated and more tightly bound up with ideas of reciprocity (*bao*) than it is in many other cultures” and “implies not only a normative standard for regulating social exchange, but also a social mechanism that an individual can use to strive for desirable resources within a stable and structured social fabric” (Hwang 1987, 946). Based in Confucian philosophy, *renqing* is regulated by the social norm, “if you have received a drop of beneficence from other people, you should return them a fountain of beneficence” (Hwang 1987, 954). Factoring this debt into an already complex web of social obligations where loyalty to multiple individuals exists concurrently, places one in the position of never being able to repay the debt of *renqing*. Consequently, cultural devices have been developed to avoid the entanglements of *renqing* and are commonly employed to avoid unnecessary entanglements (Hwang 1987, 964). *Renqing* itself is multidimensional and “contains an emotional aspect, which is expressed in daily life by the term *ganqing*, another important indigenous concept” (Yan 1996b, 139).

Ganqing, which is also difficult to translate, can be rendered as “sentiment,” “emotional attachment,” and “good feelings” (Yan 1996b, 139). Jacobs prefers to leave the term in its original Chinese form, “rather than use such inadequate translations” and deals with the concept through a discussion of its characteristics (Jacobs 1979, 259). In his classic ethnography of a

village in Anhui Province, Fried draws a careful distinction between *ganqing* and friendship; *ganqing* “differs from friendship in that it presumes a much more specific common interest, much less warmth and more formality of contact, and includes a recognized degree of exploitation” (Fried 1953, 226). Fried was, perhaps the first to notice the role of sentiment in relationships noting that *ganqing* can vary in warmth, intensity and frequently, and improves over time; it can be described as “good,” “not bad,” “not good,” or “absent” (Fried 1953, 102-104). Andrew Kipnis argues that *ganqing* is an inherent part of *guanxi* and “all practices of *guanxi* production either presume or assert an equivalence between material obligation (the obligation to assist with favors, labor, money, or other material goods at a future date) and human feelings (*ganqing*)” (Kipnis 2002, 24). *Ganqing* is useful in strengthening *guanxi* relationships bringing the parties closer in the relationship (Chen and Chen 2004, 314). Those relationships lacking *ganqing*, can be “best characterized by *renqing*, the observance of proper social form, which involves lesser degrees of affection” (Yang 1994, 122).

Bao which translates “reciprocal” or “reciprocity” is perhaps the most salient concept in the *guanxi* repertoire.¹² The very foundation of *guanxi* rests on the concept of reciprocity which acts as a safeguard against abuse. “Whenever a gift, banquet or favor is accepted, there is an obligation to reciprocate. Indeed, it can be said that implicit in the very act of accepting is an agreement in trust to repay in another form at a later date” (Yang 1994, 142; also see Yang 1957). Yang argues in her seminal work, *Gifts, Banquets, and Favors: The Art of Social Relations in China*, that “the principle of reciprocity, often translated in terms of consideration of face (*mianzi*), takes on a role in *guanxi* exchange similar to the role of codified law in monetary

¹²See Mauss, Malinowski, Levi-Strauss, Firth, and Sahlin for a general discussion on reciprocity and “gift giving.”

transaction” (Yang 1994, 142). However, there is no set exchange rate value placed on the “gift” making repayment a difficult proposition. “Since there is no fixed value for each gift, but that value arising out of the context of each gift-giving situation and contingent on the particular persons involved, repayment often causes anxiety and lengthy deliberations over how and how much to repay” (Yang 1994, 143; also see Smart 1993; Yan 1996b; Yang 1989; and Yang 1957). There is an inherent tendency for escalation built into *guanxixue*, or the *practice* of *guanxi*. If repayment does not exceed the perceived value of the gift, an ongoing *guanxi* relationship tends to end; indebtedness ceases and there is no basis to respond to a future request (Yang 1994, 143). Consequently, debt keeps the relationship open (Fei 1992, 125).

While *mianzi*, *renqing*, *ganqing* and *bao*, are perhaps the more salient aspects of *guanxi*, they do not fill the repertoire of distinguishing characteristics. *Guanxi* is multidimensional having at its disposal bases from which relationships might be nurtured.

Four fundamental bases have been identified and defined as sources for *guanxi* relationships (Jacobs 1979, 243; King 1991; Yang 1994, 111-119; Kipnis 1997; Fan 2002b; Chen and Chen 2004, 311). The first base, kinship is preordained: every Chinese is born into a family of existing ties (King 1991). The second base, common social identities, is voluntarily constructed on commonalities such as birthplace (*tong xiang*), school (*tong xue*), or work (*tong shi*) (Jacobs 1979). Next, a common third party base is also voluntarily constructed on distant or loose ties where two individuals who do not know each other establish a relationship through a third party. Finally, there exists an anticipatory base in which promises to engage in future exchanges, collaborations, or joint ventures creates a tie between two or more parties to be

consummated at a later date (Yang 1994, 114-118). Once a relationship is formed, *guanxi* takes on specific characteristics that nuance its use and effects in specific contexts and settings.

The Rise of Guanxi

While the literature demonstrates that “gift” relations existed in both Imperial and Republican China (Yang 1957; Mitamura 1970; Jacobs 1979; King 1991; Fei 1992; and Yang 1994), there have been salient changes in the nature of *guanxi*. Prior to 1949, older Chinese remember “*guanxi*” as “*renqing*,” or appeals to human sentiment where favors performed for friends and family were considered investments in the future and any refusal of repayment was considered a breach of good faith (Yang 1994, 148-149).

In Imperial China, the harsh conditions of daily life suffered by many Chinese made a support system necessary. In more than a few cases, the support system was crucial to the acquisition of daily necessities, including food in times of famine. As a result, “the extensive kinship organization performed so many functions to meet the social and economic needs of the members of the community that it discouraged both individualism and independence” (Weber 1951, xxvi). Further, ties in and to the community created a strong solidarity of the kinship organization and the effective power of the elders, together with the self-governing status of the village, confining effective formal administrative authority mainly within the city walls creating a self-regulating community where formal institutions and legal norms proved unnecessary (Weber 1951, xxvi). This system persisted throughout China’s Imperial, Republican, Communist and Reform eras, especially in rural areas.

While this system effectively “deprived capitalism of the law and order necessary for trading over a wide territory,” (Weber 1951, xxvi) it also created an element of trust where

business conducted among those within the community or those outside the community with whom a relationship had been established, could rely (Weber 1951; Redding and Ng 1982; Walder 1986; and Xin and Pearce 1996). Hence, “Chinese statutes were codified ethical rather than legal norms” (Weber 1951, xxvi). While compliance with the “rules” escapes any formal codified mechanism, submission to traditional norms are exacted through social pressures (Redding 1990, 48). There is a direct correlation between the degree of dependency on social relations and the effectiveness of sanctions for inappropriate behavior. The very threat of censure from the community, which may be manifest in the form gossip, reputation, or outright ostracization is enough to assure conformity (see Hu 1944, 61; Redding 1996, 37-38; and Farrer 2002).

Walder argues that “networks of instrumental-personal ties thrive in modern Communist enterprise because of the social and economic resources they control, the scarcity that characterizes the consumer economy, and the wide discretion that officials have in interpreting the rules and distributing resources. These instrumental-personal ties are important avenues for which workers as individuals may pursue their private interests within the factory” (Walder 1986, 26). However, China’s eroding planned economy is giving way to market forces where private ownership, an abundance of consumer goods, and diminishing control over scarce resources is increasing. Although China is striving to develop institutions and codified legal norms that support a market economy, these institutions remain underdeveloped, inefficient, and ineffective.

Xin and Pearce’s study of underdeveloped institutions supports the role of particularistic personal relationships as substitutes for formal structural supports in business relationships finding that “private-company executives counteracted their formal structural disadvantages by

building good *guanxi* with government officials as protection from unstable conditions” (Xin and Pearce 1996, 1654). Hamilton found *guanxi* networks in China useful for “the regulation of transactions in the absence of state institutions for that purpose” (Hamilton 1977, 339). In a study on the effects of business and political ties on firm performance, Sheng, Zhou and Li found that “when legal enforcement is inefficient, the use of business ties effectively reduces unlawful behaviors and unfair competition” and “when the government does not provide sufficient support to all organizations, firms can capitalize on their political connections” (Sheng, Zhou and Li 2011, 11).

Although the underlying reasons for *guanxi* have changed throughout China’s history, the practice has survived and adapted to new situations compensating for various disadvantages. Today, the scarcity of consumer goods no longer characterizes China in its reform era economy. However, securing resources from what remains of the state economy, with official controls over state contracts, access to imports, bank loans, favorable tax incentives, access to valuable market information and influential persons, and exemptions from troublesome laws and regulations, the practice of *guanxi* has found new areas to colonize (Yang 2002, 464).

Guanxixue

Mayfair Yang argues a distinction between *guanxi* and the use of *guanxi* using the term *guanxixue* to describe and differentiate *guanxi* from its instrumental use. *Guanxixue* refers to the deliberate and strategic cultivation and use of personal relationships. As it implies, one may possess *guanxi*, yet not *use* it (Yang 1994; also see Yan 1996, Guthrie 1998 and Fan 2002b). Employing *guanxi* to secure scarce resources, reduce uncertainty, sustain cooperation and acquire information are examples of the instrumental use of *guanxi*. In some cases, *guanxixue* goes

beyond the realm of connections within a person's immediate reach. When an immediate connection is unable to help, attempts to elicit assistance through the relationships of others (friend-of-a-friend) is commonly employed (Yang 1994, 125; Chen and Chen 2004, 311; Fan 2002b, 8; Jacobs 1979, 265). Further, establishing and cultivating specific relationships where none currently exists in anticipation of future use, adds to the *guanxixue* repertoire (Chen and Chen 2004, 311).

In the absence of "true" *guanxi*, one may manufacture *guanxi*. Any element that creates a common bond or connection to another, such as like family names, common home province, or other elements that create a shared identity, may be used as a basis for manufactured *guanxi* (Yang 1989, 41). Once a commonality is detected, "familiarity, then is born of the fusion of personal identities. And shared identities establish the basis for the obligation and compulsion to share one's wealth and to help with one's labor" (Yang 1989, 41). One may *la guanxi*, or "pull" *guanxi*, to get on someone's good side or one may *guanxi gou qing*, or "ruin" *guanxi*, by inappropriate behavior. One may also *li shun guanxi*, or "straighten out" *guanxi* to restore a *guanxi* relationship after a minor upset within their *guanxi wang* or network (Luo 1997, 44-45; also see Jacobs 1979, 264). Proper ethics, tactics and etiquette must be observed while employing *guanxi*. Any breach can bring a loss of face and subsequently damage an otherwise good *guanxi* relationship.

While *guanxi* relationships are flexible, *guanxi* practice is contextual and learning how to utilize it effectively and with situational awareness takes time. *Guanxi* is generally reserved for the most needy of times (Chen and Chen 2004, 318), and its utility can be said to lie in its immediate availability derived through existing networks that have been cultivated and

maintained throughout a person's lifetime. For Chinese, it is a learned behavior inculcated from birth and perfected over time.

Uniqueness of Guanxi

Recognizing that there is no English word that accurately translates the Chinese word *guanxi*, advances the concept as linguistically, if not culturally, unique. The related concepts expressed as *mianzi*, *renqing*, *ganqing*, and *bao* are equally difficult to translate, reinforcing the unique nature of the vocabulary surrounding *guanxi*. This begs the question, if the words are absent from the vocabulary as Chinese understand them, could the concept be absent from society as well?

Walder, Oi and Guthrie argue that there is nothing fundamentally Chinese about the concept of *guanxi*. *Guanxi* is simply the product of an environment where formal rules of economic interaction are either vague or nonexistent, as was the case at the dawn of economic reforms (Walder 1986; Guthrie 1998; and Oi 1999). They argue that *guanxi* is the vehicle in which goods and services are secured. Further, the use of personal relationships to obtain goods and services in a shortage economy with weak legal infrastructures can be found in like societies, each with their own term to define the phenomena. Hence, they argue that it is the presence of specific structural and institutional conditions that promote reliance on *guanxi* to accomplish tasks while rejecting the argument that *guanxi* is grounded in Chinese culture or society *per se*.

In fact, personal networks do exist in other societies. For example, the term *blat* is used in Russia (Michailova and Worm 2003, Hsu 2005; and Ledeneva 2008); *wa* in Japan and *inhwa* in Korea (Alston 1989); *jeitinho* in Brazil and *wasta* in Jordan and other Arab nations (Smith *et al.* 2011) to describe like particularistic networks. However, these studies have shown that while

there are similarities in the concept, there are also very distinct differences embedded within cultural heritages possessing specific configurations and characteristics unique to the given culture.

Dunning's exploratory study into the cultural roots of guanxi suggest that it is a cultural phenomenon that originates from a Confucian legacy placing a high value on harmony and hierarchy (Dunning and Kim 2007). King's (1991) earlier work, *Kuan-hsi and Network Building: A Sociological Interpretation*, supports this historical basis. King expounds on the concept of guanxi arguing that it is part of the "stock knowledge" that Chinese draw from in their everyday life. "To know and practice kuan-hsi [guanxi] is part of learned behavior—of being Chinese. As a sociocultural concept kuan-hsi [guanxi] is deeply embedded in Confucian social theory and has its own logic in forming and constituting the social structure of Chinese society" (King 1991, 79). Andrew Kipnis takes an altogether different approach to guanxi. Kipnis posits that while guanxi may have its roots in Confucian theory, "its significance as a modern phenomenon rather than an ancient textual tradition" is grounded in "the practical actions of modern rural people living in a socialist state" (Kipnis 1997, 7). That is to say that "actors skillfully adopt strategies and draw on cultural resources in the pursuit of contemporary ends. They simultaneously utilize past cultural logics and generate new ones" (Kipnis 1997, 7). Yunxiang Yan acknowledges the dichotomy based in these two schools of thought. Citing an article written by Ezra Vogel in 1965 which "marked a switch of scholarly interest from this normative perspective to a view which concentrates on the practice of guanxi as a means of pursuing personal interests," Yan suggests that scholarly accounts of guanxi have adopted two very different perspectives. The first is uniquely Chinese, an element of "normative social

order,” while the second treatment is “as a practical means for advancing specific personal interests” (Yan 1996a, 3). Whether guanxi is culturally specific or universalistic, there exists protocol that is implicitly understood by all parties with predictable consequences for any breach of etiquette.

Universal Rules

One of the most important characteristics of guanxi is its universally understood and accepted “rules.” Hamilton likens guanxi to the linguistic structure in a language. “Social rules are mutually recognized conventions, a sort of social grammar that is available for utilization and that, when used, structures the action itself” (Hamilton 1996, 285). Chinese know the rules of interaction no matter where they live and little effort need be exerted in domestic or across border relations. The expectations of members within the network are reinforced by the obligations and responsibilities dictated through Confucian values. Universal rules however, do not preclude flexibility. In exploring political behavior, Lucian Pye finds that the rules of guanxi do not follow a constant formulation, but are nuanced and remain flexible. Pye’s findings demonstrate that “the very power of guanxi is that its workings are not limited to its ostensible basis but rather it can be universally directed and used for multiple and diverse purposes (Pye 1995).

Hwang makes a useful distinction among the three different rules governing guanxi-mediated social exchange with each rule rooted in a specific type of tie. The “need rule” applies to the expressive tie where the empathy of the favor-granter is drawn upon to elicit a response in favor of the receiver. The basis for the need rule can be found in traditional Chinese family arrangements and has three characteristics: first, all money is turned over to the family treasury with the exception of the woman’s private savings; next, daily expenditures are allocated on a

need basis; and finally, the surplus is distributed evenly among family members (Hwang 1987, 950). The renqing rule applies to the mixed tie where favor giving is compelled by consideration for mutual obligation. This particularistic tie occurs among constructed relationships with relatives, teachers, neighbors, and colleagues based on commonalities of birthplace, school or work unit. There is a degree of affection in this tie, but not as strong as the expressive tie. Reciprocity is embedded in this type of relationship and the “gift” is expected to be repaid at some point in time (Yang 1957; Hwang 1987, 953; Fei 1992; Smart 1993; Liu 1998; Yan 1996b; and Yang 1989, 1994). Finally, the equity rule applies to instrumental ties where guanxi is constructed, the expressive component is minimal and relationships are even more distant. This rule calls for equal treatment in the transaction and generally occurs at “arms length” usually between salespeople and customers, bus drivers and taxis and other consumer type transactions. One should expect a “fair deal” in this type of exchange (Hwang 1987, 951).

Reciprocity, while not specifically mentioned during the transaction, is an integral component of guanxi and therefore, assumed. When considering the transaction, there are several points to be made here. First, repayment may not be of the same value and is dependent on the relationship and the ability to repay. While unequal relationships are common within kinship networks, significantly unbalanced relationships outside of kinship will be difficult to maintain. Second, there is no specific time frame in which to repay a favor as long as a person remembers the favor and intends to repay at some future time. Neither does repayment have to be made to the person granting the favor since repayment may be made by granting favor to a designated member of the person’s network. It has been suggested that repayment, if made too quickly, appears as an unwillingness to pursue a long-term relationship and therefore, some time

should pass before repayment is made if the relationship is to be maintained. (Yang 1994, 143; Fei 1992, 125).

Basis of Chinese Society

Liang Shuming (1949) argues that Chinese society is neither individual-based nor society-based, but relationship based. That is to say that the emphasis is based on the relationship between individuals, albeit not specific individuals, but the nature of the relationships. Hamilton and Wang argue that “China should be considered not as a class-based but a network based society” (1992, 33). Fei’s earlier work supports this notion pointing to China’s strong Confucian roots and their effects. “Confucian ethics can not be divorced from the idea of discrete centers fanning out into a weblike network” where the emphasis is not on individualism, but on egocentrism (Fei 1992, 68). As early as 1947, Fei recognized and introduced the concept of *chaxugeju*, or differential modes of association where Chinese society is composed not of discrete organizations as in the West, but of overlapping networks of people linked together through differentially categorized social relationships resulting in a social morality that only makes sense in terms of these personal relationships (Fei 1992, 69-70). These individual networks have four key features. First, they are discontinuous, linking people from an egocentric position that presupposes multiple connections. Second, they are dyadic and personal with specific and prescribed behavioral patterns. Third, they are inherited, preset, and demand competent utilization. And finally, they are situationally moral based on both the social category of the individual and the relationship among the actors (Hamilton and Wang 1992, 20-24). One cannot join or withdraw from their network. Neither can they rearrange the relative position of actors within the network nor change the obligations dictated by tradition.

Viewing a guanxi network is much like peeling an onion. There are many layers that comprise one's network. The core consists of real and close relatives then moving outward, includes close friends, schoolmates, colleagues, acquaintances and finally those connected through commonalities such as village, region, or some other shared factor (Yan 1996b, 99-103). Through the analysis of gift lists,¹³ Yan succeeds in mapping the structure of a guanxi network in a rural village to reveal the type of tie through the gifts conferred at various life events to demonstrate a "heavy reliance on friendship ties as opposed to kinship relations" notwithstanding the importance of kinship ties, but to point out the limitations of the lineage paradigm while emphasizing the salience of expanded network connections (Yan 1996b, 105-121).

Guanxi Networks

There is substantial literature on guanxi networks ranging from the foundational basis to the framing of the network structure, affective power relations, mapping configurations, and the socioeconomic consequences of its instrumental use (Hwang 1987; King 1991; Fei 1992; Boisot and Child 1996; Wank 1996; Bian 1997; Tsui and Farh 1997; Fock and Woo 1998; Bell 2000; Wong and Tam 2000; Fan 2002; Luo 2005; Zhang and Zhang 2006; Chan 2008; Verehezen 2008; Peverelli *et al.* 2011; Yang and Wang 2011). Although contending theories on the complex aspects of guanxi networks encourages lively debates, there appears to be a consensus on the fundamentals of the networks.

It is generally accepted that in Chinese society while each person is born into a network of relationships, mother, father, sister, brother, aunt, uncle, grandparents, and cousins, that

¹³Gift lists are private documented historical accounts of gift transactions traditionally kept by families to ensure that reciprocation is adequate and appropriate. When a gift is received, the recipient's family notes the gift and its value so that it can be repaid at a later time.

network expands as a person ages to include childhood friends, teachers, classmates, workmates, spouse, in-laws, acquaintances and other similar type relationships. Chinese endeavor to enlarge their network as Yang suggests, since the “larger one’s guanxi network, and the more diverse one’s guanxi connections with people of different occupations and positions, the better becomes one’s general maneuverability in society and with officialdom to obtain resources and opportunities” (Yang 1994, 123). Building a guanxi network is a tedious and time-consuming endeavor demanding a lifetime of work with little hope of attaining all desired connections. Expanding one’s network generally comes from within when a current connection acts as an intermediary and is willing to vouch for one’s reliability and virtue, assist in recommending appropriate gifts to potential contacts, scout new potential connections, and lend an air of trust and familiarity assuming the role of “common friend” (Yang 1994, 125-126).

Negative Effects of Guanxi

The negative impact of guanxi networks have been analyzed in the literature (Nathan 1976; Jacobs 1979; Gold 1985; Lovett, Simmons and Kali 1999; Hsu and Saxenian 2000; Park and Luo 2001; Cheung *et al.* 2005; Li, Poppo, and Zhou 2008; Provis 2008; and Li 2011) and publicized in Chinese newspapers from around 1978. While the timing may not be indicative of the onset of corruption stemming from guanxi practice, it defines the point in time when the state began to view guanxi practice as a threat to society (see Yang 1994, 147). The distinction between traditional guanxi and corruption is frequently subtle making it difficult to distinguish between true guanxi and bribery except in the most blatant of cases.

Ling Li’s work, “*Performing Bribery in China: Guanxi Practice, Corruption with a Human Face,*” demonstrates the subtle relationship between guanxi practice and corruption

where the former quietly supplants the latter to the detriment of society. Li argues that guanxi practice, positioned within a less attractive context, embodies such rules and codes of conduct that creates a set of norms that facilitate corruption (Li 2011, 1). This is accomplished in the way that guanxi based rules regulate the proper way in which bribes and other corrupt transactions take place in China. In the case of bribery, accepting a gift from the briber signals a willingness to move forward with future transactions. Next, choosing a “good” gift commensurate with the favor sought becomes a necessary condition to avoid rejection. Although money is unacceptable in the initial stages of building the relationship, the contemporary substitute “gift card” serves as an acceptable stand-in. To maintain distance, the delivery of the “gift” is transferred with reference to a third party. That is to say, a facade is created when the “gift” is given to the one being bribed with instructions that it should be handed over to some imaginary third party, ostensibly removing the recipient from the transaction. It is also acceptable to transfer the “gift” during some ritual occasion or on a traditional holiday such as Spring Festival when cash can be easily handed over in a “red envelope.” These transactions can escalate in value over a period of time culminating in a protracted and sustained relationship whereby the value of the favor is offset by the value of the bribe (Li 2011, 13). Consequently, the “rules” obscure the act of bribery making the transaction look more like gift-giving within the context of a traditional guanxi relationship. This obvious misappropriation of guanxi rules does not preclude questioning the moral basis of guanxi in a more traditional setting begging the question, is guanxi ethical?

Provis takes on the question of ethics as it relates to guanxi focusing on conflicts of interest finding that problems arise when office holders share allegiance with both deontological

obligations to their secular position while enmeshed in the obligations of personal relationships. Provis goes on to explain that “problems arise especially in cases where it is not clear how to prioritise different obligations, and this has been noted as a difficulty in the Chinese legal system” (Provis 2008, 57). Honoring guanxi relationships while attempting to administer justice, especially within a legal context, forces dilemmas with serious repercussions to both self and society. This destructive component of guanxi has been analyzed on a political level more than a few times (see Gold 1985; Gong 1994; Kwong 1997; Johnson 2001; Manion 2004; Wedeman 2004; Kinkley 2007; Link 2008; Smith 2009; Dickson 2010; Schaaf 2011), and takes on new dimensions when it intersects political power with economics (see Kwong 1997; Fan 2002a; Cheung *et al.* 2005; Gu, Hung and Tse 2008; Dickson 2008; Luo 2008; Hwang *et al.* 2009; Li 2009; Li 2011). Yet some scholars point out that guanxi’s benefits outweigh its costs.

Positive Effects of Guanxi

The positive impacts of guanxi networks have been analyzed in the literature with surprising conclusions. David Wank’s study of political economy in Xiamen demonstrates how private businesses expand through patron-client ties in China’s post-Mao market economy by gaining access to scarce licenses and protection through the use of guanxi with local officials. Wank points out that patron-client ties form social trust between state and society actors, drive marketization, support innovation and “reduce political uncertainties and thereby encourage investment and diversification out of speculative trade into service and manufacturing ventures” (Wank 1996, 824). Wank does not stand alone in his observations. More recent scholarship supports Wank’s conclusions. Shanshan Qian finds that guanxi networks are highly important for Chinese entrepreneurs to develop their businesses in several ways; acquisition of information

and resources, expanded business opportunities, and as a foundation for harmony and mutual reciprocity (Qian 2012). Acquisition of information has been cited by other scholars.

Ramasamy, Goh and Yeung focus on guanxi as a bridge to knowledge transfer concluding that “guanxi is the lifeblood of Chinese business communities and frequently acts as a lubricant of business activities” (2006, 130).

Guanxi is also the universal language in which Chinese businessmen are able to communicate across borders and establish relationships of trust, built on a common set of rules that are already understood by the parties. This universal set of rules serves as a framework in which Chinese conduct business lending some degree of familiarity and comfort in what would ordinarily be viewed as unfamiliar and risky. To this end, guanxi provides efficient, reliable, effective and immediate links to diaspora communities around the world expanding business networks by simply activating preexisting (or easily manufactured) cells.

Chinese networks are effective because they are flexible making them adaptable to change. They are also efficient and available. While they do not always adhere to rules and regulations established by governmental authority, they are able to readjust their course to overcome the economic barriers that are put in place by governmental authorities to regulate commerce and economies. Instead of viewing these deviations as “offenses” they are often viewed as strategic maneuvers designed to expedite trade and increase profits (Yeung and Tung 1996; Tsang 1998; Davies *et al.* 1995; Ambler, Styles and Xiucum 1999; Lovett, Simmons and Kali 1999; Peng and Luo 2000; Leung and Wong 2001; Park and Luo 2001; and Sheng, Zhou and Li 2011).

Fate of Guanxi

There is an ongoing debate concerning the relevance of guanxi and whether the practice will survive the changes taking place in China today. While some modernization theorists have argued that economic development brings pervasive cultural changes (Marx 1973; Bell 1973) others suggest that cultural values are an enduring and autonomous influence on society (Weber 2001; Huntington 1996). Still others argue that there exists a tension that demonstrates massive cultural change while distinctive traditional values persist (Inglehart and Baker 2000) and resistance although significant, is not insurmountable (Nelsen 2005).

There exists speculation on the fate of guanxi as economic reforms transform China from a centralized economy to a market economy. Max Weber argues that a cash economy erodes particularistic ties removing any personal bonds that may exist (Weber 1951). Similarly, Doug Guthrie argues that in the face of institutional and economic structure changes, the use of guanxi will diminish. As formal institutions replace informal distribution channels, the need for guanxi will erode (Guthrie 1998). Cultural concepts integral to guanxi are also under attack by modernization. Yunxiang Yan argues that *renqing* has been replaced with instrumentalism and money within relations (Yan 1996b). Willis and Quan evaluate the relevance of traditional Chinese cultural beliefs in contemporary China and find that Chinese tend to “value traditional concepts in private and social contexts but have a more complex view about their relevance and applicability in the business world, where they feel that they were (at once) no longer relevant; relevant but in a changed and more observable, measurable and assertive manner — and — then — still important in select situations and contexts, where deeply formed guanxi relationships are still present” and that “at heart most respondents still hold a special affection for traditions which

can form the basis of a select few guanxi relationships and provide the basis for much deeper and often longer term business relationships and associated activities” (Willis and Quan 2009, 87).

The significance of guanxi in contemporary China is dynamic. While some argue that the use of guanxi is in decline (Guthrie 1998), others contend that guanxi is flexible, adaptable and its use is on the rise, albeit colonizing new areas of operation (Yang 1994). Fock and Woo maintain that while guanxi is still prevalent among Chinese, its importance for success is waning (Fock and Woo 1998). However, generalizing their finding creates some difficulties. Hwang demonstrates that patterns of change are uneven with variation from place to place as many pockets are resistant to change (Hwang 1987, 696). The flexibility and adaptability of guanxi have been demonstrated and reported in more than a few instances and locations. Jacobs notes that the two lines of argument that suggest a decline of guanxi use in China have not come to fruition. Political attempts to eradicate guanxi have only given rise to new types of guanxi. Similarly, the growth of institutional organizations thought to supplant guanxi have not precluded the use of guanxi in politics (Jacobs 1979, 269). Wood, Whiteley and Zhang explore the different ways that guanxi is used and how its “adaptive behavior appear[s] to be related to the changing business environment” (Wood, Whiteley and Zhang 2001). Yang argues that while guanxi is no longer used to secure scarce resources, its effectiveness in facilitating business linkages cannot be underestimated (Yang 2002, 464). Lo and Otis (2003) support these findings demonstrating that guanxi is flexible and adaptable in their study on how the markets have shaped guanxi. Hammond and Glenn echo these sentiments suggesting that “guanxi will change with the forces of globalization, but will also remain as a source of order and stability” (Hammond and Glenn 2004, 29).

Far from its demise, some note that *guanxi* is making a resurgence. Gold argues that while the CCP has tried unsuccessfully to eradicate the “four olds”; “old ideology, thought, habits, and customs, the re-emergence of traditional patterns will reappear unless something viable is offered to fill the void” (Gold 1985, 674). After a decades-long attempt to eradicate *guanxi*, Chinese have found that in the absence of *guanxi*, “one simply cannot get anything done” (Davies *et al.* 1995, 212). Contrary to conventional wisdom, the Chinese economy is not moving toward a market capitalism system as many Western academic’s believed, but a relationship-based “network-capitalism” (Boisot and Child 1996). Lovett finds that “*guanxi*-type systems, despite having evolved under different circumstances and being based on different ethical principles, can be legitimate alternatives to our Western market system (Lovett, Simmons and Kali 1999, 245). However, *guanxi* is not limited to economic transactions or urban populations. Willis and Quan conclude that while there appears to be some waning in the use of *guanxi* as it relates to business, it continues to be deeply entrenched in social relationships “in select situations and contexts” (Willis and Quan 2009, 87). It is within this context that traditional forms of power (*guanxi*) are making a resurgence, especially in rural China where they are accepted as stable and reliable (Hansen 2006). This flies in the face of Western reports of “successful” democratic political elections in rural China.

The future of *guanxi* is uncertain, but of one thing we can be sure; for the foreseeable future, *guanxi* will remain prevalent in Chinese society constantly transforming itself into a form suitable to China’s evolving socioeconomic and political conditions as it has successfully done from Imperial times onward.

CHAPTER III CHINESE CULTURE AND POLITICAL ECONOMY

Chapter Two laid the foundation for an extensive survey of guanxi by providing a broad overview of the concept and the social networks born of its use. It also examined the relationship between China's built environment and its philosophical underpinnings demonstrating how China's physical and psychological worlds intersect and reinforce one another. This chapter builds on that foundation by chronologically examining China's sociopolitical and economic structures and the environment that supports Chinese social networks. After a brief overview of the sociopolitical conditions in early imperial China, I demonstrate the continuity of traditional Chinese beliefs and values embraced throughout the centuries, and prevalent in contemporary society. The chapter opens with a narrative of two historical ruptures that compare and contrast Eastern and Western perspectives of the same event to demonstrate profound differences in viewpoint, concluding that an accurate account of events is predicated on a thorough understanding of the belief systems in which the event is couched. After explicating China's turbulent history and violent attempts to eradicate its own ancient customs and traditions, I compare and contrast the stasis of Chinese politics with the dynamics of its economy, discussing the challenges that China faces in the twenty-first century as a result of the tensions between its political and economic sectors. Socialism has failed and China's leaders have turned to its emerging entrepreneurs as the economic engine capable of reinforcing their political legitimacy and ultimate survival through unprecedented economic growth. At the same time, China's

entrepreneurs depend upon its political leaders to supply them with licenses, loans, and access to both resources and markets. This “marriage made in heaven” is made possible through the use of *guanxi*, but it does not come without costs. The *laobaixing*¹⁴ will continue to bear the burden of environmental degradation, uneven development, and unrestrained capitalism as China takes its place among the leaders of the world.

Late Imperial China

Dynastic emperors have ruled China for more than 4,000 years. Historical documents trace the first dynasty back to the Xia, believed to exist from about 2070 B.C.E. to 1600 B.C.E., although skeptics believe this dynasty to be mythical. Having ruled for more than 400 years, the Xia succumbed to the Shang in the Battle of Mingtiao, a defeat that opened the way for a succession of Chinese dynasties headed by emperors who ruled by a “Mandate of Heaven,” a traditional Chinese philosophical concept from which emperors derived their legitimacy and authority to administered their realm through a complex civil service bureaucracy.

China’s succession of rulers known as the exalted “Sons of Heaven,” secured their conditional position predicated on their ability to discharge imperial duties and rituals. “The harmony in what we call the natural world, the cycles of the seasons, the proper amount of sun and rain, heat and cold, and thus the success of the yearly harvest, depended upon the virtue of the [sovereigns’] administration” and determined the success of the emperor’s realm (Campanella 2008, 94; also see de Bary et al. 1960, 161). A corrupt or incompetent ruler who suffered death or defeat at the hands of another did so because heaven had withdrawn its mandate. The victor would then assume the mantle of leadership and rule by a “Mandate of

¹⁴Lit. “Old 100 names.” Colloquial term used to describe China’s “common people.”

Heaven” until his defeat or death, completing the cycle.¹⁵ This system endured into the early twentieth century, ending with the fall of the Qing Dynasty in 1911 although remnants of this ancient system can be found within China’s ruling classes today.

Perhaps the most salient demonstration of China’s ancient system and its firm hold in the twentieth century can be found in the fall of the Qing dynasty. Imperial tutor, Reginald Fleming Johnston provides insight into China’s dynastic traditions and “proper behavior” with a glimpse into the Qing court in the final days leading up to the expulsion of the ruling Manchu from the Purple Forbidden City. Emperor Xuāntǒng, more commonly known in the West as Aisin-Gioro Puyi, after having sat three short years on the Imperial Dragon Throne and at the tender age of six years old, is said to have surrendered the throne in favor of the *Articles of Favorable Treatment* on 12 February 1912. The Empress Dowager Lung Yu proclaimed the abdication of the last Qing emperor and accepted the *Articles of Favorable Treatment* in what appeared to be a usurpation of power from Regent Prince Ch’un, the Emperor’s father (Aisin-Gioro [1965] 1989, 37). The authority by which the Empress Dowager Lung Yu acted is frequently misunderstood by Western scholars who cite her position very simply as the surviving empress of the deceased Emperor Tóngzhì, and sister-in-law to his successor, the more recently deceased Emperor Guāngxù; Empress Dowager Lung Yu was a distant relative, a great-aunt by marriage to the reigning emperor, Xuāntǒng.¹⁶ China’s monarchical succession and hierarchy can only be understood in the context of its deeply embedded and homogeneous societal ideology rooted in

¹⁵“In traditional Chinese historiography the imminence of profound political upheavals leading to dynastic collapse [were] usually heralded by a cataclysmic natural event such as an earthquake or flood, or by some celestial portent” (Spence 1990, 650). The Chinese continue to view natural disasters as omens of profound political change well into the twentieth century.

¹⁶ Xuāntǒng is the Reign Title of Aisin-Gioro Puyi, the last Qing emperor.

its history and couched within Confucius, Buddhist, and Taoist belief systems. Reginald Fleming Johnston explains that “the theories underlying the exaltation of an empress-dowager over the reigning sovereign may seem to the Western mind puzzling and anomalous. But they are easy to understand when we learn to associate them with the traditional Chinese code of ethics in which filial piety holds the place of honour as the first and most fundamental of virtues” (Johnston [1934] 2008, 16).

The lowly palace concubine Yehonala was elevated to a secondary consort after becoming pregnant by Emperor Xiánfēng, and elevated once more to Empress Dowager after giving birth to the Emperor’s only son and heir, Zaichun. Upon the Emperor’s death, Empress Dowager Cixi’s son, Zaichun ascended the Dragon Throne as the Tóngzhi Emperor, but died within a few years. After the death of both her son and his successor the more recently deposed Emperor Guāngxù, Empress Dowager Cixi was elevated to Grand Empress Dowager, the highest and most honorable style afforded a woman in China. Similarly, daughter-in-law Empress Dowager Lung Yu supplanted the Grand Empress Dowager upon her death in 1908, following the long established tradition of filial piety.¹⁷ “In Chinese eyes, the elder generations can never wholly abdicate its functions of authority over the younger; the younger must never fail in respect for and obedience to the elder” (Johnston [1934] 2008, 16). Therefore, as his elder, Empress Dowager Lung Yu had every right to formally accept the *Articles of Favorable Treatment* and abdicate the Dragon Throne on behalf of Xuāntǒng, the last Qing emperor.¹⁸ This traditional

¹⁷See de Bary et al. 1960, 169 for a brief discussion of filial piety.

¹⁸Also see Fei 1992, Chapter 11, “Rule by Elders.”

hierarchical privilege of age remains prevalent in contemporary China although it is now backed by the force of law.

Johnston highlights a second mystery embedded in the fall of the Qing Dynasty that defies Western logic, yet is routinely accepted by the Chinese. Article One, as outlined in *The Articles of Favorable Treatment*, states that “After the abdication of the Ta Ch’ing Emperor, his title of dignity is to be retained and will not be abolished; and he will be treated by the Republic of China with the courtesies which it is customary to accord to foreign monarchs” (Johnston [1934] 2008, 87; Aisin-Gioro [1965] 1989, 37). An additional document accompanied the *Articles of Favorable Treatment* and guaranteed the Manchu princes and nobles retention of their “titles of honor including those which were hereditary,” exclusion from military service, and guarantees that their “private property was to remain in their possession and properly protected”; it also stated that “help would be given to those members of the nobility who might be in economic distress; that the allowances hitherto granted to members of the ‘eight banners’ (the Manchu military system) would continue to be issued, pending reorganisation; that the old limitations and restrictions on choice of livelihood and domicile formerly imposed on persons of the races concerned [Manchus, Mongols, Mohammenans, and Tibetans] were abolished; and that religious liberty was guaranteed” (Johnston [1934] 2008, 88).

How then, could a republic have both a president and an emperor with a fully functioning court? The answer can be found in the very essence of the title assumed by all Chinese monarchs; the title is dynastic, not territorial. The proper Chinese wording “Ta Qing Kuo” translates as “the dominions ruled by the Qing.” Similarly, preceding dynasties without regard for their territorial size or constituent parts, were known as “Ta T’ang Kuo, Ta Sung Kuo, and Ta

Ming Kuo” which also translate, “the dominions ruled by” the Tang, Sung and Ming, respectively (Johnston [1934] 2008, 101). In 1644, when the Ming Dynasty fell, “Ta Ch’ing Ta Huang Ti” took the Dragon Throne to rule over a *dominion* whose territorial boundaries moved in concert with the Qing armies. Hence, abolition of the Qing Emperor’s title was unnecessary; the *dominion* over which he ruled had simply been reduced to the confines of the Purple Forbidden City. Within the Forbidden City, it was the Emperor’s prerogative to retain or dismiss his court as he saw fit. The documents granted nothing more than what tradition dictated.

These accounts demonstrate two important points. First, that the new Republican government continued to respect long-standing Chinese traditions. Allowing the Emperor to remain in the Purple Forbidden City with his titles and court intact showed a deep respect for China’s dynastic history and the degree to which ancient customs and beliefs retained their significance. The accounts also demonstrates how Western perspectives fail to grasp the subtleties and nuances of Eastern realities, rendering events and circumstances wholly unrecognizable to their Eastern counterparts.

China’s Pre-Revolutionary Sociopolitical Structure

Remnants of China’s imperial system can be found throughout modern China. The autobiography of Aisin-Gioro Puyi is a rare treat for sinologists and offers a first hand account of the challenges faced by the Qing. Speaking in the first person, the last emperor provides us with an understanding of the Qing Court and China’s early twentieth century challenges—challenges that have plagued China for centuries and continue to beset China today.¹⁹ Puyi speaks of

¹⁹Originally published in 1965 during the Cultural Revolution, one would have to approach the manuscript with a bit of caution; sections of the book appear to be written as “self-criticisms”, a common practice during “struggle sessions” where individuals, systematically targeted by cadres in the Chinese Communist Party for “reform” through confession, wrote both real and imagined confessions that would
(continued...)

intrigues and plots carried out within the Qing Court that lay bare the conflicts that divided members of the Imperial Family, Household Department, military leadership and common subjects. At the top of the list of contentions remains the question of modernization.

Calls for economic and political reforms reached a crescendo toward the end of the nineteenth century amid the colonization of China's coastal cities. Powerful foreigners had settled into treaty ports and foreign architecture and infrastructure began to dominate foreign concessions along the coastline emphasizing China's backwardness. China's technological deficiencies appeared stark against the backdrop of imported Western technology now modernizing China's coastal cities ensuring that "by the close of the nineteenth century, Shanghai was Asia's most modern metropolis, with gas lighting and electric trams, several daily newspapers, and telegraph and telephone service [that] linked [China] to the world by trans-Pacific cable" (Campanella 2008, 60). Recognizing the backwardness of China, Emperor Guāngxù moved swiftly to implement reforms to improve the condition of the Chinese people and quell sporadic uprisings by introducing political, technological and economic reforms (Spence 1990, 229-230). For his attempt at modernization in 1898, Emperor Guāngxù, nephew of Empress Dowager Cixi, was exiled on an island in one of the lakes adjoining the Purple Forbidden City, reduced to a shadow of his former self and forced to kowtow to Cixi each time she appeared on the island. Maintaining the status quo was crucial for the Dowager Empress Cixi, the Qing nobility, and bureaucrats throughout the country. Cixi rejected any changes that even remotely threatened dynastic power and refused to tolerate the radical reforms introduced by

¹⁹(...continued)
remain in their dossier to be used at a later date to attack the confessor for any number of reasons. This caveat is crystalized in the last two sections of the book entitled, "From Fear to Recognizing my Guilt" and "I Accept Remoulding" (See Aisin-Gioro Puyi [1965] 1989).

Emperor Guāngxù out of fear that they would undermine the Aisin-Gioro clan's stronghold and jeopardized the entire dynasty (Spence 1990, 230). In the end, Cixi was forced to make concessions, but it was too little, too late.

China's Post-Revolutionary Sociopolitical Structure

China's record demonstrates that subsequent rulers did not stray far from Cixi's concerns or objectives, but sought to acquire and hold power through radical reforms instead of resisting them. In a bit of irony, China's post-revolutionary socioeconomic reforms, held in stark contrast against its political stasis, encouraged many Chinese to embrace the very traditions and beliefs reformers sought to eradicate as they struggled to survive the harsh conditions brought about by the reforms. Consequently, China's new institutions mirrored its imperial past, albeit with some important distinctions.

Historian John King Fairbank suggests interesting parallels in his work, *The Great Chinese Revolution: 1800-1985*, as he reflects on imperial China and its reemergence in modern China. "Institutions of the imperial era may reappear under new names, like the ancient pao-chia system of mutual surveillance turning up as today's street committees, or the lower gentry of pre-1900 becoming the local bullies and despots of the Republican era and being succeeded, in systemic terms, by the cadres or party secretaries in the countryside of today" (Fairbank 1987, ix). Fairbank takes his reader through three eras in Chinese history; late Imperial China (1800 - 1911), the Republican Era (1911-1949), and the early years of the People's Republic of China (1949 -1985) and explains the sameness of institutions from one era to the next, always changing, yet never really evolving into anything new. "The Manchu dynasty's failure after 1860 to lead a modern development" explains Fairbank, "was due to two types of causes, political and

institutional” (Fairbank 1987, 364). Politically, the dynasty was backward and conservative, and attempted to maintain its stranglehold on the population in order to maintain power and continue to extract wealth. Additionally, inherited institutional structures enabled the Qing to rule by “cooptation of the Chinese upper class” (Fairbank 1987, 365). Fairbank tells us that China’s new Republican government adopted the same strategy. The Nationalist government of the Kuomintang inherited the “movement for elite activism, though on a much broader scale and the movement (underway since the 1850s) for militarization as the chief underpinning of government” (Fairbank 1987, 365). In 1949, the Chinese Communist Party (CCP) followed suit and remains faithful to its inherited institutional structures.²⁰ Fairbank points out that “China’s revolution since 1800 has been a struggle to break the grip of the past”; however, he concedes that “the influence of China’s long past is ever present in the environment, the language, the folklore, and the practices of government, business, and interpersonal relations” and has been “a major problem in China for the reasons of historical continuity and distinctive culture” (Fairbank 1987, 367). Bo Yang complements Fairbank’s work through a parable that every Chinese easily understands.

Bo Yang’s criticism of Chinese culture is outlined in his work, *The Ugly Chinaman and the Crisis of Chinese Culture*. The author contends that, “every problem in contemporary Chinese society originates in the traditional culture of the soy paste vat” (Yang 1991, vii). The author goes on to explain the soy paste vat as containing a “thick paste as viscous as mud” which “does not flow” and “because the paste remains in the vat untouched and unstirred, and because

²⁰See Dickson, Bruce J. 2008. *Wealth into Power: The Communist Party's Embrace of China's Private Sector*. Cambridge; New York: Cambridge University Press.

the water content is constantly evaporating, the paste grows thicker and thicker as time goes by” (Yang 1991, 40). Bo Yang asserts that the soy paste vat is a perfect metaphor for the traditional Chinese bureaucracy. Historically, passing the Imperial Examinations and gaining entry into the Chinese bureaucracy ensured prosperity and a comfortable lifestyle. This literati class of bureaucrats worked to subjugate the working class by extracting payments in the form of taxes, gifts, and graft sufficient to ensure abject poverty leaving its victims too busy foraging for life’s essentials to raise protests sufficient for revolution. Maintaining the status quo preserved both their power and their wealth. “One distinguishing characteristic of this culture was the way the bureaucracy set the standards for the entire society, and ran the country for their own personal benefit” not unlike “Mao’s doctrine of ‘putting politics in command’” (Yang 1991, 40). While the Chinese economy remained static, the political culture remained stuck “at the bottom of the soy paste vat” (Yang 1991, 40).

Bo Yang explains that today, China’s bureaucracy remains a tool of the Chinese Communist Party whose members have supplanted the ancient “literati” class. The common people continue in subservience to the whims of a contentious, capricious, and often vindictive political elite whose legitimacy is tied to the country’s economic success. The common people bear their own weakness in their acceptance of a culture that promotes passive adoption of a system of beliefs that continues to enslave them. According to Bo Yang, there is only one way for the Chinese people to become liberated from the social, political and economic oppression that immobilizes them and prevents them from rising above this subjugating aristocracy; the fate of the common Chinese people will be bleak; “if we don’t come to grips with this suffering and

all the destructive elements in Chinese culture” the people will have no hope and the elite “will continue to wreak havoc upon us and our descendants forever” (Yang 1991, 4).

Tracing China’s turbulent history from the fall of its dynastic system in 1912, provides the foundation to support its current realities. By the time Puyi ascended the Dragon Throne in 1908, the fate of the Qing had already been sealed. The disintegration of the Dynasty resulted from its own fundamental and deeply rooted inadequacies and the Qing’s inability to extract itself from the depths of its ancient customs and traditions. Ironically, the collapse of the Dynasty did not usher in a new era of economic reform and political freedom unimpeded by the customs and traditions that led to its dynastic decline, but replaced its slowly evolving modernization efforts with chaos, violence and suffering while continuing to embrace its ancient traditions.

For the next forty years amid civil war and foreign invasions, little was done in the way of comprehensive economic development although it would be incorrect to assume that the Chinese had made no progress at all. By the 1920s, “[d]espite the political fragmentation of the country, China’s industrial economy had grown considerably from the level it had reached at the end of the Qing” (Spence 1990, 325). The Chinese achieved this growth through the “expansion of previously existing industries and the development of new industries by Chinese entrepreneurs; through the extension of railways with foreign loans; and by the development, on Chinese soil, of new heavy industry under foreign control” which “continued to grow through the early republic and into the warlord period” (Spence 1990, 325). Workers’ unions arose from a combination of low wages, long hours, poor conditions, and the callousness that employers showed to their employees. Strikes and protests brought to life the oppression and deep-seated resentment

experienced by many Chinese workers, opening the way for the acceptance of a new ideology. By 1949, for those Chinese who had experienced foreign invasions, runaway inflation, unemployment, famine, drought, widespread corruption, and a protracted civil war, China's new undisputed leader Mao Zedong and his promise of an egalitarian modern society based on Marxist thought and international equality based on territorial integrity, was a welcomed change. However, at least one intellectual felt that China had been "founded on certain structural principles and that those principles needed to be respected in any attempt at social change" (Hamilton and Zheng 1992, 15).

Recognizing that the country was experiencing a great historical transformation, prominent sociologist Fei Xiaotong outlined a theory of Chinese society in 1947 that recognized China as being unique, then set out to persuade China's intellectuals to work toward reforming the country by concentrating on its cultural strengths. The message sent by Fei in his work, *From the Soil: The Foundations of Chinese Society* was that "Chinese social patterns differ from those found elsewhere. There are, accordingly, no universal social patterns and no universally valid principles by which all societies are held together. Western theories and Western solutions to social problems, therefore, cannot be automatically applied to China. Instead, those who seek to change China must first understand the distinctive qualities of Chinese society" (Hamilton and Zheng 1992, 16).

A second essay quickly followed the first complementing Fei's theory with a plan for reconstruction. The publication, *Reconstructing Rural China*, created an agenda for political action that addressed both political and socioeconomic structures. Chinese traditional political structure was organized at two levels; central and local. The local level was self-regulating, and

with the assistance of the gentry, checked power at the central level. However, the gentry were often landlords, a parasitical group that oppressed and exploited the peasants. In view of an increasing centralized and powerful government conceived and expanded in the Republican period, Fei sought to restore local power through land reform, giving peasants small plots of land for sustenance farming while eliminating both the burden of rent and the power of the gentry.

Fei also envisioned Chinese industrialization built on a rural foundation for two strategic reasons: first, urban industrialization could not accommodate the huge population of workers necessary for production. Secondly, “rural poverty would hinder the growth of urban industry, because the huge rural population could not provide a market for the industrial products made in the cities” (Hamilton and Zheng 1992, 148). To mitigate the effects of industrialization suffered in the West, (a concentration of wealth in the hands of a few with limited socialist programs redistributing some of the surplus to the poor) Fei envisioned a modified version of traditional Chinese patterns; cooperatives. “The cooperatives would allow peasants to engage in big projects while retaining their traditional patterns of household-based organization. More important, peasants would become owners of the collective enterprise and share the profits directly” (Hamilton and Zheng 1992, 149).

Fei’s model effectively restored China’s self-regulating local level political structures while limiting the power of central government. It offered peasants the opportunity to own plots of land sufficient to feed their families, and a means of production sufficient to raise them out of poverty. It also freed them from the oppressive and exploitive hold that the gentry had on them for centuries while using China’s own traditional cultural strengths to effect the changes. But Fei would be relegated and his plans crushed under the heavy hand of Mao Zedong.

Mao Zedong, having grown up in the countryside, had experience the oppressiveness of traditional Chinese culture and outright rejected the burdens it placed upon him. And while he also sought to create a new society where peasants would no longer be exploited by the gentry or suffer at the hands of parasitic landlords, he did not subscribe to Fei's philosophies. Mao's vision of how to achieve a new society differed dramatically from Fei's model. "Mao wanted to eradicate the old society and create an entirely new social order; he was the quintessential revolutionary. In contrast, Fei was the quintessential reformist. For this reason, if for no other, Fei's sociology waned as Mao's Marxism dominated the first thirty years of the People's Republic of China" (Hamilton and Zheng 1992, 18).

Land Reform

The first significant endeavor that the Communists undertook when they came to power in 1949 was land reform, revisiting the efforts of both pre-1937²¹ and post-1945²² campaigns to reduce the inequality between the rich landlords and poor tenant farmers and peasants. But for Mao, the move was as strategic as it was practical.

Mao believed China's revolution to be a protracted armed struggle, led by the Party and supported by the masses. Each of the three elements (army, Party, and the masses) had a key role to play. The army formed the basis of power since power only grows out of the barrel of a gun.

²¹Pre-1937 land reform efforts focused on confiscating land from rich landlords, small landlords and petty bourgeoisies who were severely beaten or killed while their land was expropriated among the peasants. Many rich and middle peasants were sent to hard labor camps where they later died. When war with Japan broke out after the Long March, these harsh policies shifted from confiscation to reduction of land rents and taxes which became the basic agricultural policy.

²²By 1947, the Land Reform movement had the sole purpose of stopping any possibility for the Nationalist Party to form alliances with the landlords or aristocracy. The Outline Land Law of China was passed by the Land Conference of the Communist Party and contained the following articles: 1) To abolish the land system based on China's *fengjian* system and to recognize the land system of "land to the tillers" 2) To abolish the ownership rights of all landlords 3) To abolish the ownership rights of all ancestral spirits, temples, monasteries, schools, institutions and organizations and 4) To cancel all debts in the countryside incurred prior to the reform (Wong 1973, 282.)

The Party forms the nucleus that provides ideology, organization, and leadership. Finally, the people supply the manpower and resources for the war. In agrarian economies, the "people" simply meant the peasants. And "land reform comes into play as an instrument to weld together the interests of the army, the peasants, and the Party" (Yeh 1971, v). Traditionally apathetic, the peasants needed to be motivated to participate actively in the revolution. For the majority of those living in rural China, land reform offered economic security in exchange for their support. "Redistribution of land by the party gave the poor peasants a stake in the revolutionary war, in return for which the peasants provided the manpower, resources, and services essential to the practice of people's war" (Yeh 1971, vi). Lui Shaoqi concurred with Mao, recognizing the potential benefits that peasant support would bring to the CCP when he noted that, "Landlords and rich peasants, who constitute less than 10 percent of the rural population, possess approximately from 70 to 80 percent of the land and brutally exploit the peasants by means of their land. Poor peasants, farm laborers, middle peasants and others, however, who make up 90 percent of the rural population, possess in all only 20 to 30 percent of the land" (Liu Shaoqi 1950: 63).

Inherent in this economic imbalance lies the more salient issue of political power. "Because local political power and land ownership usually go hand in hand, there usually cannot be land reform without a thorough political reform at the village level" (Yeh 1971, x). These sentiments brought to the fore the failure of previous land reform efforts in the 1920s and 1930s when government leaders failed to "change the local political structures" which "blocked any land reform that could have preempted the Communists' political appeal" (Yeh 1971, x). Mao's move to destabilize, then reform existing rural power structures served a twofold purpose. First,

it allowed for the redistribution of land to poor peasants, narrowly raising the standard of living above sustenance levels among many poor rural families. Mao believed that “uneven distribution of land ownership was the basic cause of poverty” and that poverty bred dissidence (Yeh 1971, 9). Consequently, when it came to poor peasants, the “lower the economic status, the greater his propensity to revolt” (Yeh 1971, 11). In Mao’s view, land redistribution would reduce the possibility for dissent since even the slightest improvement in living standards would go a long way in alleviating the abject poverty suffered by China’s majority. This move would also aid Mao in winning the hearts of the people. Additionally, land reform rebalanced power in rural areas by removing powerful local landlords and gentry who were determined to retain their wealth and position by maintaining the status quo with poorer cadres who were eager to improve their lot in life and sympathetic to the Party line, all at very low cost to the CCP. “From the standpoint of the Party, land reform is virtually costless. It establishes the peasants’ faith and confidence in the Party. In return for the land, the peasants provide resources, manpower, and other logistic support. It also consolidates the Party’s power in the villages by substituting the poor peasants for the local gentry in the rural power structure” (Yeh 1971, 21).

At the same time that land reform was taking place, a more insidious campaign, aimed at cleansing opposition through the suppression of counterrevolutionaries, had been launched. The *Zhenfan* campaign of 1950-51 sought to address the fierce resistance that continued to rage throughout China. Large-scale armed rebellions in the provinces of Sichuan, Xikang, Yunnan, and Guizhou threatened to destabilize the newly emerging regime (Yang 2008, 103). Initially promised leniency if they complied with CCP directives, “bandits and counterrevolutionaries” who identified themselves to authorities as required, were soon arrested or gathered for

“training.” As their numbers swelled and resistance continued, Liu Shaoqi and leading officials at the CCP Central Committee “began to clamour for harsh suppression of counterrevolutionaries” (Yang 2008, 104). Mao resisted all calls for harsh suppression until 10 October, two days after Beijing decided to send troops into Korea. Liu Shaoqi eloquently articulates the rationale behind Mao’s strategic timing:

Once the gongs and drums of resisting the United States and assisting Korea began to make a deafening sound, the gongs and drums of the land reform and suppression of counterrevolutionaries become barely audible, and the latter becomes much easier to implement. Without the loud gongs and drums of resisting the United States and assisting Korea, those of the land reform (and *zhenfen*) would make unbearable noise. Here a landlord is killed and there another is beaten; there would be a fuss everywhere Things would then become difficult.²³

The move was purely strategic. Once China became involved in the Korean War, Mao would use patriotism, then nationalism, to launch a large scale suppression of counterrevolutionaries at home, relatively free from dissent. Further, the cries of rural landlords recently divested of their land holdings, or the families of those who were executed, would be unable to rise above the din. At the same time, class labels based on land ownership and wealth divided whole villages, extended families and individual households, placing those with undesirable labels in grievous danger. Thousands of landowners and wealthy peasants were brutally beaten and killed. The CCPs new “double ten” directive called for large-scale imprisonment and execution of bandits, tyrants and counterrevolutionaries with front page coverage in major newspapers to serve as an example to those who dared to protest. Briefly tempering the campaign to avoid an “excessively nervous atmosphere,” Mao quickly regained his

²³“Liu Shaoqi’s report at the first national conference on propaganda work, 7 May 1951,” Document Number 123/25/2/5, Archives of Shanxi Province, as quoted in Yang 2008, 105).

footing endorsing the army's execution of "4,600 bandit leaders, local tyrants, and KMT secret agents" in 21 counties in Hunan Province alone (Yang 2008, 107). Pleased with these numbers, Mao began to require that "Party chiefs at the county level [in different regions] write directly to him and report the conditions of the *zhenfan* campaign in their areas. Wide variations in the number of executions across regions led Mao to set quotas that were quickly ratified in a special CCP Central Committee meeting. Mao reasoned that "hard-line counterrevolutionaries accounted for less than 1 percent of the population in all regions" and "believed that the execution of roughly 0.1 percent of the population would dispatch the worst counterrevolutionaries, would not run to excess and would certainly not risk killing the innocent" (Yang 2008, 109).

Taking the campaign up a notch, Mao set quotas for executions based on subjective deduction about how officials should differentiate between "us" and "them." The "Regulations of the People's Republic of China on Punishment of Counterrevolutionaries," issued on 21 February delineated those subject to arrest and execution. "Any of the following activities, either actually performed or merely 'attempted,' now fell under the category of 'counterrevolutionary crimes': collaboration with imperialism; agitating, enticing, and bribing government officials; arming rebellious forces and militias; rallying and arming rebellious mobs; participating in secret agent espionage organizations; organizing or using feudal sects for counterrevolutionary purposes; looting and sabotaging public property and facilities; murder with poison; forging public documents and certificates; inciting the masses to oppose the government or split among themselves; fabricating and distributing rumors; illegally crossing international borders; attacking or escaping from prison; and harbouring counterrevolutionary criminals" (Yang 2008, 109). As

designated targets yielded an insufficient number of enemies slated for execution, new targets began to be included. Where local officials tamped the number of executions to avoid terrorizing the middle classes and upsetting the local economy, Mao urged local Party committee officials to issue “self-criticisms,” then commit to meeting stated quotas (Yang 2008, 110). “From March 1951, one city after another in China embarked on systematic mass arrests and mass executions” significantly exceeding the target numbers for executions, imprisonment and control originally stipulated in local governments’ plans (Yang 2008, 111).

The Land Reform movement and *Zhenfen* campaign had a profound affect on China’s path to modernization. “The reforms effectively wrecked the power base of the old landlord elite in the countryside. To ensure that this process firmed up class-based loyalties to the revolution, local CCP leaders encouraged violent confrontations between landlords and their tenants, the poorer peasants, and landless laborers. Indeed the violence attending the reforms probably matched in intensity the harsher days of the Japanese and anti-Guomindang fighting. Anecdotal figures suggest that around one landlord family out of six had a member killed in these confrontations; given the percentage of Chinese who could be classified as landlords, one can conclude that as many as 1 million or more people must have died during this phase of the revolution” (Spence 1990, 517). While the campaign fundamentally ended all resistance to the newly established CCP, it also set the stage for Mao’s “class struggles,” and served as a segue into more violent campaigns against China’s “class enemies.”

Mao Zedong: The New Emperor

Marxist-Leninism, and later Mao Zedong Thought dominated the next several decades as China embarked on its plans to implement the “twin policies of socialization of agriculture and ‘a

powerful industry having state enterprise as its backbone” (Spence 1990, 515). By 1951, the CCP had eliminated all serious threats to the new regime. In 1953, China developed its first comprehensive economic development plan based on the Soviet Model, then went about planning a new society under the leadership of Mao Zedong, Chairman of the Communist Party of China (CPC).²⁴ The Soviet Union, China’s new partner in achieving both communism and economic superiority, was recovering from its own revolution and appeared to be well on the way to industrialization. China chose to emulate the Soviet Union and sought technical expertise, loans and equipment from their benefactor. The “First Five-Year Plan achieved a dramatic increase in industrial production across a broad sector of goods” and China’s international prestige grew as it was increasingly viewed as a responsible member of the world community despite its exclusion as a member of the United Nations (Spence 1990, 544-551). However, success brought hubris which lead China into subsequent decades of political turmoil, social disorder, and economic disaster.

Three-Antis and Five Antis Campaigns

The disastrous political campaigns that followed China’s First Five-Year Plan (1953-1957) under the leadership of Mao Zedong are said to have been more damaging to China and the Chinese people than the turmoil unleashed by the warlords who dominated China for decades after the failed Republican Era. As a prelude to what was to come, the first two political campaigns, the “Three-Antis” and the “Five-Antis” opened the way for Mao and his followers to seize and consolidate power by eliminating anyone who opposed them.

²⁴In the West, the title is rendered as the “Chinese Communist Party” (CCP).

The “Three-Anti Campaign” was designed to target members of the Communist Party and other senior bureaucratic officials who had benefited financially from their privileged positions and to strengthen the government’s control over labor.²⁵ After being educated in patterns of discrimination, “[e]nraged workers were then mobilized to turn on their bosses and join in expanding state supervised labor organizations that would, the party promised, end the decades-long practice of local graft and influence” (Spence 1990, 536). In a similar move, the “Five Anti Campaign” targeted the bourgeoisie in China.²⁶ Many industrialist and businessmen that remained in China after the communist takeover risked being labeled “capitalist,” “a vague definition that could incorporate anyone the state chose to charge” (Spence 1990, 536). Propaganda networks led by newly trained propagandists and tenured cadres encouraged compliance. “One function of these cadres and propagandists was to break down the often tight personal, emotional, and family bonds that united workers to their employers, especially in the smaller businesses. Even if wages were desperately low, personal bonds often crossed class lines, and many employers were not dramatically wealthier than their workers. The situation paralleled that in the countryside, where it was hard to get peasants to speak out in public bitterness against people they had known and worked with all their lives” (Spence 1990, 537). These two campaigns led to the humiliation and subjugation of China’s more prominent citizens with imprisonment in labor camps, torture and execution for those who either confessed or were found guilty of their “crimes.” Others commit suicide, although it is arguable about whether it was independent of or forced as a direct result of these two campaigns (Short 1999, 457). Tens

²⁵The “Three-Anti Campaign” was launched in 1951 and focused on corruption, waste and bureaucracy.

²⁶The “Five-Anti Campaign” was launched in 1953 and focused on bribery, theft of state property, tax evasion, cheating on government contracts, and stealing state secrets.

of thousands of Chinese suffered and more than a few families were torn apart as the party encouraged victims to denounce one another. These two campaigns reinforced the need for Chinese to establish and maintain relationships with those who might be in a position to help, should the need arise. It also served to quiet those who dared to speak out in opposition for fear that their words would return to them bringing disaster upon their entire household and all those within their immediate, and sometimes extended, circle.

Employing its citizens again in 1956, the Chinese Communist Party encouraged intellectuals to express their opinion of the regime and its effectiveness openly. The new “Hundred Flowers” campaign had come in response to intellectual and political sparring that had taken place over the past several years. With polarized views on the need to employ intellectuals to achieve political objectives, one faction argued that although the intellectuals criticized the party, their skills were invaluable to the objectives of the First Five-Year Plan while the other faction argued that “the unity of the CCP was paramount, that the CCP had led the revolution and could not now be criticized from outside without fatal effects on party effectiveness and morale” (Spence 1990, 567). Mao supported and pushed for an open forum encouraging dialog that he believed would exonerate him and crush his enemies. “In a speech he delivered on May 2 [1956] to a closed session of party leaders, Mao elaborated on the idea of ‘letting a hundred flowers bloom’ in the field of culture and ‘a hundred schools of thought contend’ in the field of science” (Spence 1990, 568). Once convinced that leaders would address their grievances against the party, the intellectuals sprung into action. High- and low-ranking officials dissatisfied with Mao’s agricultural policies joined the chorus. Their response was swift and direct. “They protested CCP control over intellectuals, the harshness of previous mass campaigns such as that

against counterrevolutionaries, the slavish following of Soviet models [of development], the low standards of living in China, the proscription of foreign literature, economic corruption among party cadres, and the fact that ‘Party members enjoy many privileges which make them a race apart’” (Spence 1990, 570).

Accusations of tyranny and malevolence were suddenly eclipsed by the backlash that came when Mao realized that the tide had turned against him. “Emperors had occasionally opened the path for words of criticism (*yen-lu*), but they often got more than they expected” and so it should have been no surprise when “Mao and his colleagues were appalled and disillusioned” by the criticism wrought by both intellectuals and others whom the party had wronged in previous campaigns (Fairbank 1987, 293). After realigning himself with the hard-liners that he originally sought to undermine, Mao revised his promise for intellectual freedom. Altering the text of his earlier speech that called for dialog, Mao published a revised version that appeared as a “censure of intellectuals rather than the encouragement of public criticisms that Mao had originally intended to be used” (Spence 1990, 572). The stage had been set and the roles cast for those who had dared to speak out. The first wave of the Anti-Rightist Rectification Campaign, launched in response to the failed Hundred Flowers Campaign, began in July 1957 and “[b]y the end of the year, over 300,000 intellectuals had been branded ‘rightist,’ a label that effectively ruined their careers. Many were sent to labor camps or to jail, others to the countryside not just to experience life on the land for a year, but into what was essentially a punitive exile that might last forever . . . A whole generation of bright young party activists were similarly penalized, among them some of China’s finest social scientists, scientists, and economists, such as the astrophysicist Fang Lizhi and the journalist Liu Binyan” (Spence 1990,

272). The centuries old aphorism that speaks to the “nail that stands up being hammered down” drove home a hard learned lesson: China’s new emperors would not tolerate dissent. The Chinese Communist Party intended to retain absolute power and expected its subjects’ unwavering allegiance. Anything less would exact an exorbitant price. A second lesson taught that having good connections in high places could avert potential danger while having connections in lower places might ameliorate an already difficult situation.

The Great Leap Forward

With their critics silenced amid an atmosphere of accusation and anti-intellectualism, the CCP with Chairman Mao at the helm, turned their attention toward economic development in a bid to transform China’s agrarian economy into a modern communist society through rapid industrialization and collectivization. After using 100 million peasants to open 7.8 million hectares of agricultural land through massive water control and irrigation projects, the CCP felt confident they could similarly employ the masses to transform agricultural production, and a new goal was set; increase rural productivity to boost China’s industrial growth (Spence 1990, 578). Departing from the more conservative incremental “Five-Year Plans,” favored by conservatives, Mao embarked in an intensified approach toward industrialization that called for the government to first take control of agriculture, then establish a monopoly over supply and distribution so that profits gained from buying grain at very low prices then selling at much higher rates could be used to finance the country’s industrialization. To effect his plan, the Chairman would have to find a way to control rural farmland and so began the process of stripping peasants of their land by forming mutual aid teams of 5-15 households, then small agricultural cooperatives of 20-40 families progressing to larger cooperatives of 100-300 families until collectives effectively

eliminated private ownership of land and all households were forced into communes. Communal living had been recently popularized in the massive water control projects and now served another purpose; they increased productivity by eliminating peasants' commute to the fields allowing more time for work. The CCP pushed for increases in agricultural output necessary to sustain urban workers, while generating the foreign exchange required to service large loans made by the USSR for China's industrialization.

From a cultural perspective, the communes forced changes in social structure. Communal kitchens replaced the private hearth and child care became a function of the community as parents, now separated from their children, were put to work in the fields. Personal farm tools, bicycles, cooking utensils and other household tools no longer needed by individuals were thrown into backyard furnaces as scrap metal in an attempt to produce steel while peasants denuded the countryside of all vegetation, going so far as to tear the wood from their own houses, and even cut down orchards in a bid to keep the furnace fires burning. Many farmers left the fields to tend the furnaces while unharvested crops were left to rot in the fields. At the same time, the party prohibited all religious institutions including the traditional and customary ceremonies of honoring ones' ancestors. Those who protested would be "struggled against" and beaten into submission, but this was a comparatively minor problem to the impending death that awaited millions.

Intoxicated with their initial success in agricultural output, the CCPs newest campaign, accompanied by the slogan, "more, faster, better, cheaper" drove production teams to over-report agricultural harvests in an attempt to outdo neighboring production brigades and please the Chairman. Cadres reported inflated grain harvests while provincial officials approved and

endorsed the overinflated production numbers. Increasing quotas based on wildly exaggerated grain production reports forced peasants to ship nearly all of their grain into the city leaving less than subsistence levels in the countryside. It was not long before peasants were starving.²⁷ “Not only had no cadres dared to report shortfalls of the procurement quotas they had been given out of fear of being labeled ‘rightists’ or ‘defeatists,’ but many of the best trained statisticians from state bureaus, having been removed in the 1957 antirightist campaign (along with the most able demographers), were no longer around to issue words of caution even had they dared.

Furthermore, the diversion of resources into local backyard steel furnaces—1 million had been scattered across the face of China—did not pay off, since the furnaces were not able to produce a high-standard produce” (Spence 1990, 580). As a consequence of Mao’s “Great Leap Forward,” famine had claimed more than 32.5 million lives between 1958 and 1962, with many more dying as a direct result of years of progressive malnutrition (Dikötter 2010, 324-334).²⁸ “Given enormous local autonomy in decision making to meet unrealistic national quotas, cadres adjusted to famine conditions by ruthlessly protecting themselves and those in their favor, while confiscating grain from the weaker or those they did not favor” (Spence 1990, 592). For those with ties to family in the city who were able to provide food, or those with relatives in positions of authority able to offer some degree of protection, conditions were survivable. However, those

²⁷The severity of the famine was exacerbated by natural disasters that occurred in various regions. In some areas the famine was so severe that villagers resorted to cannibalism as a means to survive. The majority of cases involve exhumed corpses although there are more than a few accounts of the murder and consumption of children, fellow villagers or strangers passing through the region (See Dikötter 2010, 320-323; Becker 1996, 211-219; and Zheng Yi 1996).

²⁸There are no conclusive statistics that reflect the actual number of deaths although they have been estimated to be as high as 50 - 60 million. See Dikötter 2010, Chapter 37, *The Final Tally* and Becker 1996, Chapter 18, *How Many Died?* for a discussion on the various methods used to calculate the number of casualties attributable to the Great Leap Forward.

who lacked the right connections either died of starvation or through the hands of zealous, misguided revolutionaries seeking to root out “rightist.”²⁹

Equally threatening was the message Mao sent to those who dared to contradict his authority without any regard for their political status or the death and destruction enveloping the country. “Despite the chaos caused by the Great Leap, there was only one attempt to censure Mao for the extremism of his plan. This criticism came from the army marshal Peng Dehuai” when during informal discussions at the Lushan Conference in 1959, “Peng Dehuai pointed out some of the Great Leap’s problems, and also observed that Mao’s home village in Hunan [noted for its success] had received more state aid than Mao had realized” (Spence 1990, 581-582). Peng had written a balanced letter to Mao praising the successes of the Great Leap while criticizing the “considerable waste of natural resources and manpower, inflated production claims and leftist tendencies” (Dikötter 2010, 93). During a tour of his home in Xiangtan, Hunan Province, Peng had witnessed the abuse and suffering that seemed to touch everyone. He became incensed by the display of irrational behavior ranging from “farmers forced to practise close cropping to cadres tearing down houses in the iron and steel campaign. Visiting a retirement home and a kindergarten, he saw nothing but misery, the children in rags and the elderly crouched on bamboo mats in the freezing winter. Even after his visit he continued receiving letters from his hometown about widespread starvation” (Dikötter 2010, 92). Peng composed a poem that summarized his attitude toward the Great Leap:

²⁹Friends and family living in China’s cities were often able to lend support to those suffering in the countryside. See Becker 1996 and Dikötter 2010 for a full discussion on the benefits of living in cities.

Grain scattered on the ground, potato leaves withered;
Strong young people have left to make steel;
Only children and old women reap the crops;
How can they pass the coming year?
Allow me to raise my voice for the people!
(Domes 1985, 83)

For Peng's attempts to alleviate the people's suffering, he was disgraced in front of the entire assembly at Lushan, condemned as the leader of an "anti-Party clique," and removed from his position as Defense Minister and Vice-Chairman of the Military Commission, and although allowed to retain his position in the Politburo, he was excluded from its meetings for many years. After writing a humiliating self-criticism³⁰ acknowledging his "severe mistakes" that "stemmed from his rightist viewpoint," Mao went on to purge most of Peng's supporters from important offices, then isolated Peng politically for the rest of his life. The Lushan Conference brought the end of the Great Leap Forward, but not an end to the suffering. "The people at large struggled for survival. But by late 1960, the Great Leap strategy was discredited in most eyes; and while Mao 'retired from the front lines,' as he put it, other Chinese leaders assessed strategies for recouping the nation's economic losses and rebuilding public morale" (Spence 1990, 590).

Liu Shaoqi and Deng Xiaoping headed the efforts to restore Communist Party traditional top-down bureaucratic decision-making and focused on rehabilitating thousands of party members that had been wrongly persecuted during the Anti-Rightist Rectification Campaign. They also reversed Mao's "ideological redness" over Soviet-style technical expertise and invited intellectuals, once again, to contribute their ideas and talents to China's economic reconstruction.

³⁰The practice of writing self criticisms is rooted in Confucian ethics and posits that one must rectify himself before he can rectify others.

Peasants were allowed to cultivate privately held plots as long as they were on waste ground and production teams were allowed to contract out fields. The state raised its price for purchasing grain and the peasants were permitted to trade animals so long as they were not used in production. Peasants were allocated materials to replace tools and equipment lost to backyard furnaces and given the autonomy to grow crops that suited local conditions. The party also encouraged people to contact relatives abroad to beg for food parcels and “overseas relatives in Hong Kong sent 6.2 million 2 lb. parcels in the first six months of 1962 (equivalent to 5,357 tonnes)” (Becker 1996, 245).³¹ Although conditions slowly improved, their strategies did little to reignite the fervor experienced in the early days of the revolution and peasants slowly returned to their traditional ways of life, even as Mao Zedong, Liu Shaoqi, Zhou Enlai, and Deng Xiaoping worked to develop a “comprehensive new program to reintroduce basic socialist values into Chinese society” (Spence 1990, 592).

The Great Proletarian Cultural Revolution: Ten Lost Years

Mao, now relegated to the second line of command and suffering from a great loss of face in the aftermath of the failed Great Leap Forward, found himself once again, struggling against party conservatives.³² His disgrace and anger grew as Liu Shaoqi and Deng Xiaoping dismantled the failed Great Leap Forward “brick by brick, backyard furnace by backyard furnace, and communal dining hall by communal dining hall.”³³ Although the masses enjoyed increasing

³¹To increase its cash reserves, “[t]he Chinese government extracted as much money as possible [from family members delivering food from Hong Kong to their kin in Guangzhou], levying a 400 percent duty on the 2 lb. packages” (Becker 1996, 246).

³²Mao had not only lost power and position, but continued to lose face. In the wake of the failed Great Leap Forward, one of Mao’s primary concerns “was the CCP establishment’s widespread and persistent denigration of his record and policies” (Fairbank 1987, 307).

³³See Whiting 2000, 49 for a brief discussion on the reversal of “Great Leap Forward” policies.

relief under the new systematic policies of the conservatives, Mao was determined that Deng's practical, results-oriented approach to economic development would not eclipse his own vision of a "red" communist victory achieved through the rural-based mass mobilization of poor peasants. In an attempt to gain the upper hand, Mao turned to factionalism to divide the party and weed out those who opposed him. With army marshal Peng Dehuai silenced, Mao appointed Marshal Lin Biao as his new Minister of Defense and *de facto* head of the People's Liberation Army assigning him the task of rebuilding Mao's own sense of self-esteem and indoctrinating the masses into accepting Mao as their paramount leader.

The campaign started quietly when Mao first demanded the removal of "revisionists" within the party membership, government apparatus, and armed forces.³⁴ At the same time, Marshal Lin Biao embarked on a mass campaign to indoctrinate PLA soldiers in Mao Zedong Thought. To promote the mass movement, Lin compiled and edited a collection of Mao's pithiest precepts, aphorisms, and homilies into a pocket-sized book entitled *Quotations from Chairman Mao*, more popularly known as the "Little Red Book." Every day, PLA units were required to study, recite and analyze selected verses from Mao's Little Red Book, whose passages focused on Mao's strategic brilliance, benevolence and leadership genius. With the Mao-study campaign fully implemented within the ranks of the PLA, political instructors were sent out to middle schools, high schools, universities, and local branches of the Communist

³⁴Mao defined "revisionism" as an abandonment of the goals of the revolution, and acceptance of the evils of special status and special accumulation of worldly goods, which could be called a restoration of capitalism (See Fairbank 1987, 319). This label could be applied to almost anyone and was frequently used as a weapon to destroy one's enemies especially when the campaign later expanded to encompass all areas where "revisionism" might be found.

Youth League to indoctrinate the younger generation throughout the country by promoting group study sessions of the Little Red Book.³⁵

Through reeducation,³⁶ Mao sought to solve several problems at once; he could revive his reputation as China's paramount leader and stem the tide of "revisionism." The Great Leap Forward had crushed the spirit of the nation and criticism of Mao's radical policies began to appear in literary works. By using "middle characters" cast somewhere between the perfect socialist man and a degenerate villain, writers created works of fiction that paralleled the realities suffered by the masses. The use of these characters was in direct opposition to Mao's cherished style of social realism where the perfect socialist man was held up as exemplary, or the villain as a warning to those who strayed. To avoid the Chairman's wrath, intellectuals revived an ancient imperial literary tradition that used historical allegories, fictionalized parables, and satiric plays disguised as fiction to criticize Mao's policies and attack his leadership with the deepest literary affront appearing in the modern Peking opera written by Beijing's Vice Mayor, Wu Han entitled *The Dismissal of Hai Rui from Office*. Initially, Mao had approved of the play. But his wife, Jiang Qing, a former second-rate actress from Shanghai, immediately saw it as a reactionary allegory for Peng Dehuai's dismissal, and a direct slap in the Chairman's face; at her urging, Mao came to realize that his critics would have to be silenced once again—this time through reeducation (see Spence 1990, 598-603). Reeducation would also stem the revisionism that had been growing in the classroom, a byproduct of the Soviet educational model adopted into China's

³⁵See MacFarquhar and Schoenhals 2006, 262-267 for a discussion on the use of the Little Red Book in promoting the cult of Mao.

³⁶Mao relies on Confucian ethics in his approach toward "reeducation." The ethics of Confucianism state that man errs from ignorance and the force of bad example; the remedies are education of the official classes and the good examples set by them. (See Williams 1976, 86)

educational system through its communist mentor. Mao no longer had use for the Soviet curriculum since the Sino-Soviet rift a few years earlier, and felt that students would be better served by fewer hours in the classroom and more time experiencing the day-to-day hardships of the common people, working the in the fields alongside farmers, in the factories alongside workers, and in the armed forces training alongside soldiers.

Ideological tension within the ranks of the masses had been building for years. “Factional fires were fueled by the anger of students frustrated over policies that kept them off the paths of political advancement because the students had the ill fortune to be born to parents who had had connections with the Guomindang, the landlords, or the capitalist ‘exploiters’ of the old regime and were therefore classified as ‘bad elements’ by the CCP. There were as well millions of disgruntled urban youths who had been relocated to the countryside during the party campaign of earlier years, or in line with the plans of Chen Yun and others to save the cost to the state of providing subsidized grain supplies for such city residents” (Spence 1990, 604).³⁷ Many students had been turned away from the few elite prep schools in Beijing. Those who were granted entrance did so in one of two groups; the first group was “composed of children from intellectual families, who had a head start in their education at home and were capable of doing high academic work” while the second group “was composed of children of the new ruling class of party members, officials and cadres, whose class background was considered revolutionary and first rate. They were a rising generation and would have the inside track for official employment” although their level of scholarship “was not as high as that of the children of

³⁷Chen Yun was one of the “Big Five” in China’s Civil War along with Mao Zedong, Zhu De, Zhou Enlai, and Liu Shaoqi. He was also considered one of the “Eight Elders” of the Chinese Communist Party. Chen held several positions within the government apparatus and did much to moderate Mao’s radical economic reforms. However, he was relegated into obscurity for his lukewarm support for the Great Leap Forward and never held a high-profile, power position after the Lushan Conference in 1959.

intellectuals, even though the latter's class status was declared to be very low" (Fairbank 1987, 324). There was also bitterness toward the appointment of uneducated cadres in rural areas—former peasant guerrillas, to party positions at the expense of newer educated recruits (Spence 1990, 604). Beijing was a powder keg waiting to explode and Mao had intended to use every bit of energy to his advantage in regaining leadership of the party that he had founded.

At Peking University (*Beida*), the controversy and debate that followed the publication of left-wing Shanghai propagandist Yao Wenyuan's biting editorial critiquing Wu Han's opera, spilled into the streets. Although the editorial was initially withheld by the editor of the *People's Daily* in hopes of averting a political backlash, word came through Liu Shaoqi that the editorial was to be published.³⁸ Battle lines had been drawn and another purge was about to take place.³⁹

At Beida, Mao openly supported one faction over the other adding fuel to the fire and effectively putting his seal of approval on whatever followed. For Mao, the Great Proletarian Cultural Revolution, once unleashed, would be a "settling of accounts" on a cosmic scale (Fairbank 1987, 367). Having appointed his new Defense Minister Lin Biao, and vindictive wife Jiang Qing⁴⁰ to head the new Cultural Revolution Small Group to weed out counterrevolutionaries, Mao simply stepped back and waited for "the snakes — his enemies — to

³⁸It is widely believed that Mao Zedong ordered the biting editorial to be released for publication. (See Li Zhisui 1994, 442).

³⁹Mao denounced Beijing Mayor Peng Zhen, Vice-Mayor Wu Han, and his entire Beijing Municipal Party Committee by name, demanding their dismissal and the reorganization of the entire Committee. Wu Han's play was labeled an "anti-party poisonous weed" and the *People's Daily* editor, Deng Tuo, who initially withheld publication of the editorial, was dismissed from his post. He later committed suicide. Deng Tuo's immediate superior, Lu Dingyi took indefinite medical leave, withdrawing from Beijing to south China. This purge put others on notice that Mao was regrouping for another attack and would feel no remorse for purging those who criticized him or opposed his views (see Fairbank 1987, 326).

⁴⁰See Terrill 1984 for a full discussion of Jiang Qing, Mao Zedong's fourth and final wife. Mao had been previously married to Luo Yixiu (1889-1910) from 1907 to 1910, Yang Kaihui (1901-1930) from 1921 to 1930 (executed by the Nationalist Forces in 1930), He Zizhen (1910-1984) from 1930 to 1939 and finally, Jiang Qing (1914-1991), from 1939 to Mao's death in 1976. Madame Mao, as his fourth wife was sometimes called, was notorious for her role in the Cultural Revolution and part in the Gang of Four.

come out of their holes” (Li Zhisui 1994, 459). With Mao safely in seclusion, his couriers brought reports that “the capital was descending into chaos. The schools had been closed, and the students had taken to the streets, rampaging through the city. No one, it seemed, could control the situation” (Li Zhisui 1994, 460). To make matters worse, students began pouring into Beijing from all over the country to join in the revolutionary fervor, and when the Central Cultural Revolution Group (CCRG) urged Mao to disperse the group, Mao refused insisting that “large numbers of China’s younger generation—the more the better—should be given the opportunity to see the older generation of revolutionary leaders in person” (MacFarquhar and Schoenhals 2006, 107). Acquiescing to Mao’s desires, “Chen Boda started publicly urging students to come to, rather than stay away from, the nation’s capital” (MacFarquhar and Schoenhals 2006, 107). The stage had been set for the mass rallies that would launch China’s youth into a frenzied attack on China’s culture and traditions.

By the time Mao had returned to Beijing, the capital was in absolute chaos. Inside universities, radical faculty members and students turned on party members while Red Guards (*hong wei bing*) pulled people from their homes to “struggle against” in the streets. Looting, theft and vandalism permeated every corner of Beijing. A series of six massive rallies, held in Beijing under the auspices of both the PLA and the Cultural Revolution Small Group, attracted “some ten million youths volunteering as Red Guards from all over China” and were “transported free on the railways and housed in Peking” (Fairbank 1987, 328).⁴¹ All over the country, schools closed and students headed to Beijing to wage war under the command of

⁴¹Scholars MacFarquhar and Schoenhals report that eight (not six) massive rallies, most of which were held in Tiananmen and headed by Mao Zedong, took place from August to November 1966 (MacFarquhar and Schoenhals 2006, 107).

Chairman Mao. “Mao energized the students by putting out such slogans as ‘Bombard the headquarters’ and ‘Learn revolution by making revolution’” (Fairbank 1987, 328). The situation became even more serious after Mao openly sanctioned the Red Guards.

Mao had given the Red Guards political legitimacy when he allowed student Song Binbin to pin a “Red Guard” armband on him at a rally in front of thousands of students. Releasing the photograph in a nationwide publicity campaign threw open the doors that lead to the terror that followed.⁴² The violent rampage moved quickly from the schools to the streets where innocent bystanders frequently became targets. Adding to the chaos were the factions within the Red Guards fighting each other. Divisions had emerged from the outset, and had been fueled by the class distinctions forced upon them in earlier campaigns. Now, Red Guard factions spent as much time fighting each other as they did seeking out “capitalist roaders,” a label that could be applied to almost anyone at anytime. They frequently competed against each other to prove their allegiance to Mao, breaking into homes and searching for evidence of counterrevolutionary tendencies. They confiscated property and pulled occupants out into the streets to be “struggled against.”⁴³ Struggle sessions grew deeper and more bitter and the destruction and loss of life more terrible. In Shanghai, revolutionary students displaced revolutionary workers shutting down factories and adding to the chaos. “Millions of the young were encouraged by the Cultural Revolution’s leaders to demolish the old buildings, temples, and art objects in their towns and

⁴²Mao’s public display of support in the first of a series of student rallies encouraged many youths to participate more fully in the campaign. Releasing the photograph to the public encouraged the movement to spread nationwide. See MacFarquhar and Schoenhals 2006, 144.

⁴³“Struggle Sessions” were generally led by small to medium sized gangs of students who inflicted verbal, psychological and physical abuse on their victims. Hundreds of thousands were beaten to death, while others committed suicide to avoid the beatings. Once targeted, few escaped.

villages, and to attack their teachers, school administrators, party leaders, and parents” (Spence 1990, 605).

Destruction of the Four Olds

The Great Proletarian Cultural Revolution ushered in a political maelstrom so intense that it threw the entire country into social and political chaos. Red Guards, China’s own youth, were thrust into service sweeping through the country with orders to destroy the “Four Olds” (*si jiu*) – old customs, culture, habits and ideas (Campanella 2008, 114-115). “In their frenzied efforts to purge China of its own history, the youthful Red Guards tore apart the very fabric of Chinese society. They defaced landmark buildings, destroyed precious artwork, smashed and burned antiques, and pillaged the homes of former elites, confiscating jewelry and searching for incriminating evidence of counterrevolutionary sentiments” (Campanella 2008, 266). They burned books, defaced religious icons, and imprisoned and tortured thousands. China’s youths terrorized and often murdered distinguished professors at prestigious universities and destroyed its priceless art and architecture, all in a few short years. In Beijing, what was left of the ancient city wall was dismantled and used in construction projects ranging from factories to pigsties. Other sections of the wall served as construction material for bomb shelters and air raid tunnels. “The destruction of Beijing’s [city] walls surely ranks among the greatest acts of urban vandalism in history” (Campanella 2008, 114). Some of the bricks were used in the construction of Beijing’s underground tunnel system, Mao’s strategic answer to moving military troops quietly and swiftly into the city in the event of war (Campanella 2008, 114-115). These violent years served to remove as much of China’s history as possible targeting public art and architecture as the physical manifestation of Chinese tradition and a reminder of its ancient

customs, tangible vestiges that remained after years of sociopolitical campaigns designed to erase China's history.

Seizure of Power

Inspired by the mass rallies in Tiananmen and the uprising in Shanghai, thousands of Red Guards returned to their home provinces with a desire to “remain closely in step” with Chairman Mao. Emulating the Red Guards in Shanghai, revolutionary rebels throughout China began to seize power in factories, offices, commercial establishments, schools, universities, and anywhere else authority reigned disabling entire cities. In the capital, the new Beijing Revolutionary Committee went to work “smashing the old signboards that read, ‘Beijing Municipal Party Committee’ and ‘Beijing Municipal People’s Government.’ Victory had been won and removing the signs was just a ‘mere formality,’” according to Wu De, “taken care of by eager ‘rebels,’ but one that was repeated over and over again across the country” (MacFarquhar and Schoenhals 2006, 172-173). However, the Red Guards power seizure was not to be completed.

Down to the Countryside: Rebuilding the Party

Having experienced months of unrestrained violence, Zhou Enlai finally secured Mao's support in restoring order and an edict went out from Beijing that revolutionary exchanges were to cease. Those camped out in Beijing were instructed to return home. Ministries and industries connected with national security were now declared off-limits to the Red Guards, and primary school teachers and pupils were recalled to classes, as were middle school teachers and students, and then college teachers and students. Further, “Red Guards were forbidden to punish party members, confiscated property had to be returned, and attempts to form national Red Guard organizations were quashed. Urban youths, who had been rusticated in earlier campaigns and

had seized the opportunities afforded by the Cultural Revolution to . . . return home [to the city], were ordered back to the border regions and mountainous areas into which they had earlier been decanted” (MacFarquhar and Schoenhals 2006, 173). The PLA was instructed to observe the withdrawal, but refrain from interfering. Unfortunately, the call for order had come too late and without teeth. The momentum built by Mao and his Revolutionary Cultural Committee sent China’s youth on a trajectory away from the Confucian values known to their parents and headlong toward anarchy and unbridled violence. “Tragically, the dispersal of the Red Guards did not put an end to violence, but instead proved to be the prelude to an even wider-ranging campaign of terror, during which even more people were tortured, maimed, driven mad, killed or committed suicide” (MacFarquhar and Schoenhals 2006, 252).

“Red Terror” had enveloped the country. Cannibalism had been confirmed in Guangxi Province and reports of cannibalism were coming in from other provinces (Zheng Yi 1996). “Red Guard mobs invaded the Soviet and British embassies and in fact burned the British Embassy to the ground, as well as the Indonesian Embassy later on” (Fairbank 1987, 332). Rebels derailed, then looted several Soviet military trains carrying heavy weapons and supplies to Hanoi in support of the North Vietnamese, to use in factional fighting. Whole cities became battlefields (Song 2011; also see MacFarquhar and Schoenhals 2006, 199). Heavy fighting broke out in Wuzhou Municipality and more than 2,000 buildings were destroyed and 40,000 people were reportedly left homeless when rebel factions seized light artillery, antiaircraft guns, mortars, and machine guns from PLA arsenals, then skirmished in the streets and alleys for weeks. “Prisoners” were interrogated and tortured, then executed by firing squad and thrown into shallow graves at a local cemetery. Less fortunate victims were thrown into the West River

where currents carried their bloated bodies three hundred miles downstream into the harbors of Hong Kong and Macao (Gittings 1993; also see Song 2011).

Although Mao had released several directives ordering the cessation of hostilities between warring factions, there was nothing compelling rebels to obey, especially since the PLA had been sidelined. The threat of being “severely punished” had little effect until Mao himself, ordered the PLA to suppress factional conflict “by force,” if necessary. Tens of thousands of Thought Propaganda Teams, accompanied by PLA soldiers where pockets of resistance remained, entered schools and universities all over China to “purify class ranks.” Committees verbally abused and humiliated recalcitrant rebels that were now being assigned new orders from above. Voluntary in nature, but compulsory in practice, patriotic rebels from all over China were being “sent down” to the countryside to learn humility, industriousness and plain living from the peasants.⁴⁴ The patriotic sentiments and predeparture fanfare (banquets, fireworks, speeches, and parades) made students feel as though they were being assigned a valuable and honorable opportunity. However, the fate of China’s “Lost Generation” had been sealed.⁴⁵ The Rustication Movement, the largest human migration in Chinese history, permanently disbanded the Red Guards. “During the next seven years, twelve million urban youth, about 10 percent of the urban population, were sent to the countryside; over the twelve-year period 1967-1979, the number of rusticated ‘educated youth’ totaled 16,470,000” (MacFarquhar and Schoenhals 2006, 251). These youngsters, ranging in age from 14 - 23 were relocated to rural areas and remote border regions where, devoid of an opportunity to pursue a formal education, would spend the rest of

⁴⁴Students who resisted were often denied food rations and medical services placing untenable burdens on their families who were forced to provide for them from their own meager allotment.

⁴⁵See Luo 1990 for a full discussion of China’s “Lost Generation.”

their lives engaged in manual labor, forbidden to return to the cities from which they had come.⁴⁶ Some enjoyed a narrow escape. “A much-sought-after alternative for those with good connections, especially if they had already experienced the tremendous hardships of rural life, was entry into the PLA” (MacFarquhar and Schoenhals 2006, 252). With the Red Guards effectively banished to the countryside or incorporated into the ranks of the PLA, the CCP began to rebuild the Party, and the country.

The Great Proletarian Cultural Revolution had successfully overthrown thousands of party officials, including more than 25 percent of the Central Committee members (Fairbank 1987). Statistics, although unreliable, showed that power-holders in rural counties, townships and villages fared much worse, and the general population suffered even more.⁴⁷ The PLA was the only sector of the government that was not completely devastated by Mao’s purges and so by default, military men filled the majority of the posts left empty (Fairbank 1987, 331). Mao’s own wife, Jiang Qing and two members of her Shanghai Clique landed seats in the Politburo, but their tenure was to be short lived. Mao’s life was nearing its end as he lay dying in Zhongnanhai. After suffering a series of heart attacks and a severe lung infection, he was removed from his respirator on the auspicious day of 9 September 1976.⁴⁸ His wife was arrested weeks later.

⁴⁶The hukou is a household registration record that officially identifies a person as a resident of a specific area. The document includes identifying information such as the holder’s name, those in his family, and dates of birth and other vital information. The hukou was necessary to buy food, rent housing, secure employment, attend school, and received medical care. Those who traveled without proper authorization had these services withheld. This system effectively tied all Chinese to their assigned city, town or village.

⁴⁷See MacFarquhar and Schoenhals 2006, 253-272 for a full discussion of the “Cleansing of the Class Ranks” campaign.

⁴⁸The Tangshan Earthquake, believed to be the deadliest of the twentieth-century, struck Beijing on the night of July 27-28, forcing Mao to retreat to a safer building within Zhongnanhai (Li Zhisui 1994, 622; also see Deng Rong 2006, 422-425). The first jolt registered 7.8 on the Richter Scale followed by violent aftershocks that pushed the death toll over 242,000 with more than 164,000 left seriously injured (MacFarquhar and Schoenhals 2006, 435). In 1976, “Every peasant [still] believed in the umbilical relationship between man and nature, and therefore between natural disaster and human calamities” (Fairbank 1990, 340). To many, this catastrophic event was an omen that suggested that the mantle of leadership would be passed to the next emperor. Mao died weeks later on 9 September 1976.

Few would dispute that the “ambivalence toward Mao’s death was a reasonable reaction to the complexity of his life” (Harding 1987, 11). For those who survived the Three-Anti and Five-Anti Campaigns, the Hundred Flowers Campaign, Anti-Rightist Movement, Great Leap Forward, Great Proletarian Cultural Revolution, Destruction of the Four Olds, Down to the Countryside “Rustication” Campaign and other “minor” purges, upheavals, exiles and ruptures, Mao’s death was a relief from the unyielding political and social oppression, accompanied by the economic disasters that resulted from Mao’s flawed policies. “The Maoist ideology was a systematic reversal of Confucian philosophy. Confucius said that human nature existed, filial piety was a man’s foremost duty, and the learned man was obliged to point out to the emperor his error if he acted against morality. Mao Zedong sought to conquer human nature, subjugate the educated, make children spy on their parents and couples betray each other” (Sorman 2008, 14-15). In the end, Mao achieved only partial victory. He had succeeded in turning China on its head, but had lost the people; thirty years of turmoil had taught the Chinese to rely even more on deeply embedded traditions—their personal networks, if they were to survive.

Reform After Mao

Mao Zedong chose Hua Guofeng as his successor, but by 1978, two short years after taking the lead, Deng Xiaoping was well on his way to supplanting Hua as China’s paramount, albeit unofficial leader. Deng had been purged twice during Mao’s reign and had been living in exile in southern China. Jiang Qing had personally seen to Deng’s second purge, but with Mao’s death and the “Gang of Four,” under arrest, it would be difficult to avoid rehabilitating Deng since it was Jiang Qing’s false accusation that led to his purge (Li Zhisui 1994, 612; Deng Rong 2002, 396-404). While Deng’s supporters pushed for his return, Deng openly questioned the

propriety of Mao's attacks on China's intellectuals and the soundness of his decisions, especially his choice of Hua Guofeng as successor. Mired in Mao's memory and committed to a failing centrist program, Hua's power steadily eroded as Deng Xiaoping succeeded "first by creating new positions for his own lieutenants, then by dismissing Hua's more controversial associates, and finally, when the time was ripe, securing the removal of Hua" (Harding 1987, 69). By 1981-82, Hua had been removed from his posts, clearing the way for Deng, whose *guanxi* exceeded that of Hua in both quality and scope, to move forward with his reforms.

From 1982 onward, Chinese leaders, "for the most part," were "unified in their desire for reform and united in their willingness to undertake serious changes in the institutions and policies that were the legacy of Mao Zedong" (Harding 1987, 93). This unity led to upward trends in "the diversification of the economy, greater autonomy for producers, a larger role for the market, more freedom both for intellectuals and for the average citizen and a more professional and regularized policymaking process" (Harding 1987, 94). While changes in China's foreign economic policies increased international trade by 250 percent, China maintained strong protectionist policies and its trade remained highly regulated through a complex system of licenses and duties. China's economic strategy was to expand the purchase of foreign technology while producing as much as possible at home (Harding 1987, 170-171). The political system underwent a degree of relaxation, but stopped short of any fundamental reform. The Party no longer interfered in people's private lives and refrained from launching the radical and chaotic political campaigns of the past.

Deng Xiaoping promoted one of his protégées, Hu Yaobang to replace Hua Guofeng when Hua was dismissed from office in 1982. Hu directed many of Deng's reform policies,

including the Four Modernizations, engineered by Zhou Enlai in 1963 and then quietly adopted by Deng Xiaoping. Throughout his tenure, Hu continually irritated senior leaders with his controversial opinions and liberal leanings. He encouraged public debate on controversial subjects including democracy, human rights, and political reforms. To his credit, he also made sincere efforts to rehabilitate those persecuted during the Cultural Revolution for rapprochement with the Japanese, and for the removal of Han Chinese from Tibetan territory. However, his anti-corruption program targeting the “princelings” along with his plans to reduce China’s defense budget made Hu very unpopular with many powerful party officials.⁴⁹ Deng’s confidence in Hu was eroding and after Hu refused to remove three radical intellectuals that had lead student protests in favor of political liberalization, senior Party officials and military leaders demanded his resignation. Deng Xiaoping did not interfere, but instead offered up Zhao Ziyang as a replacement.

Zhao Ziyang was a reformist and critical of Maoist policies. Best noted for his efforts at reducing bureaucracy, free-market reforms, fighting corruption, and implementing special economic zones in China’s coastal provinces, Zhao’s tenure was also cut short when student protests in Tiananmen calling for increased political freedoms, escalated to the point where PLA troops were called in to “clear the square.” Zhao was placed under house arrest and Jiang Zemin assumed his post.

Jiang Zemin handed economic governance to Zhu Rongji who continued China’s transition to a market economy. And although the economy continued to grow an average of 8

⁴⁹ “Princeling” is the pejorative term given to the sons and daughters of the revolutionary leaders and party officials who gained wealth and power through their parent’s position.

percent GDP annually, China was beginning to show signs of weakness. Rapid economic development brought an increase in government corruption, uneven development that widened the wealth gap between urban and rural areas, the closure of many state-owned enterprises (SOE), high unemployment, wildly fluctuating stock markets, large scale rural migration into urban areas, a surge in overall crime rates, the re-emergence of organized crime in urban centers, and widespread environmental degradation. Jiang Zemin would never get the opportunity to address China's mounting problems. The mantle of leadership would soon pass to another.

Hu Jintao replaced Jiang Zemin as Communist Party Chief in November 2002, as President in March 2003 and as Military Chief in September 2004, marking the first smooth leadership succession in Chinese Communist history. Along with leadership, Hu assumed the problems that accompany rapid economic development. China, now clearly on the path to modernization, industrialization, and global leadership, continues to face serious social, political and economic challenges that threaten to derail its rise.

China's Economic Rise

As China emerges from its "century of humiliation," many pundits question its ability to assume the role of a global leader. Guy Sorman explains in *The Empire of Lies: The Truth About China in the Twenty-First Century* that "the West's tendency to misread China dates back to the seventeenth century" and while "the Western press is full of stories these days on China's arrival as a superpower" its "economic miracle is rotting from within" (Sorman 2008, xiii). Sorman suggests that the political unity that China projects is as illusionary and untenable as its economic superiority. "Uprisings take place all over the country but they are sporadic, spontaneous outbursts against corrupt officials, lacking coordination, leadership and a political agenda" and

where leadership does emerge, “the [Chinese Communist] Party’s special police force is ruthlessly efficient in quelling these protests and has no qualms about killing their leaders” (Sorman 2008, xvi). Sorman points out that while the “government makes all the right noises about removing injustice and promoting social development,” that “its deeds don’t match its words” (Sorman 2008, xvi). The Chinese use slogans to promote their progressive and unique economic system, but in reality, “the so-called Chinese characteristics of the market economy are neither Chinese nor progressive: they are merely symptomatic of the transition from socialism to the market economy” (Sorman 2008, xix). Further, China’s political system lacks the innovative rigor that it proclaims. Although “they use a Marxist vocabulary, China’s leaders tend to identify more and more with the ancient Mandarin class. They are as arrogant and corrupt as the Mandarins before 1911, when the Republican Revolution put an end to their dominance” (Sorman 2008, xix). Sorman relies on anecdotal evidence to conclude that “[o]thers — journalist, sociologists, economists — are conducting the same inquiry and coming to the same conclusion: the Chinese people do not like the Communist Party, and the vast majority wish for a less corrupt, more equitable regime” (Sorman 2008, xxv). In the end, Sorman contends, “the yawning gap between what is said and what actually happens has, in the past, led to the fall of emperors” (Sorman 2008, 208). The current regime is determined to avoid their fate, although the new dynasty may not fare any better than the old.

Environmental Challenges

Addressing both the environmental and social impact of rapid economic development in “*China’s Dilemma: Economic Growth, the Environment and Climate Change*,” Ligang Song and Wing Thye Woo emphasize that while “thirty years of reform (1978-2008) have turned China

into one of the largest and most dynamic economies in the world,” China now faces three significant and profound challenges as it approaches the twenty-first century. First, China must maintain its high rate of growth while managing the potentially destabilizing tensions that accompany income inequality. Next, it must develop environmentally sustainable growth initiatives. And finally, China needs to find a way to manage its increasing demand for energy, while moderating increases in oil prices amid international concerns about global warming (Song and Woo 2008, 1). Embedded within these three major challenges, is the additional burden of feeding 20 percent of the world's population on only 7 percent of its arable land and providing water to a population whose rivers and lakes have become so polluted that over 80 percent of China's rivers have some degree of contamination while 70 percent of the 741 rivers sections monitored for contaminants are too polluted for any human *contact* at all (Wang *et al.* 2006, italics added for emphasis).

International trade remains at the forefront of China's economic strategy. Rod Tyers and Iain Bain consider global economic turbulence pointing out that “China's exports amount to almost half of its gross domestic product (GDP), with most of these directed toward Europe and North America, so China can expect that negative financial shocks in these regions might retard its growth” (Tyers and Bain 2008, 30). Yet, the authors assert that dynamic modeling, when mitigating factors are introduced, demonstrate counterintuitive results. The movement of OECD savings into Chinese investments creates a realignment. “Contrary to expectation, mitigating factors are also set in train by these shocks that lead to compensating benefits for China that insulates its economy, preserving its comparatively rapid growth pattern” and “show that China's continued growth might not depend as closely as had previously been thought on markets for

exports in North America and Western Europe” (Tyers and Bain 2008, 51). The only threat to continued growth is a rise in political risk. Continued growth “requires that China’s government [remains] stable and charts a steady and sensible policy course” (Tyers and Bain 2008, 52).

Contributors to this edited work support the position of many Western sinologists who underscore the difficulty of balancing economic growth with environmental sustainability in the face of mounting global pressure. Determined to sustain its economic growth, China’s industrial and manufacturing sectors have bypassed environmental polices resulting in large scale environmental degradation. Of the twenty most polluted cities in the world, sixteen can be found in China, with Linfen, Shanxi Province, P.R. China, singled out as the most polluted city in the world (World Bank, 2011).

Rapid economic growth has increased demand for energy for both industrial and household use. Coal remains China’s primary source of energy providing 76.7 percent of total energy use in 2006 with imports steadily rising year over year (Jiang and Hu 2008, 315). Burning coal has been the leading contributor of China’s severe air pollution problem, with energy consumption in the industrial sector as the main source of sulphur dioxide emissions. Inextricably linked to the consumption of coal, is the pollution derived by its production. China’s coal mining and washing industries emit additional sulphur dioxide, smoke and dust, and methane gas, polluting water supplies while creating “more than 1,600 waste dumps containing 4,200 Mt. of coal gangue, covering 17,000 hectares” with an additional 700,000 hectares lost to land collapse caused by mining (Jiang and Hu 2008, 316). However, industry is not the only source of air pollution. Rapid growth has led to increased energy demands for household consumption. As per capita incomes across China rise, demand for energy is projected to follow

proportionally adding to China's already burgeoning air pollution problem (Golly, Meagher and Meng 2008, 399).

China's water crisis comes to the fore as another environmental issue with which leaders grapple. Historically, China's fertile north has suffered from a lack of water while its hilly south enjoys abundant supplies. In the past two decades, northern China has suffered from falling surface-water supplies coupled with rising consumption resulting in an overall decrease of as much as 15 percent of available surface water resources in the Liao, Yellow and Huai River Basins. In response to the reduction of available surface water, farmers have increasingly looked to groundwater resources as a source of irrigation. This has led to an increase of ground water irrigation from almost nothing in the 1950s to as much as 70 percent in 2004 resulting in a falling water table, land subsidence, seawater intrusion into freshwater aquifers, desertification and the depletion of stream flows (Wang *et al.* 2008, 276-277). Rapid industrial growth and an increasingly wealthy urban population have diverted water from agricultural use placing constraints on agricultural production. In a 2005 survey, 70 percent of villages participating in the study reported that they were facing water shortages with another 16 percent of villages facing severe water shortages (Wang *et al.* 2008, 280). China has embarked on the grand South-to-North Water Diversion Project, the largest project of its kind ever undertaken which involves drawing water from its southern rivers and moving it to the dry north 900 miles away. Slated for completion in 2050, the project will divert an estimated 44.8 billion cubic meters of water annually to the population centers in the drier north linking China's four main rivers – the *Yangtze*, the *Huang*, the *Huaihe* and the *Haihe*. This project is not without its critics. Numerous and diverse environmental problems are predicted to include an overall decrease in the volume of

China's southern rivers, flooding in other locations, secondary salinization of the soil, adverse effects on fish and wildlife, population dislocations, and the concentration of pollutants that already render much of China's existing water supplies unfit for human contact (see Berkoff 2003; Liu 1998; Wang *et al.* 2006).

China has some of the toughest environmental protection laws in the world. However, implementation and enforcement of these laws, especially in rural areas is difficult. The problem lies in the drive for economic growth where those responsible for economic success are also responsible for the enforcement of environmental policies. Few local leaders are willing to close industries that employ local workers even though they spew sulphur dioxide and CO₂ emissions into the air and allow toxic waste to flow freely into local rivers, canals and other surface water supplies (Wang *et al.* 2006). Closing or restraining industries that employ friends and family would disrupt their already meager wages. Further, those responsible for the enforcement of environmental policies are aware that impeding the profits earned by local government officials with heavy investments in hometown industries can only result in disaster for themselves and their families. Consequently, while China speaks positively about environmental policies and climate change mitigation, the realities on the ground differ substantially from Beijing's lofty policies.

Unrestrained Capitalism

Kellee Tsai work, "*Capitalism Without Democracy: The Private Sector in Contemporary China*," is another important work elucidating the political and economic realities in China as they relate to reform. Tsai suggests that while China may be experiencing significant political change, democracy is not a line item on the agenda. In fact, Western views of the political

situation in China may be out of sync with Eastern realities. “The 1989 images of private business owners helping democracy activists are outdated and misleading,” and “most entrepreneurs think that the system [currently in place] generally works for them” (Tsai 2007, 3).

Long thought to be an inevitable byproduct of capitalism, democratic ideals have escaped China’s private entrepreneurs who have instead allied themselves with authoritarian Chinese Communist Party leaders (Tsai 2007, 8). This “marriage made in heaven” has allowed China’s business owners to “rely on informal, nondemocratic means to pursue their economic interests” and work around “legal barriers through innovative arrangements, often in discrete collaboration with local officials” (Tsai 2007, 11-12), bringing to mind the underlying message in Deng Xiaoping’s 1992 Southern Tour: the door to economic reforms and personal wealth will remain open as long as it does not threaten political stability (Zhao 1993).

Even if they were to have rejected Deng Xiaoping’s position of nonintervention, Chinese entrepreneurs lack the solidarity necessary to mount any real opposition to China’s political leadership. The current generation of Chinese entrepreneurs are as diverse as their predecessors. This diversity has forestalled collective mobilization in defense of their interests. Instead, most businessmen continue to rely on informal avenues to navigate operational barriers and government restrictions, collaborating discretely with local officials while focusing on their economic interests. To deviate from this model would mean a disruption in the flow of wealth and the possibility of both the isolation and neutralization of the resisting factions. This situation falls short of the emergence of a unified prodemocratic capitalist class long held out as the catalyst for institutional change (Tsai 2007, 13). In fact, the Party’s comparatively moderate-paced reforms, coupled with its deeply entrenched traditions and willingness to remain flexible

(insofar as it does not threaten political stability) may forestall any real democratic reforms indefinitely. Tsai argues that “informal interactions and agreements contribute to defining institutional reality, [and] have the potential to transform formal, state-level institutions” making them “remarkably flexible and accommodating when elites are concerned about their survival” (Tsai 2007, 14). Consequently, this elasticity has contributed to the durability of China’s formal institutions enabling most entrepreneurs to feel quite comfortable working within the current political system.

Narratives on the durability of China’s authoritarian regime are typically tied to explanations for the absence of liberal democracies in the Middle East. These arguments are first, that indigenous culture is irreconcilable with democratic ideals; next, state control and distribution of resources preclude opposition by maintaining a “robust coercive apparatus” or in the case of the PRC, sustained economic growth; third, there exists a reduction of interelite conflict through political incorporation; and finally, the combining of state building with populism (Tsai 2007, 27-31). Since *Capitalism without Democracy*’s publication in 2007, there has been a wave of political protests and revolts in the Middle East and North Africa resulting in the overthrow of three long-standing heads of state with others promising to step down “soon,” at least one civil war, and numerous protracted civil protests in more than a few neighboring states. China’s own “Jasmine Revolution” quickly wilted under the watchful eye and heavy hand of the CCP before gaining any real traction. While the explanations for durable autocracies may have to be revisited at least in the context of the Arab world, China seems to be navigating the waters of “authoritarian capitalism” rather well.

Chinese leaders have been especially sensitive to issues of political stability since the fall of the Communist Bloc. Beginning with the 1981 protests in Poland, political unrest spread throughout East Central Europe bringing down one communist regime after another throughout the 1980s, culminating with the collapse of the Soviet Union in 1991. Committing its brightest scholars to analyzing the conditions and factors that precipitated the fall of each regime, China's leaders continually examine their own situation relative to that of their communist cousins in an effort to avoid repeating their mistakes.

Limited Development

Minxin Pei's work, *China's Trapped Transition: The Limits of Developmental Autocracy* outlines the limits of developmental autocracy in a progressive society. Pei argues that despite awe-inspiring economic growth, the political apparatus is weakening and neither the state, nor the Chinese Communist Party are capable of reconciling the tensions inherent in the continually widening chasm between an anachronistic authoritarian regime and a liberalizing contemporary society. Pei's recent work challenges his earlier findings which presented a more optimistic view of China's gradualist approach to reform rethinking China's situation after witnessing Russia's economic shock therapy that contributed to its demise (Pei 1994). Here, Pei addresses three common beliefs that dominate China's neoauthoritarian development strategy despite the mounting skepticism about their validity. First, that economic progress drives political liberalization; next, the sustainability of a gradualist approach to economic reforms; and finally, the viability of a political autocracy in the absence of the rule of law, civil liberties, and political opposition. In China's case as in other autocracies, the overriding goal of self perpetuation is ultimately eclipsed by the destructive tendencies inherent in all autocracies: low political

accountability, unresponsiveness, collusion and corruption (Pei 2006, 207-208). Rational actors seek their own advantage and China's political leaders are no exception. Abundant opportunities for self enrichment have not gone unrequited as China's ruling elites seize every opportunity to benefit from their political power contributing to China's economic rise while eroding its political foundations through corrupt, collusive, albeit lucrative relationships.

The second issue is whether China's current rate of economic growth can be sustained, and whether it will be sufficient to suppress internal dissent. What is more important, Pei argues, is whether economic growth will come at the expense of environmental degradation, economic inequality, underinvestment in human capital and pervasive corruption, byproducts of rapid development that undermine both economic gains and political stability. Pei offers three possible scenarios to China's dilemma: either a central-level takeover by moderate reformers, a regime collapse, or "middle-up" initiatives on the local level that mitigate local dissent while testing viable reform options that accommodate the current regime. All three scenarios do not necessarily replace the current regime and there may be a protracted transition where a mix of repression, cooptation, and adaptation temporarily sustain an otherwise eroding elite-based ruling coalition. As Pei eloquently notes, "having seized political power through the barrel of a gun, a formerly revolutionary party, such as the CCP, will unlikely seek its own demise through voluntary [political] reform" (Pei 2006, 208).

This revolutionary perspective is echoed by Gordon Chang who argues that "the Party, born of conflict, knows no other way" and "will not politely leave when the people demand it; [the people] will have to take back their government by force" (Chang 2001, 3). Gordon Chang's work, *The Coming Collapse of China*, offers a more grim outlook on China's future advancing a

single scenario as the only possible outcome to China's dilemma; the complete collapse of the Chinese Communist Party and the government that it promotes (Chang 2001, 282). Chang contends that China's problems are intractable, pervasive, deeply entrenched, and fatal. Echoing Jack Goldstone's (1995) earlier work, *The Coming Chinese Collapse*, Chang claims the discontent of rural peasants, the demise of state-owned enterprise, an unfettered media, the burdens of a large unskilled labor force, an ailing banking system, a flagging economy, a weak and corrupt government and ideological and political suppression will inevitably lead to the demise of the Peoples Republic of China. Although Chang's window of opportunity for China's collapse has closed, he holds firm in his convictions and continues to advance his position in public speeches and academic and political circles (Chang 2011).

International Wealth and Power

David M. Lampton's *The Three Faces of Chinese Power: Might, Money, and Minds* is another example of how we might think about China's rise and what it means for the United States. Lampton promotes an empathic approach as the key to positive engagement with China; understanding China's position will allow the US to engage China constructively. Lampton puts forth the rationale for US-China relations citing economic stabilization of the global economy, security, and ecological issues all within the context of Chinese power. Using Joseph Nye's definition of power as "the ability to achieve one's purposes or goals" (Lampton 2008, 9), Lampton goes on to compare and contrast China's dominant power base in generational terms. Mao Zedong paid more attention to military power, Deng Xiaoping to comprehensive national strength, and Jiang Zemin to soft power while noting that the most effective approach to

achieving one's objectives employs a mix of these power types in measures appropriate to both the situation at hand and the goals being sought (Lampton 2008, 11).

China's range of power has grown to include both coercive and persuasive strategies. While coercive power, or might (military power), includes the power to threaten, China remains mindful of the mistakes made by the Soviet Union and is careful to avoid overinvesting in the military at the expense of domestic programs. Although leaders recognize that a strong military can be useful in reassuring citizens in national disasters, it can also worry neighbors who can easily become alarmed at China's military buildup (Lampton 2008, 37-77). Coercive power also includes money in the form of bribery power, or the power to buy. China's capacity to buy is becoming increasingly important as countries compete for investment dollars (Lampton 2008, 78-116). What is more important, according to Lampton, is China's persuasive power. The Chinese are sending large numbers of scholars abroad for technology training with their success being reflected in the increasing number of scholarly citations in world class journals. Another indication of China's success can be found in the increasing number of patents awarded to Chinese as well as the notable difference in the quality of Chinese leaders and diplomats reflecting remarkable training in their fields (Lampton 2008, 117-164). It is, perhaps, these persuasive powers that are most worrying as many contemplate China's intentions and wonder whether China may be "pretending to be a pig to eat the tiger."

The global community has to be impressed with the manner in which China has moved forward in all three of these dimensions. China's objectives should not be underestimated. The Chinese intend to be an economic, intellectual and military power on a global basis. Their ambitions are not modest; they are thinking big and moving forward with their goals. But the

road ahead is riddled with challenges. Lampton notes that China must urbanize and globalize to remain on its current course. Although more than 300 million rural Chinese have moved into the cities, the migration is not yet complete. Marketization and rapid economic growth are necessary to raise millions of Chinese out of poverty and alleviate tensions that frequently erupt in violent protests, occasionally large enough and sufficiently widespread to cause Beijing concern.

China's leaders remain vigilant knowing that any economic downturn can derail the entire plan and increasingly yield to the pressures of making as many friends as possible to minimize external problems while maximizing internal growth. There are a host of variables that can interfere with China's peaceful rise, not the least of which originate within the PRC itself. As China becomes more powerful in the global community, its international posturing will come under increasing pressure to reconcile with its domestic realities.

China: Fragile Superpower, is an important work on the relationship between China's domestic state of affairs and its international posturing. Taking an analytic approach to the convergence of China's domestic issues and external pressures, Susan Shirk expounds on the tensions that exist within China, delineating the various ways that China's internal politics could derail its peaceful rise.

The dilemma for China is in its economic rise. The Chinese Communist Party (CCP) needs to promote economic development in order to maintain political stability. However, the more developed and prosperous the country becomes, the more insecure and threatened its leaders feel. This is a paradox with unpredictable potential. Shirk argues that China's leaders exhibit deep insecurities about their waning power even though China is politically and economically stronger than it has ever been since the nineteenth century (Shirk 2008, 6). These

insecurities are rooted in the downfall of the two previous dynasties, the Qing in 1911 and the Nationalist in 1949, when mass movements “accused leaders of failing to defend the nation against foreign aggression” (Shirk 2008, 7).

Sun Yat-sen recognized the lack of unity among the Chinese people in 1924 when he referred to them as “a sheet of loose sand” (Sun 1981, 6). In his series of lectures on political philosophy entitled, *The Three Principles of the People*, Sun places the principle of *mínzú*, or “nationalism” ahead of both *mínquán* and *mínshēng*, “democracy” and “people’s welfare” respectively, admonishing the people to “earnestly promote nationalism” to “weld together the nation” of four hundred million Chinese, or face the “loss of [the] country and the destruction of [the] race” (Sun 1981, 6). When a foreign enemy threatens, nationalism has the power to create solidarity among the people. And when solidarity is created through nationalism, the masses tend to support, and blindly follow, their leaders. Mao successfully used nationalism as a tool to deflect attention away from the violence perpetrated against both the gentry and landlords during the land reform movement in the early days of the People’s Republic of China. Finding it an effective tool, Mao continued to use nationalism to strengthen the Chinese Communist Party by stirring up patriotic tendencies in China’s youth. Subsequent leaders have relied on the rhetoric of China’s “century of humiliation” to perpetuate nationalistic tendencies and today’s leaders have no qualms about using nationalism as a stand-in the event of an economic slowdown.

Against the backdrop of communism’s failure in all but a handful of relatively poor states (Cuba, Laos, North Korea, Vietnam, with Cyprus and Nepal having elected Communist parties), the current regime’s propaganda machine promotes nationalism as China’s new binding ideology. This dangerous approach is a two-edged sword. While the CCPs brand of nationalism

has drawn attention away from China's domestic problems uniting the Chinese by providing an outlet for their "century of humiliation," it has also limited the Party's repertoire of responses in the international community. In the event of an international crisis, the CCP may feel pressured to respond in an inappropriate manner in order to appease the masses and avoid any large scale domestic demonstrations that may destabilize the regime (Shirk 2008, 6-12). Shirk contends that the "Communist Party leaders will never make international considerations a priority. Their number one priority will always be the preservation of the Communist Party rule" (Shirk 2008, 8).

The recently released Communist Party circular known as "Document Number Nine," issued by the Central Committee General Office, reveals the precarious situation in which the Chinese Communist Party believes itself to exist.⁵⁰ Although the full contents of the document have not been made public, "it paints a grim picture of what the party sees as [a] threat posed by liberal ways of thinking" and sends the chilling message: "stick to the party line and denounce any dissent" (J.M. 2013). Seven perils have been enumerated in a "'mass line' campaign to enforce party authority that goes beyond the party's calls for discipline" and includes "Western constitutional democracy, promoting 'universal values' of human rights, Western-inspired notions of media independence and civic participation, ardently pro-market 'neo-liberalism,' and 'nihilist' criticisms of the party's traumatic past" (Buckley 2013). Secret briefings across the nation admonish officials to "uphold the three forbiddens: no public expression of disagreement

⁵⁰In Chinese culture, the number "nine" is thought to be auspicious. The Chinese word "nine" is a homonym for "long-lasting." It is also strongly associated with the Chinese dragon, the symbol of magic and power — there are nine forms of the dragon, it has nine attributes, and it has nine children. The dragon symbolizes the Emperor and can be found in ornaments throughout the Purple Forbidden City. The number nine also adorns the circular altar platform of the Temple of Heaven, where reigning emperors performed sacred rituals at specific times of the year. While naming the CCP's circular "Document Number Nine" may be coincidental, it may also have been a deliberate attempt to convey the significance of the message.

with the party line, no spreading of ‘political rumours’ and no making of remarks that taint the image of the party or state” while citizens are encouraged to “display ‘three self-confidences’: confidence in the political system, in the party line, and in party theory” (J.M. 2013). At the same time, the recently released “three-volume study of the self-confidences blames the West for the world’s economic troubles,” vindicating the “China model” while condemning the “Washington consensus,” in an attempt to reinforce the Party’s political ideology and sound economic planning.

China has worked to maintain its reputation as a peaceful rising nation and benign power that accommodates its neighbors . And although it uses its economic ties to make friends and behaves as a team player in multilateral organizations, several flashpoints have the potential to alter China’s course: Taiwan, Japan and the United States (Shirk 2008, 105-139). Driven by its nationalistic ideology and need to maintain “face,” China is determined to bring the “renegade province” of Taiwan back into the folds of the motherland, while the Taiwanese are determined to maintain their independence.⁵¹ This has, on more than one occasion, resulted in a heated confrontation with the potential of US involvement. The Taiwan Relations Act of 1979 provides for the continued defense of the island by the United States (although not a formal defense treaty), placing America square in the milieu of tensions between the two sides. This potential flashpoint became extremely heated in 1995 when Taiwan President Lee Teng-hui made his provocative pro-independence speech at Cornell University eliciting Beijing’s angry response; large-scale military exercises in the Taiwan Strait where unarmed missiles landed just a few

⁵¹Chaing Kai-shek lead American backed Nationalist forces against Mao Zedong in the Chinese Civil War, retreating to Taiwan in a bid to regroup and retake the mainland. The Korean War prevented Mao from attacking Chaing and his forces who were now stationed on an island in the Pacific with strategic importance to the U.S. in the Korean conflict. Unable to engage the U.S., Mao was left no choice but to “swallow the bitter pill” and capitulate until another “more convenient” time. Taiwan remains under the protection of the United States.

miles off Taiwan's coastline. The mounting crisis ended when then U.S. President Bill Clinton sent two aircraft carriers to the vicinity of the Taiwan Strait as a warning to Beijing. The Chinese viewed the response by the United States as "interference in domestic issues" and an act of "bullying." Similar to the "domino theory" of communism, mainland Chinese leaders feel that if Taiwan declares independence, then Tibet, Xinjiang, and inner Mongolia may follow suit compromising China's territorial integrity (Shirk 2008, 181-211). Any secession of "Chinese territory" will only add to China's century of humiliation, forcing the CCP to respond to domestic pressures by defending the nation against foreign aggression.

The additional flashpoints of Japan and the United States are also driven by Chinese nationalism with its propaganda machine fueling the flames of hatred toward Japan for its twentieth-century aggression toward China and its historical hatred of America as an "imperialist" nation. While promoting a harsh stance against its "enemies" China must also maintain favorable trade relations with both of these countries to ensure its own economic health (Shirk 2008, 148, 219). This is becoming increasingly difficult, especially in the case of Japan where a backlash has more Japanese viewing China as a threat, than Chinese viewing Japan as a threat (Shirk 2008, 146).

Domestically, China faces the more insidious problem of economic inequality. China's economic miracle has produced an ever widening gap between its wealthy urbanites and its extremely poor rural cousins. This growing divide has fueled large-scale social unrest that the CCP has, until now, handled quite well by identifying with protesters, coopting potential opposition leaders, expanding individual freedoms, strengthening coercive measures, promising populism, and sustaining some level of economic growth in rural areas (Shirk 2008, 39-78).

Additional challenges that the CCP faces are, for the moment, being adequately addressed by the Party. To avoid public leadership splits, the party plays to the selectorate, controls cartels, and maintains a weak international voice in a show of “hanging together.” It has also been successful in retaining PLA loyalty by providing the military with new equipment and uniforms, salary increases, integrating military and political leadership, while providing financial rewards, larger budgets, and national recognition (Shirk 2008, 39-78). However, its biggest challenge continues to be its economic success.

Communists Embrace Capitalism

Bruce Dickson offers a unique analysis of China’s political future and challenges the commonly accepted notion that democracy follows economic development. In *Wealth into Power: The Communist Party’s Embrace of China’s Private Sector*, Dickson tells us that “economic development by itself does not necessarily or directly lead to democracy” (Dickson 2008, 250). Contrary to the popularly accepted view that China’s entrepreneurs would promote democratic values, China’s political and economic conditions reflect the formation of a partnership between China’s entrepreneurs who embrace the politically powerful CCP and use the Party to support and enhance their business ventures. “Instead of engaging in conflict and confrontation, China’s political and economic elites are increasingly intertwined, cooperating on producing national development and colluding in accumulating personal wealth” (Dickson 2008, 1). The evidence has shown that the Chinese Communist Party supports the private sector, a strategy that has been an increasingly prominent part of its economic reforms. This is reflected in the quiet recruitment and cooptation of entrepreneurs into the party since 1989 although their inclusion had been banned by the CCP (Dickson 2008, 3).

The relationship between the CCP and China's business sector is mutually beneficial. While the CCP promotes and supports China's entrepreneurs, Chinese entrepreneurs legitimize the CCP and lend power to a political party said to be suffering from atrophy, lack of a clear direction, and a hollow ideology (Shambaugh 2008). "The CCP has shown how an effective strategy of survival can perpetuate authoritarian rule even in the midst of rapid economic and social change" (Dickson 2008, 250). However, this relationship is not without its challenges. "By tying its legitimacy to the trappings of wealth and power, the CCP has also tied itself to the private sector" to promote the goals of "economic modernization and the nationalistic pride that it generates" (Dickson 2008, 22). This cozy relationship, described as "crony communism" promotes the "interaction between economic and political elites based on patrimonial ties in which success in business is due more to personal contacts in the official bureaucracy than to entrepreneurial skill or merit" (Dickson 2008, 23). With the CCP as the central actor, Party and government officials have disproportionately benefitted from sweetheart deals that allow the political elite to parlay their power into unprecedented wealth. "According to an internal party and government report, 90 percent of Chinese millionaires are the children of high-ranking officials" (Dickson 2008, 23). Consequently, maintaining the political status quo benefits the elites and continues to subjugate the economically and politically oppressed general population; the Party maintains its power and its members grow wealthy, entrepreneurs are afforded political favors and enjoy sweetheart deals, and the CCP can boast of China's economic miracle and legitimize their hold on political power.

Political Stasis in a Transitioning Economy

David Shambaugh analyzes the current state of the CCP in his most recent work, *China's Communist Party: Atrophy and Adaption*. Shambaugh suggests that the CCP is at once in a state of atrophy and adaptation and emphasizes that the CCP is acutely aware of its own precarious position, especially after the collapse and disintegration of communist ruling parties in both the Soviet Union and Eastern Europe, and has worked diligently to analyze its own internal and external challenges. “The process of understanding the reasons and precipitating causes for the collapse of these other party-states” we are told, “was not an idle exercise in academic research among some Marxist theoreticians—the research spanned a number of institutions and had very practical implications for both the CCP’s ‘general line’ (*Zhongyang luxian*) and its longevity” (Shambaugh 2008, 2). Shambaugh points out that “unlike many Western analyses—which tended toward a singular emphasis on Gorbachev’s individual actions and failings—Chinese analysts took a much broader and historical view and offered a more systemic analysis of the multiple reason for collapse” (Shambaugh 2008, 2). The results of this analysis have been a wide range of reforms that are “sweeping in scope and have collectively been intended to strengthen the party’s ruling capacity” rather than replacing their system (Shambaugh 2008, 2).

While Western analysts disagree on the future of China, there appears to be a strong consensus on the challenges that the CCP faces: “declining party legitimacy, eroding party organizations, increasing noncompliance with party directives, a hollow party ideology and moral vacuum in society, rampant corruption, parasitic officials who engaged in rent seeking and other predatory practices, and so on” (Shambaugh 2008, 24). Some scholars believe that the Chinese political system is in danger of breakdown and collapse while others tend to envision an

adaptable and more gentle regime geared toward economic expansion. “Although the pessimists and optimists are largely in agreement that the CCP is a vulnerable institution and that political reforms are needed to reverse the atrophy and rebuild its legitimacy and power, they differ—often significantly—over the scope and intensity of problems afflicting the CCP and how successful the political reforms of recent years (and many of the pessimists would argue that there have been no political reforms *per se*) have been” (Shambaugh 2008, 38). The results are that one group of specialists see the challenges as manageable, strengthening the Party, while the other group sees the Party losing control.

The reality of China is that “the multitude of variables and the complexity of the political system in a nation the size of China just do not lend themselves to such straight-line projections, simplistic descriptions, or confident predictions” and the most likely outcome will not vary much from the current situation where “atrophy plus adaptation will coexist and be sustained indefinitely” (Shambaugh 2008, 177). There is no indication that China’s communist party will, at least in the foreseeable future, reform itself and introduce democratic ideals. This does not preclude a move toward a procedural democracy where “elections” take place between candidates put forward by the CCP. In fact, this is exactly what has been happening in China’s rural areas for several decades. However, there is a vast difference between a procedural democracy and a substantive democracy. China is focused on the dual objectives of economic development and international recognition and is unlikely to allow anything to deter it from achieving its goals.

China's Return to Ancient Traditions

With the goal of economic development and world prominence leading China's resurgence, both its leaders and citizens continue to rely on traditional Chinese relationships with *guanxi* playing an important role in China's success (Fairbank 1987, 368). In the early days, *guanxi* served to ensure one's family remained fed through famine. Later, it served as a protection against revolutionaries whose objective was to destroy both Chinese culture and those who clung to the "old ways." Beginning in the 1980s, China's Special Economic Zones showed outward signs of cooperation between the CCP and China's entrepreneurs, using *guanxi* to court favor and sweetheart deals. Today, the "princelings" continue to support the CCP while the CCP issues licenses that allow access to both foreign and domestic markets growing both the economy and CCP power. This marriage between China's entrepreneurs and political leaders enjoys the support of its intellectuals who advocate for a more "humanistic" society based on Confucianism. (Wang 2007). Beijing's Foreign Language Press continues to publish new texts promoting China's "peaceful rise" and "harmonious society" through its ancient philosophies and its citizens continue to subscribe and adhere to ancient traditions (Li 2008; Liang *et al.* 2004; Wang 2007; Wu 2007; Zhan, Wang and Wang 2007; Zhou and Fu 2007).

CHAPTER IV CASE STUDIES

Previous chapters laid the foundation for Chinese social networks through the use of guanxi, a culturally embedded concept that has survived in China throughout centuries. The present chapter will demonstrate the use of guanxi in two separate case studies, the first being based in a manufacturing firm in the south of China,⁵² and the second being based in the aviation industry in the north of China. While the two cases are distinct in all but absolute size, similarities emerge that highlight consistency in the strategic use of guanxi. Further, a comparison of these two networks show that similar tactics are employed in the expansion of guanxi networks. Prior to embarking on the narrative of each case, I present a brief discussion of the methodological strengths inherent in case studies and justification for their use in this research, then preface each case with a detailed overview of the industry in which each network operates. This chapter limits itself to presenting only the narratives of each case study, reserving the detailed analysis for the chapter that follows.

As a Methodological Approach to Guanxi

The case study as a methodological approach to understanding the empirical world is perhaps the oldest approach to social inquiry. Over the past fifty years, the approach has come in and out of favor. However, the past three decades have witnessed the systematic development of

⁵²See Weeks 2004.

case studies for the cumulative building of social science theory, a relatively new phenomenon in social science (George and Bennett 2005, 5). Prior to the assessment of the case study as a methodology approach to the study of guanxi, I will speak very briefly to the important ongoing debate between methodologies within the social sciences in general, and the case study approach specifically, recognizing that although quantitative methods have long dominated the field, qualitative methods are making a resurgence and a mixed method approach is receiving increased attention.

Methodological Tradeoffs

Case studies are not without their weaknesses and researchers must weigh these tradeoffs. Notable limitations include case selection bias, tradeoffs between parsimony and richness, tensions between internal validity and generalizability, an inability to judge the frequency or representativeness of a case, and difficulty in estimating the average causal effects of a variable.

The most common critique is selection bias which occurs when a researcher chooses a case to “substantiate a preconceived position” (Yin 2009, 72). This bias should not be outright rejected. In some instances, choosing cases on the dependent variable “can help identify which variables are not necessary or sufficient conditions for the selected outcome” and in the early stages of research, this bias can help identify potential causal paths and other variables leading to the dependent variable of interest (George and Bennett 2005, 23). Representativeness poses another problem for case study researchers. Achieving greater explanatory richness within a case results in the tradeoff of achieving explanatory power across cases. With respect to generalizability, scholars tradeoff parsimony and the broad applicability of theories in exchange for explanatory richness. Variable gradations are another inherent weakness in case studies.

Exploratory-Explanatory Case Study Approach to Guanxi

Both the phenomenon under investigation and the framing of the research question determines the relevant strategy used in research design. Case study is an ideal methodology when a holistic, in-depth investigation is needed (Feagin, Orum and Sjoberg 1991). A holistic approach to the phenomenon does not imply that the case study design is holistic. In fact, guanxi networks lend themselves to an embedded design where each person in the network is analyzed first as a single unit then as a subunit in the larger network. The case study is the preferred method when approaching “how” and “why” questions in an explanatory context, and is reflected in the research question; “how” do firms initiate, build, and use guanxi networks? These types of questions (“how” and “why”) deal with operational links rather than frequency or incidence (Yin 2009, 9). Single-case studies are useful in “captur[ing] the circumstances and conditions of an everyday or commonplace situation” (Yin 2009, 48). They are also ideal for revelatory cases where an observer may have access to phenomena that were previously inaccessible. Here, the “study is worth conducting because the descriptive information alone will be revelatory” (Yin 2009, 48-49). This is a fitting and appropriate approach to the study of guanxi and guanxi relationships where access to information is not only guarded, but thought to be so typical and commonplace that little attention is paid to the phenomenon.

Within the single-case study tradition, the exploratory-explanatory approach utilizing participant-observation as a source of evidence has its own strengths and weaknesses. While this mode provides insight into interpersonal behaviors and motives, it also creates bias due to the participant-observer’s opportunity to manipulate events (Yin 2009, 102). The manipulation of events is a two-edged sword. While it has the power to alter the details in a case, it can also

provide opportunities to “produce a greater variety of situations for the purpose of collecting data” (Yin 2009, 112). In investigating how firms initiate, build and use guanxi, participant-observation promises unusual opportunities to gain insight on otherwise inaccessible phenomena and is an appropriate method for collecting the nuanced data inherent in guanxi networks in everyday settings.

Research Process

This research takes a very direct, albeit less-traveled path to data collection in employing participant observation through consultancy appointments (see He 2006, 168-188). The data for this study were collected and recorded in both mainland China and the United States and in cases spaced more than ten years apart, focusing on the same phenomena: guanxi networks. In China, guanxi production is ubiquitous (Kipnis 2002, 22). That is to say that it is virtually impossible to live or even travel across China without being affected in some way by guanxi. Trained scholars, sensitive to both their surroundings and their circumstances are acutely aware of the networks they become enmeshed in and the opportunities those networks provide for research. Since the salience of a network does not become apparent until after some series of significant events, planning longitudinal studies is extremely difficult; a researcher can never know in advance whether a specific network will be of interest and must rely on the time-consuming and costly “soak and poke” approach to data collection (See Fenno [1978] 2003, 1986). Consequently, longitudinal studies of guanxi networks are extremely rare.

The following case studies capture the mechanics of guanxi, revealing the dynamics of Chinese social networks within two distinct industries. The first case study considers a guanxi network in a low-tech manufacturing firm in South China, home to thousands of factories that

fueled China's economic rise in the late 1990s. The second case is couched within the highly technical and complex field of aviation, a nascent industry that China is working hard to develop. Both cases are unique in their longitudinal data and level of detail found in the narrative.

Case I — China: The World's Factory

Significance of the Case

China's ascendancy as an economic power is the result of decades of reform rooted in a "century of humiliation." Now, the world's second largest economy and largest exporter of goods, China has consistently achieved near double digit growth rates over the last three decades and is well on its way to regaining the prominence and international recognition that it once enjoyed. Its strategy for development does not follow any preconceived program, but "crosses the river by feeling the stones." Termed a "socialist economy with market characteristics," China's unique economy has given birth to three classes of business; State owned, privately owned/joint ventures, and Town and Village Enterprises (TVE).

The Town and Village Enterprise emerged in the latter part of the 1980s as people's communes were being dismantled and economic liberalization spawned new types of business organizations. The TVE served as a middle ground between state owned and privately owned/joint ventures retaining many of the elements of the collectivization found in the earlier communes. Consequently, there remains a tight network between local interests and a strong cohesive relationship between managers, workers, local government, and the broader community (Bruton, Lan and Lu 2000, 21). By the 1990s, TVEs had become the "largest contributors to the nation's industrial output and one of the most successful sectors of the economy" employing 17 percent of the nation's workers in an estimated 900,000 firms that produced approximately 41

percent of China's industrial output and approximately 1.2 billion RMB in exports (Bruton, Lan and Lu 2000, 21). The combination of a collective orientation with a strong entrepreneurial spirit produced the economic engine China needed to launch itself on the path of recovery in the early days of reform and its success enabled the Chinese Communist Party to repair its credibility as a legitimate leader capable of leading China to a position of prominence in the global community.

Economic Growth: The Town and Village Enterprise

KS Gongchang is a Town and Village Enterprise established in 1992 in Changping, Guangzhou, P.R. China.⁵³ The TVE has four divisions: lighting, metal, paper and plastic. The collective produces various decorative light strings (Christmas lights), lighted wire sculptures, wire furniture, paper packaging and decorative resin products. During peak production the factory employs close to 4,000 workers, mostly unskilled migrants who depart after the Chinese New Year.

Dongguan KS Gongchang possesses impressive credentials. The collective holds a Certificate of Approval for establishment of enterprises with investment in Taiwan, Hong Kong, Macao, and overseas Chinese in the Peoples Republic of China. An official report issued on 19 December 1997 identifies Dongguan KS Gongchang as a factory able to "produce a product that will meet the standards of quality established by Wal-Mart Stores, Inc." The "International Factory Quality Certification" prepared by Wal-marts' representative gave the factory a rating of 89 percent deducting points only for quality control systems. Additionally, SGS Yarsley International Certification Services Limited of the United Kingdom issued a certificate in 1998

⁵³All personal names have been removed and replaced with either pseudonyms or titles. Similarly, the names of specific locations have been changed. These modifications do not affect the data in any way.

designating KS Gongchang Metals and Plastics Manufacturing Co., Ltd. as having “been assessed and registered as meeting the requirements of ISO 9001,” the mark of a truly international company.⁵⁴

The importance of these credentials to the Chinese is both practical and strategic. In the business world, designations by globally recognized organizations have a considerable impact on consumers’ willingness to purchase a manufacturer’s products. Chinese philosopher Li Zhong Wu explains that this advantage serves a second purpose. In his essay, *Thick Black Theory*, Wu states, “You must join organizations that have virtuous purposes so that people will not believe you capable of ruthless actions” (See English translation by Chu 1992, 360).⁵⁵

The president and general manager of Dongguan KS Gongchang is a businessman in his early 30s who secured the top position because of his *guanxi* and subsequent access to a Chinese export license.⁵⁶ After securing his own position, he appointed his brother-in-law as Vice President of Operations and a former classmate, formally trained in agriculture and inexperienced in business, as Director of Sales and Marketing. The classmate had voiced his concern over

⁵⁴ISO 9000 is a set of five universal standards for a Quality Assurance system that is accepted around the world. Currently 90 countries have adopted ISO 9000 as national standards. Goods or products purchased from a company that is registered to the appropriate ISO 9000 standard, ensures the buyer will receive the advertised quality of the goods. The most comprehensive of the standards is ISO 9001. It applies to industries involved in the design, development, manufacturing, installation and servicing of products or services. The standards apply uniformly to companies in any industry and of any size. Many companies require their suppliers to become ISO 9001 registered. Consequently, registered companies find that their market opportunities have increased. In addition, a company's compliance with ISO 9001 insures that it has a sound quality assurance system, and that is simply good business. Registered companies have had dramatic reductions in customer complaints, significant reductions in operating costs and increased demand for their products and services. ISO 9000 registration is rapidly becoming a requirement for any company that does business in Europe. Many industrial companies require registration by their own suppliers. There is a growing trend toward universal acceptance of ISO 9000 as an international standard.” <http://www.isoeasy.org/>

⁵⁵*Thick Black Theory* is an analysis of the methods used in Chinese society to obtain and hold power. It examines how men use their power and wealth to accumulate more power and wealth. The essay was written in 1911 by Li Zhong Wu, a social philosopher and critic and argues that the primary reason to strive for an important appointment is to be in a position to accumulate wealth through bribery and corruption (Li [1911] 2010).

⁵⁶See Wank, David L. 1996. “The Institutional Process of Market Clientelism: Guanxi and Private Business in a South China City,” *The China Quarterly* 147, 820-838.

taking the position but accepted upon the urging of the President who was eager to fill the office with someone loyal to himself. The President appointed his sister as head of the accounting department. KS Gongchang's Hong Kong office remains at the apex of financial transactions. However, KS Gongchang controls all accounting from mainland China. It is common knowledge among staff that the accounting office maintains three sets of financial records. One set satisfies the Chinese government, another the investors, and a third set and probably the most accurate is for the exclusive use of the President.

The decorative lighting and lighted wire sculpture divisions are by far the largest and most profitable sectors of the enterprise with an estimated export value of more than \$20 million USD in annual sales (1998) in the United States. All decorative light strings imported into the US are required to obtain an Underwriters Laboratories (UL) Listing and bear the UL Label. The UL Listing is not a legal requirement. However, the US Consumer Product Safety Commission (CPSC) recommends that consumers avoid products lacking the UL Label and issues nationwide recalls on unlabeled products found on the shelves in retail outlets. The recall notices generally state that the CPSC has not received any reports of injuries or incidents involving the products and explains that the recall is being conducted to prevent the possibility of injury.⁵⁷ The CPSC instructs consumers to return the products to the place of purchase for a full refund. Effectively, products lacking a UL Listing and the UL Mark are unmarketable in the US.

International Trade and Safety Regulations

⁵⁷Of the 12 recall notices posted on the CPSC website for seasonal lights, only two reported occurrences of dangerous incident. Ironically, both incidences noted a UL File Number in the recall information indicating a relationship between the manufacturer and UL. The recall failed to dispute the legitimacy of the use of UL Labels appearing on the product. See Releases #00-042, #00-036, #99-043, #98-070, #98-041, #98-038, #97-049, #97-045, #95-055, #95-033, #95-027, #90-025. Information accessed at CPSC website: <http://www.cpsc.gov/cpscpub/prerel/prerel.html> on 12 March 2000.

Chinese light string manufacturers understand that obtaining a coveted UL Listing grants them the authority to use the UL mark on products, opening American markets to their exports. They are willing to go to great lengths to secure the privilege. Extreme measures that include the counterfeiting of UL labels are common, especially in China. In an effort to curb label counterfeiting, UL introduced a new hard-to-copy holographic label and has required Chinese companies to use the new labels since November 1997. Additional efforts include the Anti-counterfeiting Consumer Protection Act of 1997, which allows US Customs Agents to seize products bearing counterfeit UL labels, prosecute individuals who traffic in “counterfeit goods” (labels) and reveal the names of manufacturers and importers that are guilty of counterfeiting, opening the way for legal action against the offender (Liff 1997, 3; also see Lamm 2010). While these measures have cut down on counterfeiting, they have done little to ensure the safety of products purchased by US consumers.

Legitimately obtaining a listing and authority to use UL labels requires passing a battery of tests specific to the product and then manufacturing those products in compliance with the “UL Procedure” issued. The UL procedure specifies the material to be used in the manufacture of the product. “Decorative Light Strings” fall under UL588 requirements and the “cost limit” on a full battery of tests is \$13,500 USD per light string provided the failure of any one test does not require subsequent retesting.⁵⁸ The fees seem reasonable. However, the listing requirements, policies, and procedure regulations increase the real cost.

⁵⁸Cost is in 1998 dollars.

The Inner Workings of a Chinese Factory

Initial contact with the actors in the network was made when irregularities were suspected in March 1999. KS Gongchang's UL Specialist complained that he was having a difficult time getting the US Independent UL Agent (UL Agent), to respond to inquiries concerning KS Gongchang's account.⁵⁹ Multiple notices sent out over a period of several weeks failed to produce a single response concerning the status of outstanding projects and threatened to cause great economic losses to the company. The UL Specialist suggested that intervention on behalf of the factory by the Factory Representative might elicit a response.

The American UL Agent finally responded to a firm demand for immediate action by KS Gongchang's Factory Representative and a reply came nine days after the initial contact. In his response, the UL Agent said that he was sorry for the delay but "we have been very busy working on your UL projects. We settled the problem of the counterfeit labels . . . from last year (March 25, 1998). You will receive a letter from UL dated January 25, 1999 confirming the case is closed. Congratulations." The letter continued to explain the situation concerning another project stating that, "we have negotiated so that UL only requires one sample . . ." ⁶⁰ The implication that UL did not apply testing requirements uniformly, but instead based testing requirements upon the Agent's relationship with UL and his negotiating skills were backed by the Agent's professed background; the UL Agent represented himself to Chinese manufacturers

⁵⁹Underwriters Laboratories allows manufacturers to assign an "Independent Agent" to submit products for investigation on the manufacturers behalf. The Agent is not an employee of Underwriters Laboratories and is not under the control or direction of the organization. The only requirement to become an Agent is a signed "Agency Authorization Notification" granting authority to act on behalf of the manufacturer and indemnifying UL "against any loss, expense, liability, or damage, including reasonable attorney's fees, arising out of any and all actions or omissions by the Agency."

⁶⁰Letter from UL Agent (USA) to Dongguan KS Gongchang, (China) dated 11 February 1999.

as a “former UL Chief Engineer responsible for the training of US UL Engineers and having considerable power within the organization,” credentials that demanded considerable respect.⁶¹

The letter went on to outline, as requested, the status of KS Gongchang’s projects under UL investigation. The UL Agent stated that all products had been submitted for consideration and test results would be forthcoming. Confirmation by KS Gongchang’s Factory Representative directly with the UL office in Camas, Washington, revealed discrepancies. UL officials reported that they had no record of some products reported to have been “in testing.” Additionally, some products that had been reported as “in testing” were “on hold” pending payment of the testing fees. Since KS Gongchang had previously wired the required testing fees to the UL Agent, the irregularity of the situation prompted further investigation.

The Factory Representative arranged a general meeting at the UL Office in Camas, Washington for the UL Agent, UL Engineers and KS Gongchang’s Factory Representative to discuss and resolve the discrepancies. A second and private meeting between the UL Agent and KS Gongchang’s Representative was scheduled to follow the general meeting providing an opportunity to review the financial records concerning KS Gongchang’s account at the UL Agent’s headquarters in Seattle, Washington. At the general meeting, the UL Agent announced a change in the agenda moving the meeting location for the audit from the UL Agent’s office in Seattle to a local Camas restaurant with the promise of a complete review “since the records were easily portable; just a single manila folder would save the long trip to Seattle.”

⁶¹Officials at the UL office in Camas, Washington deny the UL Agent’s claim as both an engineer and former employee of Underwriters Laboratories.

The general meeting resolved the issues concerning KS Gongchang's pending projects and the UL Agent promised to submit any unpaid testing fees that were "inadvertently missed." The audit, however, never took place. The UL Agent announced that the financial records were "inadvertently left behind at the office in Seattle" which made the audit impossible. An audit was eventually completed with the expected results. An accounting of bank transfer receipts from Dongguan KS Gongchang in China to the UL Agent in America revealed more than \$285,000 USD in excess payments that were not transferred to Underwriters Laboratories.⁶²

The meeting resulted in the decision to transfer responsibility for all pending and future projects to the joint control of the UL Agent and KS Gongchang's Factory Representative. This decision allowed for the constant monitoring of projects and eliminated the UL Agents monopoly on information.⁶³ Improvements in communication with Underwriters Laboratories created a time-frame more in line with normal testing procedures and KS Gongchang's UL Specialist increasingly relied upon the responsiveness of the Factory Representative for information.

China - Implementing US Regulations

A clear view of the dynamics of the network developed over the course of several months of interaction with KS Gongchang employees, the UL Agent, and the UL Engineers in America. What existed was a transaction network based on guanxi, that transcended national borders and operated outside the formal institutions established to regulate the organization. Although graft took place within the network, the intent of the parties, as will be shown, was to create a strong

⁶²The audit was conducted with information supplied by KS Gongchang, Ltd. (copies of international bank transfers to the UL Agent), the UL Agent's payment ledger and Underwriters Laboratories account records concerning KS Gongchang's File.

⁶³KS Gongchang's UL Specialist, although familiar with UL requirements was unequipped to deal with American business systems and bureaucracy.

transaction network with access to profitable markets for the export of manufactured goods. It is also important to note that not all of the parties involved in the transactions were aware of the corruption that was taking place.

Many key positions within the network were founded on guanxi and access to many of the goods and services within the collective were acquired through the willingness of the participants to use that guanxi. Those within the Chinese collective were only too happy to be able to tap into the perceived power that the UL Agent had with Underwriters Laboratories. Conversely, the UL Agents success in projecting an aura of power based on his professed relationship with UL acted to restrain the collective and allowed the UL Agent to transform that power to influence, influence to fear, and fear to control.

Power to Influence

In China, “[w]hatever you want to do, you have to have contacts. Life becomes an endless search for the right person, followed by continuous negotiation . . . Every sector of the economy is affected” (Burstein and DeKeijzer 1998, 204). Throughout history, the Chinese have relied upon relationships with family, friends and officials to bypass inefficient and oppressive bureaucracies. Modern China is no different in this respect. The “back door” is an effective and efficient way to accomplish most tasks, especially those concerning governmental authorities. The manufacture of guanxi when no previous relationship exists, by relying on either intermediaries or cultivating and then nurturing a new relationship, is an acceptable means of establishing the necessary network connection. However, the benefits of “back door” access are not without costs.

Li Zhong Wu's work, *Thick Black Theory* (1911), translated in part by Chin Ning Chu, describes the way Chinese interact in the real world. Wu explains that there are two types of bribes. The first consists of small gifts that create a sense of obligation exceeding their cost. The second type is offered to those individuals who have great influence with the official having power over you (Chu 1992, 359). The Chinese perceive the UL Agent to possess the necessary *guanxi* that gives him "great influence" over the official (Underwriters Laboratories), who holds substantial power over you (Chinese manufacturing firm). Records confirm that bribe money was requested by and forwarded to the UL Agent regularly.

In June of 1999, KS Gongchang's UL Specialist expressed concern over a new plastic used to manufacture lamp holders and felt that it might not pass required testing. The Specialist faxed the following message to their Factory Representative in a plea for help:

"For the PP material [99CAXXXXX], we have to do something. Please review the emails that I sent to you. I mentioned this question in one of them. At present, I was told a lot of stories concerned UL projects which happened in Taiwan factories. It seems that the UL CLIENTS from Taiwan are very flexible and are able to settle much more things. I was also told by some very important UL inspector from Beijing Office, something is not dependent on their quality or good design, contradict, it will be rely on good relationship between UL clients and UL. I will tell more in detail if you were back in China. I hope you will be able to persuade UL do not carry out rain test for the PP material [99CAXXXXX];⁶⁴ so that we will have a opportunity to get approved. Otherwise, we won't get a approval."⁶⁵

The Factory Representative returned the following response to the manufacturer on the same day after a lengthy discussion with UL Engineers in Camas, Washington; "No Rain Test

⁶⁴ The "rain test" is arguably the most feared of all UL tests. Manufacturers are most concerned with failing this single test and it is usually the topic of conversation when discussing UL 588 testing in China.

⁶⁵E-Mail from Dongguan KS Gongchang to KS Gongchang's Factory Representative dated 7 June 1999.

will be performed because no rain test is necessary. UL will not perform any test that is not required.”⁶⁶

KS Gongchang’s President feared confirming this information with the UL office in the event that the Factory Representative’s information was inaccurate or overturned. The UL Agent insisted that the personalities involved in the corruption would always remain anonymous and that no one would be able to discern where the orders for a particular test came from, only that if cooperation were not forthcoming and proper payment was not made, then difficulty would surely follow. Moreover, KS Gongchang’s President feared that the UL Agent may retaliate if the factory caused the Agent to “lose face” by questioning his authority.⁶⁷

After a lengthy telephone conversation with KS Gongchang’s UL Specialist, the following message was returned to the Factory Representative by fax; “So the Board of Directors of KS Gongchang made the decision let the [UL Agent] to take care of it as I told you before.”⁶⁸

The desperation of the manufacturer was apparent. In an attempt to explain the shift of sole responsibility for this single project back to the UL Agent, KS Gongchang offered the following explanation. “There are thousands and thousands light strings with this T-shaped Lamp-holder piled in the factory. If we can’t ship these products by the end of June, we will suffer from heavy losses.”⁶⁹

⁶⁶E-Mail from KS Gongchang’s Factory Representative to Dongguan KS Gongchang dated 7 June 1999.

⁶⁷ In China, causing one the “loss of face,” or embarrassment, is an act of disrespect with serious consequences. “Losing face at someone else’s behest is justification for some form of retaliation.” (Seligman 1999b, 201).

⁶⁸E-Mail from Dongguan KS Gongchang to KS Gongchang’s Factory Representative dated 7 June 1999.

⁶⁹Letter from Dongguan KS Gongchang to KS Gongchang’s Factory Representative dated 17 June 1999.

Records show careful attention focused on avoiding a direct request for bribe money. Usually the request was simply for an amount that exceeded the testing fee without explanation as to its disposition. In fact, on only one occasion was there documented inference to additional payments to be submitted for a UL investigation concerning the T-Shaped Lamp-holder. The UL Agent responded to KS Gongchang's plea for help:

"I am sorry to delay your faxes and telephone calls but as you know you gave me a very tough job re. the lamp-holder with T-shape bridge used to fix wire. I had to fly to several UL offices in the US to negotiate how to settle this big problem. And now I have good news for you.⁷⁰ I think we got all the people that we need to complete this work and you do not need to worry about the Rain Test."⁷¹

A subsequent fax sent by the UL Agent to the factory a few days later stated that "When we receive the money, then we can settle the T-Lamp-holder project for you [in one day] as we must pay that money to those guys."⁷²

Influence to Fear

The UL Agent had convinced the Chinese that personal relationships (*guanxi*) within the UL organization allowed approval of a project without the necessary testing if those concerned were sufficiently compensated. Conversely, if payments were not made, or if the amounts were found inadequate, then trouble was sure to follow. *Thick Black Theory* states that "[i]f you are so

⁷⁰Consider the classic Chinese tale: When a housewife discovered that her wok had developed a crack, she summoned a repairman. The repairman asked the woman to go build a fire so that he could burn off the soot and examine the wok more closely. After she left the room, the repairman took his hammer and tapped the wok lightly until the crack had enlarged almost to the point where it could not be repaired. When the soot had been burned off, the woman said, "The crack is much worse than I thought." The repairman agreed, "It will be a difficult job. You're lucky that I am such an excellent craftsman." Oftentimes it is necessary to make the situation a little worse than it actually is in order to ensure the proper level of appreciation for your efforts. (See Chu 1992, 362-363).

⁷¹Letter from UL Agent to KS Gongchang, Ltd. dated 18 June 1999.

⁷²Letter from UL Agent (US) to KS Gongchang (China) dated 21 June 1999 .

well connected to important people, you might have the ability to make trouble for him if you are not accommodated” (Chu 1992, 358).

The President and the Board of Directors were so fearful of the perceived power of the UL Agent that they forwarded large amounts of money to him without question. Ironically, the Chinese were quite happy to have this Agent with “inside connections” able to “buy” UL Listings and were more than willing to pay large amounts in bribe money to ensure those listings. Moreover, KS Gongchang’s President remained in a position of power within the factory based on his *guanxi*, which included his relationship with the “powerful UL Agent.” If the UL Agent had been exposed as powerless, then the President’s position would have been weakened. It was in the President’s best interest to avoid exposing the Agent and continue with the relationship.⁷³

The Agent’s claim to power was manifested in his ability to “make things happen” in relation to the manufacturers behavior. Should a manufacturer behaved in an unacceptable way, something unpleasant might happen to him. Sometimes it appeared as though the UL office “created” the crisis and sometimes it appeared as though the UL Agent “created” the crisis. Once in motion, the Agent would step in and “rescue” the manufacturer from the fabricated crisis with his “undisputed power.” Consider the following incident:

The Chinese UL Specialist sent an urgent E-mail from KS Gongchang, Ltd. to the Factory Representative with the following message.

⁷³ “Village governments, as owners of the enterprise are unquestionably the party with the power to determine the terms of the contract. They set the rents, determine the profit margins, and have the right to intervene in the internal management of the enterprise after it has been contracted out.” If they are unhappy and feel that the interests of the collective are no longer being served by the terms of the contract, it is not uncommon for the contract to be terminated. It should be noted that in China the term “contract” does not necessarily denote a legally binding agreement negotiated by two parties of equal status, but serves more as a guideline outlining a general agreement with details to be negotiated and renegotiated when circumstances or desires change. (See Reynolds 1988.)

“Further, we received a notice from Guangzhou UL Inspection Center. It says that our factory which produce the products under UL File [E XXXXX] moved to a new place. We must return the UL labels concerned and the UL procedures back to Guangzhou UL Inspection Center. But in fact, we haven’t move any pieces of tile to anywhere. We are wondering did UL make a mistake or someone else did it on purpose . . . Please check and answer soonest. Otherwise we will stop production and suffer the heavy losses.”⁷⁴

UL prohibits changes in the physical location of a production facility without prior notification in writing and the necessary paperwork approving the change, and reserves the right to confiscate labels and procedures if there is an unauthorized move. This “address confusion” occurred while the UL Agent was at the testing facility in Camas. The unacceptable behavior that prompted the crisis was the “interference” by the Factory Representative.⁷⁵ The “crisis” was serious, but easily resolved.

Fear to Control

A direct relationship between UL Engineers and the Manufacturer must be avoided if the Agent is to be effective in his manipulation of the manufacturer. The relationship must remain exclusively between the Agent and the UL Office. The following letter from the UL Agent was received by KS Gongchang’s UL Specialist in a display of displeasure at the invitation of two UL Engineers to the manufacturing facility in China.

“I know you always try to do good but sometime you cause some problem. As [two US UL Engineers] will visit your factory next week per your invitation, UL decided to postpone the issue of outdoor use for T-Lamp-holder because [the UL Engineers] want to see your factory. Although I arranged with others at UL to not test this T-shape lamp-holder, but because [the UL Engineers] will visit you next week, they decided they want to see the products in your warehouse and perform at least the Rain Test on the lamp-holder during their visit. At least I was able to

⁷⁴Letter from KS Gongchang, Ltd. to KS Gongchang’s Factory Representative dated 24 June 1999.

⁷⁵The manufacturer had given the Factory Representative full authority with respect to KS Gongchang’s UL account and all contact between the UL Agent and the UL Engineers was now being confirmed.

schedule a Rain Test for your T-lamp-holder in the Hong Kong UL office with [the UL Engineers] for Thursday, July 8.”⁷⁶

The UL Agent intended the message to manipulate the Chinese Specialist into withdrawing the invitation extended to the UL Engineers. In fact, there were no facilities to perform the “rain test” at the production facility in China. A test had never been scheduled in Hong Kong but the results were effective. The very threat of performing this test in Hong Kong invoked panic in the UL Specialist and prompted the following reply to the UL Agent; “As you know, evaluation at UL Hong Kong Inspection Center is always very strictly. So nobody apply lighting products for approval at Hong Kong. We are much more worried and upset concerning the project.”⁷⁷

Additionally, the UL Agent claimed to be able to manipulate samples in order to pass required testing. This perceived ability carried significant power. The UL Agent required KS Gongchang, Ltd. to ship testing samples directly to his office in the US giving him the opportunity to “fix” the product before submitting to UL for testing. The Agent acquired this alleged “skill” during his “employment” at the UL facilities.⁷⁸

Once the UL Agent convinces the Manufacturer that he is powerful enough to control events, fear drives the relationship. The manufacturer is unable to confirm the agent’s power although the Agent appears to be able to wield his power in a variety of situations. The Manufacturer lives in fear of retaliation being frequently reminded by the “little crises” that seem

⁷⁶Letter from UL Agent to KS Gongchang, Ltd. dated 29 June 1999.

⁷⁷Letter from KS Gongchang, Ltd. to UL Agent dated 30 June 1999.

⁷⁸Engineers at Underwriters Laboratory confirmed that the UL Agent was neither an engineer nor previously employed by underwriters laboratories in any capacity.

to develop when the Agent becomes unhappy. Also, the UL Agent is aware of the Manufacturer's noncompliance with procedures providing substantial ammunition for retaliation.

From the Manufacturer's viewpoint, there is economic benefit in cooperating with the Agent. Listings are critical to export into US markets and with millions of dollars in merchandise waiting to be shipped from the manufacturing facility, a few hundred thousand dollars are certainly worth the price. Failure to obtain the listing means economic disaster for the entire collective. But these payments are not without consequences.

Unintended Consequences

There are unintended consequences as a direct result of governmental requirements promulgated by Underwriters Laboratories and imposed upon manufacturers in the name of consumer safety. These unintended consequences expand the reaches of the network beyond this author's opportunity to collect data. However, I will outline the consequences to provide a glimpse of what exists beyond the bounds of this study.

Substitute Material

When Underwriters Laboratories grants a listing to the manufacturer, the "procedure" outlines the specific material employed in the assembly of the finished product. The same manufacturer must produce each component in the finished assembly and of the same quality as that used in the testing samples.⁷⁹ Any time a new material is incorporated in the manufacture of a component or in the assembly of the product, testing must be completed. A change in suppliers of plastic, wire, current taps or bulbs requires each light string that uses the new material to be

⁷⁹Each component is required to pass testing and receive a "UL Recognized" designation prior to being assembled into a finished product. The finished product then requires testing for the "UL Listing." The logic of the "double testing" is that even though a component passes specific testing in isolation, the performance of the component in an assembly may vary substantially.

retested as if it were a new product. The cost of retesting is the same as that of initial testing, \$13,500 USD for a light string provided UL has already tested each component and it is designated “UL Recognized.” Effectively, the manufacturer of the finished product is locked into using the specific component manufacturer used in the testing evaluation and any deviation is considered a violation of the “Procedure.” If UL detects a violation of the Procedure, a Variance Notice (VN) is issued and the manufacturer must make immediate corrections otherwise forfeit rights to the UL Listing.

Once the product manufacturer is locked into a component manufacturer, a monopoly situation ensues and the price of the component increases. To remain competitive, the manufacturer of the finished product often purchases the “production material” in a competitive market escaping the monopoly situation, but being forced into a situation of having to falsify invoices for presentation to UL Field Inspectors to “prove” that the production material conforms to the UL procedure. Fortunately, for the product manufacturer, there exists a network of suppliers readily able and willing to fill orders for substitute material and agreeable to using discretion when delivering them to the factory.

The UL Specialist at the factory is aware of the practice of substitution although he is seldom aware of the details of how and when finished products are affected. The factory’s Purchasing Department maintains sole responsible for the acquisition of material. The purchasing department neither consults nor informs the UL Specialist about purchasing decisions unless a Variance Notice (VN) is issued. Once the VN is issued, the UL Specialist is responsible for correcting the problem.

UL Field inspectors are aware of substitution material but often turn a blind eye. It is not unusual for a Field Inspector to be on site when a delivery truck accidentally shows up at the wrong time and is sent back because of the “mistake.”

Underwriters Laboratories is trying to curb the practice of substitute material by implementing its new “two strikes” policy announced in June 1999 and effective as of January 2000. The program calls for the expulsion of any manufacturer who has two violations within two years. The initial reaction from manufacturers is one of compliance. “We will use real UL listed materials such as wire, PP plastic material for lamp-holder and plug as well as lamps. We will try our best to be perfect in the field and to meet all requirements of UL 588.”⁸⁰

The manufacturer is acutely aware that compliance with the system is unprofitable and inefficient and the factory must circumvent the new UL policy to remain competitive. As the rules and policies become more stringent, manufacturers will choose to develop newer ways to get around the requirements.

Foreign Investors

Foreign capital plays an integral role in Chinese economic development. KS Gongchang’s impressive credentials lure foreign investors who are promised substantial returns. These investors, expecting to realize a return on their investments are disappointed when large amounts of money being spent on bribes, corporate entertainment, the lavish lifestyles of managers, government fees and the production of unmarketable goods drain any potential profit leaving the investor empty handed and without recourse. Management is constantly looking for new sources of investment to keep the factory afloat. Additionally, any real profits are hidden in

⁸⁰Letter from Dongguan KS Gongchang to KS Gongchang’s Factory Representative dated 8 July 1999.

the ledger kept specifically for the President, further reducing the chance that investors will receive a return on their investment proportionate to the factory's earnings.

Deficiencies in China's systems are well noted and changes are being implemented. James Wang succinctly notes that "[t]he change from a planned economy to Deng Xiaoping's socialist market economy requires not only a redefinition of the functions of China's enterprises and economic organizations, but also a host of legal frameworks and bases for legal meanings of ownership and management, or simply 'the establishment of legal person system' as a standard practice commonly accepted in most capitalistic market economies" (Wang 1995, 136).

Increasingly, investors have been granted legal recourse for mismanaged investments and unauthorized use of company funds. However, in China the interests of a business concern and the interests of the people traditionally have been considered the same. This puts foreign investors at a marked disadvantage concerning contract disputes, mismanagement and misappropriations of funds. Wang explains, "Legislatively, the state must sponsor new laws to regulate enterprise registration and verification of enterprise assets, and to establish a limited liability system, procedures for repayment of loans to state banks, contract responsibilities, requirements and rules for the merger of enterprises, rules on joint partnership operations, a set of investment laws, and a taxation scheme" (Wang 1995, 136).

For the Chinese, laws and legal procedures are only instruments for achieving [political] party policies. "As Chinese would say, 'policy is the soul of law.' This is a basic point that investors must understand in dealing with the Chinese" (Wang 1995, 136). Under these conditions, it is not long before investors flee taking their capital with them. When this happens, factories close and unemployment wreaks havoc on the small villages where the enterprise no

longer supports the local economy. Further, economic development stalls as production of export products diminishes.

Workers and Suppliers

The pressure that the organization bears concerning the success of the collective is heavy. While the lion's share of the workers are migrant, the collective employs a significant number of local people. Still, workers continue to be exploited by those in control of production. The standard of living for the average worker remains unchanged while the management enjoys extravagant company-sponsored lifestyles. Income gaps and differences in the standard of living are substantial.

The average line worker receives \$500 Yuan per month (\$62.50 USD) in addition to housing and food.⁸¹ Workers are expected to be on the job six days a week from 8:30 a.m. to 5:30 p.m. with a one and a half hour lunch break from 11:30 a.m. to 1:00 p.m.. However, seeing workers on the job until 9:00 p.m. on weekdays and at their stations at least half a day Sunday is common. Managers promise workers compensation for overtime, but they seldom receive it. Typically, a worker's salary lags 2-3 months behind, but is paid if the worker is patient. Workers who leave the factory forfeit their back pay, and so the delay in salary serves as an incentive for workers to remain on the job.

The interior regions of China are unable to compete with the coastal regions and are falling further behind economically. Economic reforms in the state sector are causing substantial

⁸¹Based on an exchange rate of 1:8.27 in 1998. Dormitories accommodate between nine and fifteen workers depending on the work season. It is not unusual for as many as 24 workers to share a single toilet and sink. Unlike Western standards, there are no cooking facilities or running hot water in the dormitories. In peak seasons, overflow workers are housed in shacks with dirt floors without toilet facilities. Line workers are entitled to a bowl of rice with some vegetables for lunch and dinner. Recently, salary deductions for payment of food and electricity were eliminated, and have become a part of the workers benefits.

displacement and workers are losing their state-sponsored benefits (Nathan and Ross 1997, 158-177). Millions of residents have migrated to factories in the coastal regions where working conditions are deplorable, but with rising unemployment, workers line up to apply for positions and are thankful to be hired. The factory turns away most applicants. Without a job, food and housing are difficult for these migrants so they accept any conditions they can get and are grateful that employment has provided basic necessities.

Material suppliers line up each month waiting hours for payment on previously delivered supplies. Yet they continue to provide the factory with supplies based on the promise of payment at a later date. Denied their earnings they have no alternative but return to plead for payment another day. They are eventually paid enough to continue supplying material, but never receive full compensation for their work.

Overseas Chinese

KS Gongchang Metals and Plastics Manufacturing Company Ltd., while a town and village enterprise (TVE), is also a joint venture. The TVE's partner, KS Gongchang Enterprises Co., Ltd. is located in Kowloon, Hong Kong. In 1998 the joint venture added a third party according to the Sino-foreign Joint Venture Enterprises Ordinance and Regulations of Change of Foreign Investors Shares. Adding the third party was a strategic maneuver enabling KS Gongchang to employ overseas Chinese as both investors in its manufacturing operations as well as distributors of its products. The location of the third partner provided access to one of the most profitable markets in the world, the United States.

As a strategic move aimed at positioning KS Gongchang Metals and Plastics Manufacturing Company to take advantage of multiple testing laboratories, KS Gongchang's

President succeeded in extending a wedding invitation to the two UL Engineers through the KS Representative, flying them “business class” from Camas, Washington to Hong Kong for the celebration. This very personal invitation created a direct link to the Engineers, one of which was planning to establish his own testing laboratory, the other who would remain behind at ULs Washington office. Since UL does not require product testing to be completed at their own facilities, readily accepting the results of required tests performed at other private, albeit “approved” laboratories, the factory would now have two engineers located in separate quarters.

Guangxing Limited

Guangxing Ltd., is a Hong Kong based trading company with its distribution partner in Philadelphia, Pennsylvania, USA and is a minor shareholder in a joint venture with KS Gongchang. Guangxing Hong Kong, Guangxing Philadelphia and KS Gongchang Enterprises established a new joint venture in October 1998 and according to the “Shares Transfer and Joint Venture Agreement” KS Gongchang and Guangxing Hong Kong transferred 2.5 percent of the total shares from its Hong Kong partner and 2.5 percent total shares from its mainland factory allocating total shares of 62.5 percent to KS Gongchang Special Type Steel Co., Ltd. (its mainland Chinese factory), 32.5 percent KS Gongchang Enterprises Co., Ltd. (Hong Kong trading company) and 5 percent to Guangxing Ltd. (US partner).

According to the agreement, the purchase price of the shares was based on the existing authorized share capital of \$22,900,000. HKD (\$2,769,044.USD, 1998), a 5 percent share transfer valued at \$1,145,000. HKD (\$138,452. USD, 1998). Upon payment to KS Gongchang, Guangxing Ltd. Philadelphia, took 5 percent ownership of the joint venture along with annual sales commitments and substantial penalties for non performance.

The strategic transfer of 5 percent total shares was executed with perfection. As the deal went, Guangxing Ltd. Philadelphia, after investing \$1,145,000 HKD (\$138,452. USD in 1998) cash in the Chinese joint venture, was committed to placing a minimum order of \$82,700,000. HKD (\$10,000,000. USD) annually with financial penalties for failure to meet the quota. While receiving some protection against direct competition, KS Gongchang (mainland) retained the right to sell directly to its previously established accounts as enumerated in the agreement.

The agreement also binds Guangxing US in assisting KS Gongchang in obtaining financing “should [KS Gongchang] come across financial problems.” As part of the agreement, KS Gongchang accepts responsibility for “all related bank interests and bank charges [that] are for the account of Joint Venture company.”⁸² The agreement addresses the resolution of any disagreements in a predictable manner. “Any argument between [KS Gongchang] and [Guangxing US] will first try to compromise in a friendly way.” In the event the parties fail to reach an agreement the remedy is arbitration followed by litigation according the “Law in the Peoples Republic of China.” All production is conducted at the mainland factories while financial transactions are administered from Hong Kong.

With the execution of the joint venture, the company can now advertise itself as “Guangxing Manufacturing Company.” They can also claim, with some degree of truth, that the company was established in 1932 and that it is a “fourth generation, family-owned business located in Philadelphia, Pennsylvania, USA.” Promotional literature goes on to reassure

⁸²“Shares Transfer and Joint Venture Agreement” dated October 1998.

consumers of the company's stability and steady growth noting that "what began as an importer of novelty items, has grown into a major manufacturer and importer of holiday decorations."⁸³

Establishing the network then binding it with a joint venture agreement allows the organization to use the resources and strengths specific to its respective partners successfully. Further, inviting the distribution partner to become a partner in the manufacturing facility ensures access to a highly competitive and profitable market. Creating international organizations by combining the strengths of its individual partners is not a new development. However, the creation of a joint venture in China has traditionally been with foreign companies who invest directly in manufacturing facilities within China's borders. Typically the manufacturing organization is either wholly owned by the foreign investor or exists as a joint venture established with a Chinese partner charged with day to day operations. This organization differs in that its establishment preceded the joint venture and continues to operate, to a limited extent, independent of the joint agreement. With rights to existing customers, the TVE preserves the opportunity to maintain its current level of production separate from the joint venture and grow as its existing customer's sales base grows. This allows the collective to maintain a "bread-and-butter" level of production. Meanwhile, the agreement provides for the expansion of the collective's manufacturing capacity through its US partner's sales and marketing efforts. Effectively, the collective has provided a manufacturing base for its US distribution partner on the mainland by establishing a relationship directly with the distribution center in the US, benefitting from foreign investment while maintaining complete control of the production facility.

⁸³ As quoted from the distributor's website.

Case II — The United States: China’s Key to International Aviation

Significance of the Case

International air travel continues to grow year after year with growth in world travel averaging approximately 5 percent per year over the past thirty years (Belobaba 2009). Researchers at the Massachusetts Institute of Technology (MIT) estimate that globally, “more than 2,000 airlines, operating more than 23,000 aircraft out of 3,700 airports flew more than two million scheduled flight departures and carried more than two billion passengers in 2006” (M.I.T. 2012). In China, airline traffic growth rates are expected to rise by more than 80 percent during China’s current Five-year Plan (2011-2015), or approximately 13 percent per year, according to the Civil Aviation Administration of China (CAAC), with the number of commercial aircraft rising to 2,700, or at a growth rate of 11 percent per year during the same time period, all vying for limited space in China’s already congested airports and airspace (Perrett 2011). It is within the context of these dynamic growth patterns and limited resources that two salient issues emerge; access to lucrative international air routes and concern for the safety and security of crewmembers and passengers, as well as citizens residing within transited, sovereign airspace.

Access to lucrative international routes is contingent on a number of factors, including the ability to negotiate the complex array of international bilateral Air Services Agreements⁸⁴ (ASAs)

⁸⁴There are three principal types of ASAs currently in existence today that can be categorized as either traditional, open market, or open skies. These agreements pertain to market access, airline designation, capacity, and tariffs. The International Civil Aviation Organization (ICAO) maintains a database of all certified and registered agreements (current and expired) that conform with Article 8 of the Rules for Registration (See www.icao.int accessed 6 February 2013). While the fundamental purpose of these agreements serves to outline the economic aspects of international aviation, they also open national borders to foreign aircraft to either transit or land in a host country. It is here that the operational realities of flight impact both safety and sovereignty.

that emerged from the Chicago Convention held in the United States in 1944.⁸⁵ As a late comer to the aviation industry in general, and international aviation specifically, one expert comments on the weaknesses that China suffers noting that “the lack of international experience at both the policy and managerial levels” is one of China’s “largest obstacle[s] to [international aviation] liberalization” (Zhang 2003, 40).⁸⁶ While the international community may be sympathetic to China’s contractual challenges and managerial inadequacies, these issues fail to merit the same degree of attention afforded its operational competence, a hard earned advantage enjoyed by the United States after decades of experience.

Federal Aviation Administration

The Federal Aviation Administration (FAA) emerged in 1967 after decades of trial and error in the path-breaking work of establishing a regulatory and organizational administration capable of overseeing the highly technical field of aviation. The Administration’s predecessor, the Federal Aviation Agency (1958), combined the earlier Civil Aeronautical Administration (CAA), charged with air traffic control, airman and aircraft certification, safety enforcement, and airway development with the Civil Aeronautic Board (CAB), entrusted with safety regulations, accident investigations, and economic regulations of the airlines, in an attempt to improve aviation safety after a series of midair collisions. The need for refinement came in the wake of

⁸⁵The framework for regulatory control of international aviation emerged in 1944 toward the end of World War II when representatives from 54 states met at the International Convention of Civil Aviation in Chicago (Denmark and Thailand attended as observer nations without the privilege of voting). The “convention confirmed the emerging realization that civilian air transportation was an activity of potentially enormous global importance, deserving to be nurtured and promoted through a set of internationally accepted rules for the *rights of access to markets*” [Italics added] (Odoni 2009, 20).

⁸⁶“ Domestically, China’s airline industry was founded during the early 1950s when the country was established and needed airlines as a national instrument to carry out its policy of government administration, trade, and tourism. Prior to 1979, the industry was a paramilitary organizations with the Civil Aviation Administration of China (CAAC) as a department of air force for most of the early years” (Zhang 2003, 32). From an international civil aviation perspective, “a delegation from the PRC participated for the first time in a session of the ICAO Assembly in September 1974” (Talmon 2009, 139).

an official report that revealed serious deficiencies in airline safety. “In all, report the C.A.B., there have been 159 collisions in the past ten years [1948-1957], and 971 near-misses were reported in 1957 alone” (Civil Aeronautic Board 1958). Experience taught that a single authority would be better suited to improve aviation safety along with the creation of fixed air routes and mandatory positive controlled airspace. These changes led to consolidation of an otherwise fragmented organization operating under a number of related “acts,” creating a single, unified organization with a simple mission statement; “Our continuing mission is to provide the safest, most efficient aerospace system in the world.”⁸⁷ At the same time, the newly formed National Transportation Safety Board (NTSB) assumed responsibility for the investigation of accidents, allowing an impartial body to evaluate the effectiveness of policies and procedures promulgated by the FAA. This highly-refined arrangement proved effective until September 11, 2001 when responsibility for security screening and airport access transferred to the Transportation Security Administration under the purview of the Department of Homeland Security after a series of terrorist attacks leaving the FAA to focus on technical and procedural issues relating to flight safety.

Today, the FAA oversees one of the most advanced aviation systems in the world taking charge of the operational safety of civil aviation with primary responsibilities in training and licensing, aeronautical safety regulations, airspace and air traffic management, air navigation facilities, commercial space transportation, research, engineering and development, aircraft registration, insurance, specifications for aeronautical charts, published information on airways, airport services, and other technical aeronautical subjects. With firm roots in the historical

⁸⁷See <http://www.faa.gov/about/mission/> accessed 6 February 2013.

development of aviation, the FAA is arguably the most advanced aviation organization of its kind.⁸⁸ Consequently, its historical significance and regulatory achievements carry significant weight within the international community and within the International Civil Aviation Organization (ICAO).

ICAO (International Civil Aviation Organization)

The International Civil Aviation Organization (ICAO) emerged toward the end of World War II as the West recognized the global importance of civil aviation in a postwar world and the need for an international body capable of regulating this emerging industry. Delegates to the 1944 Chicago Convention placed ICAO under the auspices of the United Nations in hopes that the organization would grow to universal acceptance. Today, ICAO presents itself as the “global forum for cooperation among its Member States and within the world aviation community.”⁸⁹ Originally comprising fifty-two members, ICAO has grown to include 191 “Contracting States” reaching near universality.⁹⁰ The organization is charged with setting standards and recommended practices for the safe and orderly development of international civil aviation. The stated mission of this Intergovernmental Organization (IGO) is to “foster a global civil aviation system that consistently and uniformly operates at peak efficiency and provides optimum safety, security and sustainability” emphasizing three strategic objectives: safety, security, and environmental protection and sustainable development of air transport (Murphy 2009, 194). ICAO “is the most active” intergovernmental organization in “setting standards for safety,

⁸⁸See <http://www.faa.gov/about/mission/activities/> accessed 6 February 2013.

⁸⁹See http://legacy.icao.int/icao/en/strategic_objectives.htm accessed 6 February 2013.

⁹⁰China was recognized as a member of ICAO two years after the “Chicago Convention” in 1946. See Appendix A for a full list of Contracting States.

navigation, and personnel, and for drafting and enforcing conventions on liability for accidents” (Murphy 2009, 194). ICAO Member States benefit from access to each others airspace and to an international forum for dispute resolution as outlined in its charter.

ICAO membership does not preclude states from exercising sovereign authority in regulatory affairs. While the “[c]onvention recognized the critical need for international commonality in airport and air traffic control facilities, equipment and procedures” and recommended the establishment of ICAO which is “charged with coordinating the rules guiding air transport operations around the world, developing international standards for aviation facilities and equipment, and overseeing adherence” to established rules, compliance is not mandated and member states voluntarily agree to abide by the standards (Odoni 2009, 21). Further, each member state retains the right to establish specific rules and regulations that may deviate from the standards and guidelines established by ICAO. Consequently, sovereignty creates challenges for international aviation when tensions between domestic objectives and economic interests intersect with the collective action of foreign states citing safety as a basis for compliance.

Complexity of Aviation

The complexity of civil aviation in both technical and operational areas demands strict organizational and regulatory controls, developed and administered with consistency across participating states. Although navigation and air traffic control come to the fore as more critical areas of concern, in practice seemingly innocuous issues such as pilot licensing and airport operations are equally important. This has been demonstrated on more than a few occasions

when taxiing aircraft have collided with departing or arriving flights or when ground crews misinterpret or misunderstand simple directions causing fatalities and property damage.

Licensing

The competency of pilots is a primary concern for the safety of civil aviation. The FAA has stringent requirements that students must meet prior to applying for licensure. In addition to “ground school” where proficiency in aerodynamics, engines and systems, flight instrumentation, Federal Aviation Regulations (FARs), airport and radio operations, navigation, weather, charts and briefings, flight planning, aircraft performance, and weight and balance calculations are demonstrated, student pilots must also show in-flight proficiency in the positive control of the aircraft under various conditions and in distinct aerodynamic configurations. Flight experience must include “dual instruction” hours in addition to pilot in command (PIC) time where diverse types of flight experience logged under various conditions are documented and endorsed by an FAA Certificated Flight Instructor (CFI). Once students meet minimum flight hours and training requirements, they may apply for a “check-ride” with an FAA Designated Examiner (DE) demonstrating in-flight proficiency after a comprehensive “oral exam” as outlined in the FAA published *Practical Test Standards* (PTS).⁹¹ This is the first step in acquiring the necessary “ratings” for qualification as a commercial pilot (CPL), or an “air transport pilot” (ATP) in the United States.

This rigorous training, testing and documentation of flight hours is not practiced in all countries. “There are some regulators that have fallen behind the curve because of growth in

⁹¹The *Practical Test Standards* (PTS) are a series of documents published by the FAA specific to licence types available at http://www.faa.gov/training_testing/testing/airmen/test_standards/ accessed 6 February 2013.

aviation” especially in developing countries (Francis 2010, 52). Recently, India’s Directorate General of Civil Aviation (DGCA) was implicated in a scandal involving the falsification of flight records that enabled student pilots to obtain advanced ratings without the required experience reducing both the time and cost of obtaining valid licenses (Singh 2011).⁹² Pilots with falsified documents can be added to a larger group of aviators that complete training in states with less stringent operational and performance requirements.

While conventional wisdom dictates the exclusion of less qualified pilots from entering the airspace of neighboring nations that demand higher minimum standards, international aviation lends itself to the exposure of more qualified pilots entering and transiting the national airspace of less qualified pilots placing the unequally trained aviators within the same operating environment. Commercial passenger jets typically transit airspace above FL200 reducing the chances for incidents and accidents during the “cruise” phase of the flight.⁹³ However, the most critical phases of flight are takeoff and landing which occur in environments, and at altitudes where less experienced pilots are more likely to operate. Mandating international licensing standards would provide uniform competency requirements ameliorating potentially dangerous conditions by requiring all pilots to meet minimum standards of proficiency. However, in order to accomplish a more uniform operating environment, the state requiring the more stringent standards would have to be held up as the ideal prototype to be emulated. This has both economic and political consequences for states that would be compelled to meet the higher standard.

⁹²Reported licensing costs range from \$45,000 - \$56,250 USD for the advanced Commercial Pilot’s License required for the carrying of fee paying passengers.

⁹³Flight levels are express in increment of 100 feet placing FL200 at 20,000 feet above mean sea level (MSL).

Requiring pilots to obtain additional training to meet international standards is a costly proposition in terms of both time and money adding thousands of dollars to the initial cost of licensing.⁹⁴ Removing a pilot from line duty for retraining reduces an airline's transportation capacity with ripple effects throughout an economy. Although the initial burden of compliance would prove financially demanding, maintaining proficiency may prove even more costly.

Airport Operations

Uniform operations within the airport environment are crucial to the safety of aircraft and both the FAA and ICAO specify in great detail how runways, taxiways, and active movement areas are laid out, marked and lit. As aviators travel from one airport to the next, there is an expectation of uniformity that allows pilots to concentrate on controlling the aircraft while quickly reading and assessing critical information within the airport environment that impacts flight limitations and operating procedures.

Runways are aligned and numbered according to magnetic direction with markings that designate blast pads, thresholds, displaced thresholds, unusable runway, relative length, centerline guides and other critical information with supplemental color coded lighting at airports that support night operations. Similarly, taxiways are lettered, marked and lit to designate mandatory holds, crossings, safety, service and parking areas. The complexity of ground operations intersecting with aircraft arrivals and departures demand ground crews, controllers, and flight crew training at a level of competence sufficient to meet the anticipation of movement and the seamless integration of ground and air traffic.

⁹⁴Minimum training to obtain a Commercial Pilot's License (CPL) in the US, excluding type ratings and experience building can easily exceed \$50,000 (2011 dollars) and is dependent upon student ability, instructor proficiency, training fees, fuel costs and other variable costs. Airport landing fees, service fees, fuel surcharges, liability insurance, background checks and other miscellaneous charges and taxes can increase costs substantially.

Investigators report more than a few fatal accidents where departing or arriving aircraft have collided with taxiing aircraft on the ground.⁹⁵ While some accidents can be attributed to pilot error such as miscommunication and insufficient training, many more can be attributed to absent or confusing signage, inadequate infrastructure, and poor facility maintenance.⁹⁶ On 22 May 2010, Air India Express overshot the runway in Mangalore International Airport and crashed into a gorge at the end of the runway killing nearly everyone onboard. The 152 passengers and crew whose lives were lost may have been saved had the runway been designed to accommodate overrun. Although ICAO standards state that “airports must have a runoff area or an alternative such as an Engineered Materials Arresting System,” in practice, “it is up to the local regulators” who “may have a different definition of what the ICAO standards mean” (Francis 2010, 52).

Ground Operations

Ground crews used to marshal aircraft within the terminal ramp area employ hand signals that direct pilots as to when it is safe for engine start, where and when to move aircraft and when to shut down engines and systems. Lack of uniformity in signaling can have devastating effects resulting in economic loss and human fatalities. A jet engine producing thrust has the capability of ingesting ground personnel who enter the danger zone or equipment in the vicinity of the

⁹⁵On 27 March 1977 two Boeing 747s operated by KLM (Dutch) and Pan Am (American), collided on the runway at Tenerife, Spain in foggy conditions killing 583 people. The KLM jet departed without clearance and struck the Pan Am jet as it taxied along the same runway. Confusion over instructions and a blockage of radio transmissions contributed to the crash. See <http://www.aviation-safety.net/database/record.php?id=19770327-1> accessed 6 February 2013.

⁹⁶On 10 January 2011 a Boeing 737-2TS operating for Africa-Air Charter departed a taxiway at Hoedspruit AFB in South Africa when it missed taxiway “C” and discovered that the current taxiway dead-ended into a asphalt road with no place to turn the aircraft around. In an attempting to use reverse thrusters to turn the plane around, the main gears departed the taxiway leaving the aircraft ensnared in soft terrain and unable to move under its own power, blocking the active taxiway. See <http://www.aviation-safety.net/database/record.php?id=20110110-1> accessed 6 February 2013.

engine intake causing property damage, bodily injury, or fatalities. This scenario is especially applicable when a lineman attempts to place or remove wheel chocks during engine start-up or shut down or when the area is not sufficiently cleared for operations. Similar dangers entailing prop strikes can occur in the operation of reciprocal and turboprop aircraft when ground personnel incorrectly marshal aircraft in tight quarters or when there is miscommunication between pilots and ground crews. In addition to improper ramp guidance, improper positioning of ground equipment, distractions, air carrier and operational issues, and ramp congestion also contributes significantly to ground control accidents (Chamberlin, *et al* 1996). International standards reduce the chance for miscommunication by establishing predictable procedures expressed in a common language and in a vocabulary that both ground and air crews can anticipate.

Navigation, Airspace and Air Traffic Control

Navigation presents itself as yet another operational area of concern as the integration of aircraft from all nations share the same global airways. Flight planning provides the necessary information for ground personnel to reserve requested air routes blocked at specific times that are guaranteed through clearances. In the event of en route lost communications, a pilot is assured exclusivity of the airspace granted by departure clearance with sufficient time to arrive at the intended destination and if early, to maintain an established holding pattern until the expected time of arrival is reached. That is to say, aviation traffic is self regulating based upon established norms of operations through the flight planning process. Inconsistencies or disruptions in the norms or processes affecting assigned or expected altitudes flown, established routes or corridors, or expected times of arrival (clearances) can create chaos within an otherwise well

arranged and organized environment. Nations that fail to comply with international standards concerning these procedures endanger transiting aircraft who rely upon these established conventions. Further, domestic aircraft that fail to operate within international norms risk engaging transiting foreign aircraft operating under a set of rules that they may be unfamiliar with and unable to engage in on an operational level. Hence, there is a critical need for uniformity and consistency within the flight planning system that demand trained personnel capable of understanding and adhering to international norms.

Navigational Facilities

Modern piloting employs radio navigation aids that work with ground-based facilities to create a reliable navigational system. Reliance on the proper functioning of ground-based navigational aids such as NDBs, VORs, and ILS systems presuppose the proper maintenance of those stations. In some cases, international organizations like ICAO have financed, built and maintained international air navigation networks such as the one used across the North Atlantic, the world's most traveled route (Murphy 2009, 194). However, this responsibility is typically reserved for the state in which the equipment is located.

Costs associated with the acquisition, installation and maintenance of ground-based facilities are generally borne by the nation in which the equipment is located. Further, responding to system outages is the responsibility of the nation having jurisdiction over the equipment. Hence, personnel must be available to man or monitor facilities and address

interruptions in service (Francis 2010).⁹⁷ Civil Aviation Authorities that fail to maintain ground-based facilities adequately, place flights in jeopardy.

Although technologies such as Global Positioning Systems (GPS) effectively eliminate ground-based equipment and substantially reduce maintenance costs, they also require significant capital investments. Airlines have pushed regulators to “implement performance-based navigation systems such as Automatic Dependent Surveillance-Broadcast” based on more reliable satellite technology, but its adoption has been slow (Francis 2010, 52).

Communication

From an operational perspective, the most salient aspect of international aviation is communication, both airborne and earthbound, and especially within the airport environment. International aviation demands uniformity and continuity in both air and ground communications to ensure that all participants understand not only their own instructions, but those instructions issued to pilots operating within the same controlled airspace.

Ground to air radio communications have enabled air traffic controllers to increase the density of airborne traffic by reducing spacing requirements between aircraft in both the departure and arrival phases of flight.⁹⁸ However, this is predicated on pilot compliance with air traffic control instructions and the ability of airborne pilots to discern the relative location, speed and direction of surrounding traffic in a “see and avoid” context. Compliance with air traffic

⁹⁷Manila International Airport (Philippines) and Jakarta International Airport (Indonesia) have experienced unscheduled power outages and radar shut downs, forcing the cancellation of dozens of flights.

⁹⁸Additional efforts have been made towards Reduced Vertical Separation Minimums (RVSM) increasing cruise altitude density through vertical separation above flight level (FL) 290 from the current 2000-ft minimum to 1000-ft minimum. This allows aircraft to safely fly more optimum profiles, gain fuel savings and increase airspace capacity. See http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/rvsm/ accessed 6 February 2013.

control is conditional. That is to say that there are instances when a pilot is simply unable to comply due to aircraft limitations or current circumstances (including piloting abilities and emergency situations). The Pilot-in-Command (PIC) has the option of rejecting any request or instruction from air traffic control by responding, “unable to comply” or simply “unable.” When this occurs, air traffic control must defer to the pilot and alter the flight plans and paths of other aircraft to accommodate the noncompliant aircraft. In the event that a pilot declares an emergency, all other traffic, airborne and earthbound must yield to the distressed aircraft. Consequently, pilots are expected to receive and comply with clearances and instructions when able while drawing a mental picture of surrounding traffic and circumstances based upon the air traffic control communications with other aviators in the vicinity. Pilots in possession of this essential information are better equipped to exercise the situational awareness necessary to operate with adequate spacing.⁹⁹

Ground movement via radio transmission creates still another level of communication as controllers integrate airborne and earthbound aircraft. Large airports typically operate several frequencies based on the phase of flight; arrival, departure, ground control and clearance delivery each serving specific areas of operation. Miscommunication can lead to incursions and accidents resulting in fatalities. A common language not only allows verbal communication in an active aviation environment, but includes other non-verbal aspects of communication. Written documents conveying critical flight information such as weather reports, navigational and approach charts, Notices to Airman (NOTAMs), and other regulatory information including

⁹⁹On 12 November 1996, an Ilyushin IL-76 cargo plane from Kazakhstan collided in midair with a Saudi 747 near Delhi; all 349 aboard both planes were killed. The Kazakh crew had disobeyed instructions, and neither airplane was equipped with collision-avoidance technology. <http://www.aviation-safety.net/database/record.php?id=19961112-1> accessed 6 February 2013.

station identifiers and radio phraseology depend on nomenclature expressed in a common tongue. The lingua franca of aviation is English and an inability to read, speak and understand the language compromises the integrity of controlled and uncontrolled airspace worldwide (Tajima 2004).

An English language proficiency endorsement began appearing on all new FAA certificates on 11 February 2008 in compliance with ICAO's mandate that all private (PPL), commercial (CPL) and airline transport pilots (ATP) along with flight engineers (FE), navigators and control tower operators demonstrate proficiency in English.¹⁰⁰ ICAO requires all member states to train aviation personnel in English and ensure that their aviation personnel achieve the minimum ICAO Level 4 (Operational) proficiency by March 2011 or risk license restrictions prohibiting the operation of aircraft in member states.¹⁰¹ For non-English speaking states, complying with this international standard requires the acquisition of a new language, a time consuming and costly endeavor.¹⁰²

The FAA is aggressively pursuing non-English speaking citizens and foreign nationals who may have secured a US aviation certificate prior to the implementation of mandated language requirements. On 8 February 2013, the FAA released a safety bulletin to all Certificated Flight Instructors. Notice NOTC4551 reminds flight instructors that “[i]n accordance with FAA Notice N8900.204, which was effective 01/11/2013, we wish to inform

¹⁰⁰Proficiency includes the ability to read, write, speak and understand English. For compliance requirements and deadlines see http://www.faa.gov/licenses_certificates/airmen_certification/english_proficiency/ accessed 6 February 2013.

¹⁰¹See http://www.faa.gov/licenses_certificates/airmen_certification/english_proficiency/ accessed on 6 February 2013. Formal evaluation of language proficiency was required as of March 2008, but ICAO effectively extended the deadline to 05 March 2011.

¹⁰²ICAO estimates 100-200 hours of language learning contact hours are required for “measurable improvement” in aviation English indicating a preexisting level of proficiency. See ICAO Document Doc 9835, AN/453.

you of your responsibility to identify any applicant for a certificate or rating who does not demonstrate the English language skill standards in accordance with 14 CFR regulations and FAA policy.” This reminder urges instructors to “report appropriate information about the airman to the nearest FSDO,” and the “FSDO will then take action in accordance with order 8900.1, Volume 5, Chapter 2, Section 5” (personal email 8 February 2013).¹⁰³ CFR Title 14, *Aeronautics and Space*, addresses the English language skills necessary to qualify for Airman Certification under Part 61 *Pilots, Flight Instructors and Ground Instructors*, Part 63 *Flight Crewman Other Than Pilots*, and Part 65 *Airman Other Than Flight Crewmembers*, in detail. FAA English Language proficiency standards are reflected in ICAO Document 9835, *Manual on the Implementation of ICAO Language Proficiency Requirements*. In the US, any certificate holder that fails to meet the English Language Proficiency standard is subject to suspension, revocation, or reissuance of that person’s airman certificate under Title 49 of the *United States Code* (49 U.S.C.) § 44709.

International and Domestic Regulation

While the basis for international standards may be predicated on safety and security, political and economic interests frequently emerge to create tensions that affect outcomes. Currently, the international aviation community is regulated by a patchwork of international treaties, bilateral agreements, and sanctions put in place by domestic actors and international organizations. Further, established norms practiced in economically developed countries are often adopted by global organizations that require weaker states to conform to the practices of

¹⁰³FSDOs, or “Flight Standards District Offices” are regional offices of the United States Federal Aviation Administration charged with ensuring compliance with the United States Federal Aviation Regulations.

their more advanced neighbors. States that fail to comply with international standards have little recourse as there is no formal organization outside of ICAO to turn to for appeal. Hence, they face exclusion from the global economy through limited transportation options effectively isolating both economies and peoples from global networks with devastating effects.

ICAOs power to regulate international aviation is derived from its dominant member states who systematically “blacklist” individual airlines as well as entire countries that present significant “safety concerns.” Currently, the FAA and the European Union (EU) maintain a blacklist of air carriers banned from entering or operating within their respective airspace.¹⁰⁴ As of 1 November 2012, the United States prohibits all airlines based in twenty-four specific nations from entering US airspace.¹⁰⁵ As of 12 April 2012, the European Union prohibits 287 air carriers based in twenty specific nations from operating within the European Community.¹⁰⁶ These airlines have failed to meet minimum ICAO standards.¹⁰⁷ The majority of blacklisted airlines are located in Africa, Central Asia, and Indonesia and are excluded based on issues concerning pilot competency, aircraft maintenance and a host of other safety issues.¹⁰⁸ Additionally, states that lack adequate infrastructure may be excluded from international air routes forcing pilots to either

¹⁰⁴Exclusion is achieved through “blacklisting” either entire states or specific airlines within a state. See http://ec.europa.eu/transport/air-ban/list_en.htm for member states of the European Community banned foreign airlines; <http://www.faa.gov/about/initiatives/iasa/media/iasaws.xls> for US FAA banned foreign airlines. Also see <http://www.aviation-safety.net/airlinesafety/enforcement/assessment.php> accessed 6 February 2013.

¹⁰⁵See <http://www.faa.gov/about/initiatives/iasa/media/iasaws.xls> for US FAA banned foreign airlines accessed 6 February 2013.

¹⁰⁶See http://ec.europa.eu/transport/air-ban/list_en.htm for member states of the European Community banned foreign airlines accessed 6 February 2013. NOTE: The list includes 10 carriers with operational restrictions allowed to operate under strict conditions.

¹⁰⁷ICAO explicitly states that although “ICAO does not assess air operators and does not hold any specific information related to the safety of an air operator” member states “perform assessment[s] of air operators and may from time to time produce a document containing their opinion related to the safety of such air operators.” See http://www.paris.icao.int/faq/faq_air_operator.htm accessed 6 February 2013.

¹⁰⁸In 2009, Africa had the world’s highest hull loss rate for Western-build jets at 12.24 per 1 million. In the same year, African and Middle Eastern carriers accounted for 32 percent of global accidents although carrying only 8 percent of the global air traffic. See Thomas 2010, 35.

transit airspace without landing or completely divert around noncompliant states. As is the case in many African nations, “[t]oo often specific operating regulations are not in place or are not aligned with the latest ICAO standards.” Regulators have studied and identified the root causes of many of Africa’s deficiencies; “some of the key issues identified were lack of political will, misappropriation of funds, insufficient real autonomy for CAAs [Civil Aviation Authorities], shortage of qualified personnel, economic barriers, low priority given to aviation safety relative to other social priorities and fleet obsolescence” (Thomas 2010, 36). And while “poor infrastructure and regulatory oversight are key issues” economic barriers perpetuate the “lack of safety across the continent [as] a major obstacle to the development of air travel and economic development, creating a vicious cycle” (Thomas 2010, 36).

Compliance with ICAO standards as set forth in the Chicago Convention requires that “every airport in a contracting State which is open to public use by its national aircraft shall likewise . . . be open under uniform conditions to the aircraft of all the other contracting States” and “the charges imposed by a contracting State for the use of such airports or air navigation facilities shall not be higher for aircraft of other contracting States than those paid by its national aircraft engaged in similar international operations.”¹⁰⁹ This clause undermines the sovereign right of states to assess progressive taxes and incremental fees, precluding the LDCs from using the EDCs to fund the development and maintenance of airports and navigational equipment through specific fees. And while ICAO may be limited in its authority to mandate law, the Council reserves the right to review complaints from contracting states involving charges and

¹⁰⁹Chicago Convention, Article 15. Document available at www.mcgill.ca/files/iasl/chicago1944a.pdf accessed on 6 February 2013.

fees and to address reported irregularities (Dempsey 1999, 196). Affected states are effective in bring pressure to bear on the offending state sufficient to elicit compliance.

ICAO also dictates minimum safety standards as they relate to the design, construction, and maintenance of airports, runways, and navigational equipment.¹¹⁰ Technological advances demand continually updating obsolete equipment including aircraft (Thomas 2010, 36). Ground-based navigational equipment works in conjunction with onboard radios requiring appropriately paired navigational aids. This places a heavy financial burden on LDCs that are forced to replace obsolete systems in favor of more current technology as its adoption, generally led by the EDCs, requires compatibility. Failure to update systems can result in the exclusion of otherwise functional airports (Dempsey 1999, 285-298). More important, pilots must received advanced training in the use of new technology which is often cost prohibitive for emerging economies. This places them at a disadvantage when venturing into the airspace of countries that routinely use leading edge technology.

The coordination of international standards with domestic policies and procedures ensures the safety and security of flights and assures acceptance in the international aviation community with threat of exclusion for those who fail to conform. These standards range from pilot training, testing and licensing to airport infrastructure, equipment and maintenance. Currently, the US stands at the forefront of civil aviation and has taken the lead in formulating many of the standards promulgated by ICAO. Recognizing this superior position, the Chinese Communist Party has embarked on a campaign to emulate the United States in developing China's nascent aviation industry. China's current 5-year plan (2011-2015) lays out specific

¹¹⁰See www.icao.int/icaonet/anx/info/annexes_booklet_en.pdf accessed 5 April 2011.

goals for expansion including newly developed airports, improved infrastructure, leading edge technology, and aviation professionals capable of operating and maintaining advanced aeronautical systems, with generous funding to support its goals.

More immediate goals include the acquisition of expertly trained aviators. To this end, China has launched a series of pilot recruitment events in the United States with promises of \$14,000 - \$16,000 USD *per month* for ready trained pilots, gaining immediate benefits from the pool of expertly trained and experienced aviators.¹¹¹ Given the highly technical nature of flying, coupled with the expertise necessary to engage in international and domestic operations, China's shortage of trained professionals has directly impacted its ability to train future aviators and it is failing to keep pace with industry absorption rates. Quick to recognize the need for experienced pilots, Chinese entrepreneurs have embarked on a campaign to supplement China's demand for aviators by developing partnerships with US based flight training facilities solving two of China's greatest problems: expert aviation training in an English language environment.

Preface to the Case

In the fall of 2010, a Chinese Diplomat enrolled his teenaged son in Vero Beach's world renowned *Flight Safety Academy* for training as a professional pilot. As an accredited college, the student was required to complete a litany of prerequisite general education courses and aviation ground school prior to advancing to the flight portion of the program. However, after one semester, the student withdrew citing a "difficult curriculum, slow progress, and never having had the opportunity to fly, even once."¹¹² "F Visa" restrictions would not allow the

¹¹¹See China Daily at http://usa.chinadaily.com.cn/business/2012-02/29/content_14723222.htm accessed on 18 February 2013.

¹¹²Account discussed in a televised interview, Summer 2011.

student to remain in the United States once he withdrew from the academy, so the Chinese Diplomat had to work quickly to identify a new program, enroll his son, then convert his visa.¹¹³

The new academy, Central Flight School (CFS), offered flight training under FAR Part 61 and FAR Part 141.¹¹⁴ Public records show that CFS filed articles of incorporation in the fall of 2002 and the school's website revealed a staff of nine flight instructors and a fleet of nine aircraft, a respectable sized organization with at least ten years of experience. While not an accredited university, the flight school qualified as a vocational institution under its FAR Part 141 certification, allowing its students to apply for an "M Visa," usually reserved for vocational or other recognized nonacademic institutions.¹¹⁵ While choosing a vocational school over an accredited university would allow the student to expedite his training, it also removed any possibility for a college degree or even the accumulation of college credit, a distinct disadvantage with long term implications as most major air carriers require a bachelor's degree for employment. FAR Part 141 vocational schools that do not partner with universities to offer college degrees serve an important market: college educated workers seeking a career change, a caveat frequently overlooked by more than a few aspiring aviators eager to take a shortcut to the high salaries offered by the major airlines.¹¹⁶

¹¹³See US Department of Homeland Security website at <http://studyinthestates.dhs.gov/students/maintain-your-status> accessed on 23 February 2013.

¹¹⁴The major difference between flight training under FAR Part 61 and FAR Part 141 is in the structure of the program. FAR Part 61 allows a more individualized training program whereas FAR Part 141 is classroom based with an FAA approved syllabus and time frame for completion. Testing requirements and pilot proficiency remain the same under either program. See US Title 14: Aeronautics and Space of the United States Code (49 U.S.C.) for specific differences between FAR Part 61 and FAR Part 141 training requirements at <http://www.ecfr.gov> accessed on 23 February 2013.

¹¹⁵For student visa types see http://travel.state.gov/visa/temp/types/types_1268.html accessed on 23 February 2013.

¹¹⁶CFS offers an 18 month vocational program with completion 30 months sooner than a typical 4-year college.

Recognizing the various options for flight training in America and its preeminence as the world's most desirable aviation training ground, the diplomat envisaged a flight training academy to cater to China's growing demand for pilots, with himself as the head.¹¹⁷ After consulting a former Air Force colleague working for one of China's premier air carriers in Tianjin, P.R. China, the diplomat set out in search of a viable American partner with whom he might establish a flight school and within weeks struck a deal with an American colleague.

The Founding of American Flight Academy

The American Flight Academy's (AFA) official website offers a history of the organization citing the President's personal experience in aviation beginning in 1986 when he received his private pilot license. The web page goes on to explain how the President later received high performance, instrument, and multi-engine ratings, then states that twenty-five years ago, the "[President] and his partners created flying clubs and bought and sold multiple aircraft all over the world." Another page on the website delves into the "strong aviation history" behind AFA. Claiming "two main campuses" in the same large city, the web page explains that the "north campus" opened in 1939, weathered a temporary closing during World War II, then reemerged to see "NASA Astronaut Nicole P. Stott perform her first solo flight in the mid-1970s." AFAs "south campus" located at an international airport, lays claim to several significant contracts; "Our campus is currently under contract with the National Oceanic and Atmospheric Administration (NOAA) to provide commercial pilot training and recurrency training to their pilot and navigator staff. In addition, the campus is also contracted to provide

¹¹⁷Televised interview, P.R. China.

training for the Florida Department of Education Vocational Rehabilitation Services.”¹¹⁸ The campus also boasts its own in-house FAA inspector and designation as an FAA inspection facility, all very impressive accomplishments.

The website’s home page sports full color photographs of a heavy passenger jet in climb out, a narrow body jet in cruise phase, and an executive corporate jet parked on the tarmac against a brilliant sunset. A host of exclusive speciality programs are offered by the academy including classes that cater to female, celebrity, and junior student pilots with very specific needs. The “Female Program” promises an exclusive experience limited to women, while the “Celebrity Program” promises to “handle the paparazzi” while movie stars, sports stars, entrepreneurs, politicians, and other celebrities learn to fly. More important, the Academy offers “ICAO Level 4 English proficiency” training for its foreign cadets, a coveted skill sought by all major airlines. The Academy, sensitive to the concerns of parents who may be sending their only child off to a foreign country for flight training, offers a blog where students can communicate with their loved ones at home. “All Students will be required to maintain a Student Pilot Log. This log will track their progress throughout the program. Instructors and parents will be able to access [the] SPL and post comments. The log will be cloud-based, and will contain pictures and video as well.”¹¹⁹ While the academy’s accomplishments and exclusive program offerings are impressive, they pale in comparison to those advertised on the Chinese language website.

¹¹⁸AFAs website accessed on 20 February 2013.

¹¹⁹Posted on the “Student Life” page of the schools website.

Chinese Language Sources

According to Chinese language sources, American Flight Academy “has developed into a well-known world-renowned institution, not just in the United States, but in Europe, Canada and Africa” where “26 campuses host students from 40 different countries from around the world.”¹²⁰ Internet sources go on to explain that the “aviation institution of technology and engineering” was “founded in 1986” and currently offers “college level undergraduate courses.” Within the “past 25 years, [American Flight Academy] has trained thousands of pilots” for “most US Airlines,” and enjoys “established partner relationships with many airlines and universities in China working directly with Air China, China Eastern Airlines, Hainan Airlines and others for more than seven years.” There are also full color photographs featuring various aviators, including a female in full military flight gear with a caption that reads, “[American Flight Academy] trainee.” The website goes on to state that American Flight Academy has “direct access to outer space technology.” These impressive credentials place the Academy at the leading edge of aviation and in the perfect position to train China’s fledgling aviators. However, proper introductions to potential partners in China would be necessary.

The Diplomat turned to his old comrades, now working at the Central Ministry of Education (CME) in Beijing, to secure an audience with a few of the important members of the CME. Then, presenting himself as an important player in the aviation industry with unique ties to powerful people in the US, the Diplomat preceded to discuss his aviation training program

¹²⁰As posted to the American Flight Academy’s Chinese Language website.

through a brief presentation followed by an extravagant banquet.¹²¹ With the development of civil aviation occupying a prominent position in China's 12th Five-year Plan, formally approved by the National People's Congress on March 14, 2011, the Central Ministry of Education acted in accordance with the CCPs objectives in making the necessary introductions and recommendations. The Diplomat's contact in Beijing turned to a former comrade now serving in the Provincial Ministry of Education (PME) in a western province to search for potential partners. As it happened, the official in the Provincial Ministry of Education had a long-standing relationship with a former comrade who now served as the president of a private university in the same province and was eager to grow both his university and his reputation. Operating as a private university, albeit with a western province official as a major investor, "X" University (XU) specialized in tourism and aviation offering a variety of programs in Airframe and Powerplant Maintenance, Avionics Repair, Airport Ramp Operations, and Aviation Safety with flight crew training limited to Flight Attendants. Partnering with the US-based "world-renowned" American Flight Academy to offer a commercial pilot training program would complete XUs offerings making it a "true" aviation training facility placing it among the few elite institutions in China equipped to offer aeronautical training outside of the Air Force and National Airline Cadet Sponsorship Program.¹²² Further, accomplishing this without having to make any capital investment at all, placed XUs President among the most capable and effective

¹²¹Chinese government officials customarily retain access to their former department's resources after leaving office and often host banquets and guests at the department's expense without opposition as long as the costs remain "reasonable." In Beijing, diplomats partake of this benefit. Guests seldom know whether the expense is a reflection of the individual's personal wealth and status, or that of his former post.

¹²²Chinese civil airlines typically recruit and train China's brightest students tuition free in exchange for a career-long employment contract. While the salary offer by China's domestic airlines is substantially above the average Chinese salary, it is also substantially below the average salary paid to foreign pilots employed in China. The airlines claim that the salary differential offsets the cost of training, but with a 3-4 year cost recovery, it does more to ensure China a stable, low-wage pilot base.

administrators in the province. Finally, opening the program to any candidate who could pass the physical exam and political background check, then pay the exorbitant tuition, removed long-standing barriers that prevented all but the most elite from aspiring to the coveted position of “airline pilot.”

Over the past ten years, private universities in China have been growing exponentially, admitting students who fail to score high enough on the National College Entrance Exams to gain entry to China’s more prestigious public universities, yet wealthy enough to be able to afford the staggering tuition characteristic of private institutions. China’s poorer students are also gaining access to these private universities by borrowing from friends and extended family, then promising to repay the loans after graduation from the extraordinary salaries that private universities promise.¹²³ Entrepreneurs and government officials fortunate enough to be able to invest in this lucrative industry realize impressive returns on their investment, making it a “win-win” situation for everyone involved.

The US - China Joint Venture

On 11 May 2011, X University formally announced the signing of a “cooperative joint agreement” establishing the “American Flight Academy / X University Flying School” in a publically televised ceremony. On scene to witness this “historic event” were reporters from the Xinhua News Agency, People's Daily, China Daily, [Western Provincial] TV, and dozens of other central [provincial] media writers who interviewed the participants in an open forum question and answer session. Speaking on behalf of the Chinese government were several high-

¹²³According to the X University, “pilots can expect to earn 400 - 500 million yuan 8-10 years after graduation,” approximately \$64,254 - \$80,317 annually (calculated at an exchange rate of 1:6.22 as of March 2, 2013), exceeding China’s average salary of \$14,000 USD, by 4.5 - 5.75 times. See <http://www.averagesalarysurvey.com/article/average-salary-in-china/15201531.aspx> accessed on March 2, 2013.

ranking officials from the Provincial Government, a City Mayor, several University Officials, and the Diplomat. Each delegate gave a brief overview of their position in the arrangement, then said a few words about the “historic international exchange” remarking how it would enable China to reach new heights in civil aviation and establish a basis for further trade in leading edge aeronautical technology. On the US side, both the “Dean” and his “Vice President” appeared in black tie to sign the “bilateral agreement” offering comments on the solidarity of the partnership, confidence in its success, and enthusiasm for future trade.

Earlier in the year, the Diplomat’s son had transferred from a four-year aviation college to an 18-month vocational program, and in a televised interview the Diplomat used the transfer to highlight the benefits of vocational training over academic programs: shorter completion times and lower tuition.¹²⁴ During the interview, the Diplomat touched on another issue that caused him considerable concern with hopes that it would cause the parents of potential trainees concern as well; most US vocational schools did not offer housing, transportation, meals, or field trips. More important, they did not offer supervision outside the classroom or teach aviation English — essentially, there were no provisions for foreign students. However, AFA had been at the “leading edge of aviation training,” catering to young foreign students by providing English language training, housing, transportation, and most importantly, to the parents who were sending their recent high school graduates off to the United States unaccompanied, adult supervision.

The business arrangement had come together brilliantly, except for one small detail; American Flight Academy had never operated a flight training center, never trained a single pilot,

¹²⁴The interview was arranged to promote the new AFA / XU University Partnership and aired later in the year.

did not own a single airplane and did not even exist until the Spring of 2011, one month prior to the publically broadcast signing ceremony celebrating the new cooperative agreement.¹²⁵ Still, from the perspective of the Chinese Diplomat, no one had been deceived in the business arrangement.

Deception, and the negative connotation associated with the concept, is a Western construct born of religious influence. The difference between right and wrong, in the Western mind, comes in only black and white. From an Eastern point of view, the realities of life span degrees of grey. “Deception, to the *Thick Face, Black Heart* practitioner, is a tool to be utilized to gain necessary advantage” (Chu 1992, 183). To the Chinese, deception can be practiced without deceit with the difference being illustrated in the distinction between a con man and a businessman. “A businessman and a con man both understand the value of deception. The only difference between the con man and the business man is this: The businessman will ultimately deliver the benefits he has promised. The con man will not” (Chu 1992, 196). To the Chinese, “the difference between the con man and the businessman is not in their outward actions, but rather in the expression of their soul” (Chu 1992, 196).

Out of Thin Air

The newly establish American Flight Academy listed two managing members as principals, and only one had any experience in aviation. The “President/Dean” of the academy held a primary “Private Pilot” certificate with an instrument rating.¹²⁶ A cursory review of the Academy’s list of administrators revealed the following: AFAs “President” operated a local

¹²⁵Public records reflect the filing date of the American Flight Academy and a list of its managing members.

¹²⁶The FAA maintains a public database of all certificated pilots and their ratings available to the public.

home improvement supply house; AFAs “Vice President” held the position of Senior Vice President of Investments at an international investment bank; AFAs “Director of Logistics” held positions in several local small businesses; AFAs “Public Relations Director” owned a trucking company and a photography studio; and finally AFAs “Dean of International Studies” was none other than the former Chinese Diplomat. Public records suggest a common thread running through the organization; there existed previous business relationships and ongoing partnerships in non-aviation related industries.¹²⁷

American Flight Academy’s website revealed another interesting connection: the business address listed for AFA was exactly the same as CFS, an established flight school with an FAA-approved program and facilities for Part 141 training. This was an unusual arrangement since the *Code of Federal Aviation Regulations* (FAR) specifically states that two flight schools may not share the same address or facilities.¹²⁸ Yet the respective website of each school reinforced the connection. Live web links cross referenced the flight schools allowing users to move seamlessly between the two sites. AFAs website went a step further offering users the convenience of a live link drawing the user directly to X University. While internet websites confirmed the connection between CFS, AFA and XU, photographs, televised interviews, and promotional material pinpointed the specific links.¹²⁹

¹²⁷Public records reflect various relationships between principals in a variety of business arrangements.

¹²⁸US Code of Federal Regulations, Title 14: Aeronautics and Space, Part 141—Pilot Schools, Subpart A, § 141.25 Business office and operations base, (c) The principal business office may not be shared with, or used by, another pilot school. Also see Part 141—Pilot Schools, Subpart A, § 141.25 Business office and operations base, (a) and (b).

¹²⁹A photograph of the Diplomat’s son sitting in the cockpit of a airplane wearing an aviation headset appears in a full color brochure promoting the AFA / XU Aviation Training Partnership.

The Chinese Diplomat had effectively created a “world renowned” flight academy with an impressive history and track record out of thin air, then offered it up to university officials at X University (and later, Y University), whose president was sufficiently eager to have consummated the partnership without ever having stepped foot on the academy’s campus. The entire transaction had been based on personal guanxi and the trust inherent in those relationships.

In the opening salvo, the Chinese Diplomat activated his existing connections to initiate contact with a potential training center in America through existing connections. These initial connections opened the door to information flow and laid the foundation for future cooperation. Tempted by a steady flow of Chinese students, CFS eagerly embraced the opportunity to increase both its student population and profits. However, it was not willing to offer housing, transportation, or supervision to China’s fledgling cadets. At the same time, a more fundamental problem lingered. While the Chinese university was willing to “recruit” students from China’s Western Provinces and provide a steady flow of new cadets, the Chinese Diplomat had no way of extracting any of the profits from the transaction. All tuition had to be paid directly to the Chinese university, and the Chinese university was required to forward all fees to the US training facility. Both problems were solved at once when the Chinese Diplomat, working with his American colleagues, quietly founded the American Flight Academy to broker the deal with a bit of added value.

In a win-win arrangement, Central Flight School would train students enrolled in the high profile American Flight Academy. Promotional literature confirms this relationship. In a press release, AFA refers to CFS as one of its many “designated partner[s] worldwide,” and on their website, AFA refers to CFS as “our official flight training provider.” This arrangement allowed

CFS to concentrate on flight instruction while AFA processed students recruited by X University. CFS would benefit by increased enrollment using existing training aircraft and classroom facilities while AFA would arrange student housing, limited adult supervision, and English language training and X University would recruit students from all over China to participate in its “leading edge aviation program,” all parties earning substantial profits from the arrangement.

Tai Gong Wong, eleventh century military strategist whose work formed the basis of Sun Tzu’s the *Art of War*, captures the sentiments of competing parties when he said, “when benefits are mutual, then cooperation will follow. Mutual cooperation results in benefits, and thus leads to affection” (Chu 1992, 191). Wong’s military strategy was not based on maneuvering or stationing troops, but on understanding human nature. “Through his personal observations and studies of human behavior, he discovered that there existed unwritten laws mandating the principles of utility and mutual benefit that ordinary human beings unconsciously followed. By utilizing this understanding, he could predict the outcome of any given situation, thus maximizing his advantage” (Chu 1992, 191).

Thick Black Theory promotes creating the illusion of utility for ones’ benefit. “When you wish to motivate others to participate with you on a personal or business level, you too need to create an attractive bait. You have to make the benefits obvious to attract your intended participants. If you can not find a legitimate benefit, then create an illusion of one. By applying this principle, you will be able to entice your potential counterpart to participate with you” (Chu 1992, 185). To effect the deal, the Diplomat presented the American Flight Academy as a prestigious, exclusive institution with impressive achievements and extensive experience, enticing X University to pursue a joint program in aviation training. The perceived importance

of the American Flight Academy and the fanfare that followed the announcement of its joint venture, laid the groundwork for recruiting other private Chinese colleges. The partnership with X University was limited to a specific geographic region of China by design. This allowed the Diplomat (now carrying the title, AFA “Dean of International Studies”) to recruit a second university in a neighboring province and grow the business. Using a college recruiter that had relationships with multiple universities proved effective in opening doors for the Diplomat to present a series of informal conferences to promote American Flight Academy and offer a second partnership with exclusive territory from which to glean new students.

Within weeks of the fanfare announcing the AFA / X University partnership, Y University invited AFAs Dean of International Studies to make a presentation to its own President with two Deans and an investor in attendance to consider the viability of a second partnership. The Diplomat reiterated the glowing achievements and prominence of the American Flight Academy, outlining the training program and commenting on the phenomenal success of the current joint venture.¹³⁰ Emphasis was placed on the exclusivity of territory, an entire region of potential students reserved for a second partnership and the prestige and wealth it would bring to its Chinese partner. The model would be used again to grow the organization.

Effectively, Chinese universities would recruit students for aviation training in America, at once enriching the pool of competent aviators in China while earning substantial profits for their investors and prestige for their schools. Students would earn a two-year college degree from the Chinese institution while securing a coveted US FAA Commercial Pilot License. Each

¹³⁰ At the time, the current joint venture had successfully recruited 6 students, missing its original projection of 90 students per semester by 93%. By the summer of 2013, at least one student had returned to China after being washed from the program.

of the American flight schools would earn a profit from either training or housing Chinese cadets. And the Diplomat would be able to take his share of the profits through the American Flight Academy once the students arrived in America for training.

CHAPTER V SOCIAL NETWORK ANALYSIS

Chapter Five provides an overview of the network concepts used to explore specific cultural phenomena presented in the preceding case studies. It also addresses two distinct approaches to network analysis, each suitable for answering specific types of research questions. Networks display specific characteristics through measurements that are at once general and unique; general in the sense that they are universally accepted and unique in that no single measure can be relied upon to reflect a “true” picture of the network. Analysts must compare and contrast multiple measures to obtain an accurate assessment of any network. Basic measures include network size, density and diameter, while more complex measures identify both structural holes and brokerage opportunity. This chapter opens with a detailed discussion of concepts and measurements prior to discussing the challenges of longitudinal network research and the newly emerging techniques used in dynamic visualization, a tool that allows researchers to better understand pace and sequence, tie decay and tie churn.

Social scientists generally concern themselves with data that is rooted in cultural values and symbols. In keeping with this tradition, social network analysis is inherently interdisciplinary, benefitting from sociology, anthropology, psychology and other social science disciplines. Its data is relational and focuses on the contacts, ties and connections between individual actors and groups and so cannot be reduced to the properties of individual actors. Network analyst John Scott explains, “relations are not the property of agents, but of systems of

agents; these relations connect pairs of agents into larger relational systems” that form networks (Scott 2000, 3).

Networks are ubiquitous and can be found in both the natural and social sciences and in the animate and inanimate worlds. “The fact that so many researchers, from such different disciplines, almost simultaneously discovered the network perspective is not surprising. Its utility is great, and the problems that can be answered with it are numerous, spanning a broad range of disciplines” (Wasserman and Faust 1994, 10). In the social sciences, the methods of social network analysis focus on the relationships between actors and their patterns of behavior, and seek to describe empirical phenomena in terms of network linkages. Consequently, social network analysis is unique in its approach to social science inquiry. While standard social and behavioral science focuses on the attributes of autonomous individual units, “the social network perspective views characteristics of the social units as arising out of structural or relational processes or focuses on properties of relational systems themselves” (Wasserman and Faust 1994, 7).

Network Analysis as a Methodological Tool

As a methodological tool, social network analysis offers researchers a way to investigate interaction between actors within a group and within specific contexts. This study looks at two networks that operate within the confines and framework of Chinese society and through the lens of guanxi relationships. Within that context, concepts inherent in guanxi are defined as variables that measure different aspects of the relationship and reflect processes that occur within the network as a whole.

Ego-centric versus Socio-centric Analysis

Social network analysis concerns itself with two distinct approaches to inquiry, socio-centric and ego-centric networks. In its simplest form, socio-centric analysis looks for patterns of interaction used to explain the flow of resources and information, status, or the concentration of power and is based on complete networks while ego-centric networks are partial, encompassing only those actors connected to ego, (frequently including ego's alters) and focuses on individuals with respect to structure and composition. This research uses an ego-centric approach to construct a partial network based on the transactions that occur within a set of commercial firms.

Ego Networks and Their Measures

Ego networks consist of a central actor (ego) and a set of alters, or connections. A network has as many egos as it has nodes which can be either an individual, group, or organization. Ego resides at the center of the network and all other actors radiate outward from this point. This analysis focuses on a central actor, embedded within the primary firm of a partial network to explore the relationships between and among actors concentrating on the operation of the firm and the dynamics of the network.

There exist universally accepted measures in network analysis such as size, number of ties and pairs. While these measures reveal certain facts about a particular network, they must be considered in relation to other measures in order to have value. These basic measures also serve as factors in the mathematical calculation of other measures.

Size, Ties and Pairs

The first measure of an ego network is its size which is calculated by adding the total number of actors in the network. This relatively simple calculation is preceded by the more

complex task of determining which actors to include or exclude from the network. Occasionally, the boundary of a network will be a clear external definition that enables a researcher to establish a definitive line between who belongs and who does not. This approach may be used to answer questions concerning employees of a certain firm or groups with definitive membership roles. More frequently, the boundary of a set of actors is arbitrary, based on criteria such as frequency of interaction, intensity of ties, or the theoretical concerns of the researcher (Wasserman and Faust 1994, 31). The network boundaries for this study are based on the relevance of the actors with respect to the organizational structure of a firm with a finite number actors set at $n=34$, a relatively large ego-centric network.

In ego networks, a secondary measure of “size” is used to capture the total number of actors directly connected to ego, excluding ego itself. Iterations of this calculation are made for each actor in the network with subsequent calculations factored on the “refined” measure of network size. Similarly, ties and pairs reflect the total number of ties and the total number of pairs of alters, excluding those involving ego, with the results used to calculate network density.

Ego Density and Diameter

Density is the number of ties divided by the number of pairs multiplied by 100 and is used as a measure of network “completeness.” The density of a “complete” graph is 1, but this is rarely, if ever, achieved. In order to reach a density of 1.0, all actors in the network must be directly connected to all other actors in the network. Consequently, the probability of achieving a complete graph is inversely proportional to the size of the network and “larger graphs will, other things being equal, have lower densities than small graphs” (Scott 2000, 74).

As one of the most common measures in social network analysis, density can be easily calculated for directed and undirected graphs, and used in ego-centric and socio-centric studies. However, there is an important caveat in the way that density is measured in ego-centric networks with regard to the focal agent and their direct contacts. Density measures the connections between actors. Since ego is, by definition directly connected to “direct contacts,” ego and ego’s direct contacts are excluded from the calculation isolating the connections between ego’s alters. Additionally, while slight adjustments can be made in calculating density for the asymmetrical data contained in directed graphs, “there is very little agreement about how this should be done” (Scott 2000, 73). This study relies on the more generally accepted method of calculating density using an undirected, non-valued graph which provides a more useful and meaningful measure of ego-centric density and ensures a more accurate view of changes across time.

Diameter is another basic measure in ego networks and is used as an index to determine the span or extensiveness of the network. Network diameter measures the distance between the two furthest actors through the longest single path to reveal the number of “layers” between these two distant actors. Similarly, average geodesic distance is the statistical mean of the shortest path lengths among all of the pairs in a network. These two similar measures reflect the “size” of the network through the number of steps necessary to reach specific actors, and provide another indicator of network “closeness.”¹³¹ In addition to these basic and relatively straightforward measures of size, density, diameter, and distance, more complex measures can be

¹³¹See Watts, Duncan J. 2003. *Six Degrees: The Science of a Connected Age*. New York: W.W. Norton & Company for an extensive discussion of network connectedness.

ascertained through computer routines found in software programs like UCInet, designed specifically for network analysis.

Weak Components, Reach and Efficiency

Weak components is a measure that examines the number of connections within a network highlighting those actors that are connected to ego, but not directly to each other. In these instances, ego provides the only path that information or goods can travel between two “weak components.” This serves as another indicator of ego’s opportunity for brokerage, an important position within the network that will be addressed later in this chapter. Dividing the number of weak components by the size of the neighborhood normalizes the count and provides a sense of whether ego’s role in connecting actors is unexpected.

Two-step reach and reach efficiency provide a way to examine network connections beyond ego’s immediate neighborhood. Two-step reach reports the percentage of all actors that can be reached within a “friend of a friend” distance while reach efficiency normalizes two-step reach by dividing the percentage by size. The results reveal the number of non-redundant or secondary contacts for each unit of primary contact, an indication of efficiency, or the amount of effort expended on maintaining a primary contact. When primary contacts lack secondary contacts, efficiency is low and the cost of maintaining the primary contact may have to be reconsidered. There are several caveats that must be considered before allowing the tie to decay. All ties are not equal. Some connections are more valuable than others and may be able to supplying goods or information that cannot easily be acquired through other actors. In order to understand why an actor may invest additional effort in fostering a tie that appears to be inefficient, actor roles and positions must be considered.

Roles and Positions

In network analysis, the terms “role” and “position” are frequently conflated although they are theoretically distinct. This may be the result of certain flexibility in using the concepts since “there are numerous ways to formalize the ideas of network roles and network positions” (Wasserman and Faust 1994, 464). Perhaps the most straightforward approach to differentiating between the two concepts can be found in Wasserman and Faust’s 1994 work entitled, *Social Network Analysis: Methods and Applications* where they quote Homans’ 1967 work defining role as “ . . . the behavior expected of a [person] occupying a particular social position” (Wasserman and Faust 1994, 462). However, they expound, “in contrast to social position, which refers to a collection of actors, the concept of social role refers to the ways in which occupants of a position relate to occupants in other positions” (Wasserman and Faust 1994, 462).

Network analysts frequently view actors’ roles in different ways and on different levels. An actor’s “role” can refer to specific types of relations between particular categories of agents allowing analysts to isolate similar type actors (Scott 2000, 123). These actors are thought to be “structurally equivalent” and interchangeable with respect to their roles (Burt 1982; Sailer 1978). “The occupants of a clearly specified cultural role comprise a structurally equivalent category of agents: they do similar things in relation to similar others . . . It is important, therefore, to see the concept of structural equivalence as applying to social positions *per se*, and not simply to roles or proto-roles” (Scott 2000, 124).

This research approaches an actor’s role from a slightly different perspective using the term to refer to a subset of actors belonging to the same group or firm. Hence, an actor’s role may lie with a specific firm while their position within the firm might be that of a broker with

respect to the organizational structure of the network. An actor's role could range in importance from nonessential where their departure would have no effect at all, to crucial where their departure might compromise the integrity of the entire network. Similarly, an actor's position could range from nonessential where their departure would have no effect as long as the position were filled with another competent actor, to crucial where their departure would compromise the entire network. Brokerage relationships that depend on guanxi are good examples of crucial positions.

Brokerage

In guanxi networks the broker emerges as the most salient position because of its power, influence, and dependency effects. Burt provides the most useful approach to understanding brokerage examining the position from the perspective of a rational actor attempting to maximize profit or advantage. Brokerage is exclusive and involves the flow or exchange of resources or information from one actor to another through an intermediary. Marsden defines brokerage as a process "by which intermediary actors facilitate transactions between other actors lacking access to or trust in one another" (Marsden 1982, 202). Gould and Fernandez expound on Marsden's work demonstrating five distinct types of brokerage. Local brokerage or coordinator brokerage which occurs within a single subgroup and is completely internal. Cosmopolitan or itinerant brokerage occurs when two principals within the same subgroup are linked through an outside intermediary. The gatekeeper and the representative, as the third and fourth type, act similarly in that they link two actors within the same group to a subgroup. Finally, the liaison links two distinct groups having no prior allegiance to either group (Gould and Fernandez 1989, 93). These five types of brokerage can be found in guanxi networks.

Brokerage is an important position in social networks linking actors or organizations together through a single actor. The value of any broker is directly related and proportional to the importance of the link. That is to say, the more important a specific subgroup or subunit is to the host, the more important the broker is who connects them. Brokerage can be identified through network visualization software or through computer analysis using structural holes as an indicator of brokerage.

Structural Holes

Actors within a network are linked together directly or indirectly through other actors. The more connections there are between various actors, the greater the density of the network. Structural holes, a term coined and popularized by Ronald Burt, refers to the absence of connections between actors and points to positional advantages and disadvantages inherent in the way that actors are embedded in the network. Because structural holes reflect a limited number of connections linking one actor to another, density measures reflect and are indicators of structural holes. Burt clarifies this important feature noting that “structural holes separate nonredundant sources of information, sources that are more additive than overlapping” (Burt 2000b, 35; also see Burt 1992 and 1997).

Actors that bridge one subgroup to another exhibit advantages in the flow of information or resources. Consequently, structural holes provide an “opportunity to broker the flow of *information* between people, and *control* the projects that brings together people from opposite sides of the hole” (Burt 2000b, 35). The ability to broker the flow of information and control projects that connect subgroups creates a position of power within the network. Measures related

to structural holes can be computed on both valued and binary data although binary data is more commonly used because of its ease in interpretation.

A second indicator of structural holes is dyadic redundancy. Dyadic redundancy means that the tie to a specific actor is repeated, albeit to another actor within the same subgroup. With multiple ties to the same actor, those ties become “redundant.” Dyadic redundancy and network density are directly related. That is to say, dyadic redundancy is an indicator of density. The more redundant ties are within a network, the more dense the network.

Ego Betweenness is related to brokerage in that it indexes the percentage of all geodesic paths that pass through ego revealing the extent to which other actors must move through ego to connect through the shortest path. Normalized ego betweenness compares the maximum possible betweenness with the actual betweenness. When maximum value is achieved, the network will resemble a star with ego in the center. Every actor will have to pass through ego to connect to any other actor. This puts ego in the perfect position to broker every connection.

Actors embedded within a network that enjoy brokerage opportunities have strategic advantages over other actors. Network analysis allows researchers to identify and isolate specific actors based on their position. While structural holes and redundancy act as indicators of brokerage opportunity, brokerage and betweenness are different ways of indexing the centrality or power held by an actor. This study transcends analysis of the direct effects of power in social networks in its strictest sense, and moves on to longitudinal analysis to trace the changes that take place within the network with respect to power positions.

Longitudinal Studies of Networks

Network dynamics, or the changes that take place within networks over time, is a relatively under-researched theme in social network analysis although some attention has been drawn to longitudinal studies (Steier and Greenwood 2000; Hite and Hesterly 2001; Burt 2002a, 2000b; Jack, Dodd and Anderson 2008). “Much of the recent interest in longitudinal social networks revolves around understanding how networks develop and change, as scientists seek to build models of social processes that result in observed structures” (Moody, McFarland and Bender deMoll 2005, 1208). Burt’s study on the changes that take place in evolving networks found patterns in tie decay suggesting that experienced brokers tend to retain their positions (Burt 2002a, 2000b). Other studies suggest that actors choose to either form or delete ties based on their own needs or desires (Zeggelink 1994; Willer and Willer 2000). Batjargal’s work finds that “competitive actors are suggested to learn and re-learn networking techniques and routines to shape and restructure their networks to generate sustainable entrepreneurial opportunities” (Batjargal 2010, 151). While these studies have increased our understanding of network dynamics, newly developed tools for analysis promise even greater insights.

Dynamic Network Visualization

The first step in the visual representation of longitudinal networks begins by establishing a baseline from which subsequent data can be compared. After establishing a time window to span a set of relational events that transpire within a given time period, snapshots can be taken at specific intervals that capture changes.

Dynamic network visualization has the capacity to capture changes in network structure over time allowing researchers to see the changes taking place. The use of static flip books and

dynamic movies are two effective approaches in capturing the changes, each exhibiting strengths in different areas. Dynamic movies use node movement to map changes in the underlying structure of the network to reveal endogenous network processes that help identify the mechanisms through which changes occur. A second approach, static flip books, use static nodes with dynamic ties to reveal the formation and decay of relations. While both approaches foster theoretical insight on network dynamics, “theoretical questions surrounding the temporal representation of social networks and technical questions about how best to link network change to changes in the graphical representation” come to the fore (Moody, McFarland and Bender-deMoll 2005, 1206). Moody, McFarland and Bender-deMoll’s work confronts these questions considering both pace and change sequence as a primary focus.

Static Flip Books and Dynamic Movies

Static flip books and dynamic movies provide analysts with the ability to “see” network changes taking place. While both approaches offer unique insight into network structure, their effectiveness is directly related to the type of network under investigation. In static flip books, nodes remain stationary and lines, or connections are either added or deleted over time. Each page of the book represents a specific time period and by flipping from one page to another, the changes in ties between nodes become visible. Flip books are appropriate for sparse networks where there are limited nodes. A second approach to dynamic network visualization is through movies, where nodes move as a function of changes in relations. This approach is effective when network are more connected and reveal the mechanisms through which changes occur by mapping the changes in the underlying network structure. This study uses a static flip book

approach to visualize the changes that take place over time, an appropriate approach given both the size of the network and the phenomena under investigation.

Pace and Sequence

The most basic dimension for dynamic relations is relational pace, or the rate of change in which irregularities take place. This can vary dramatically with the type of network under investigation, using seconds or minutes for conversation networks, days or weeks for friendship networks, and month or years for kinship networks (Moody, McFarland and Bender-deMoll 2005, 1209). Further, pace can vary within the same type of network and may be dependent on the age or maturity of the network. In some cases, newly formed networks may be more dynamic than mature networks that have already reached equilibrium. Conversely, some types of networks strive for stability first, then become dynamic in an attempt to refine specific relationships. Investigating pace is a theoretical decision and an effective tool for answering questions that concern time and space focusing on “how long” it may take for certain changes to appear. Cases for this study were selected on the basis of specific changes taking place, precluding pace from the analysis. However, that does not preclude assumptions being drawn to elicit further investigation.

Sequence emerges as a second temporal aspect in network dynamics. The order in which changes take place can reveal interesting theoretical insights on the cause of change, or whether one change is dependent or affected by another. Studies on network processes and hierarchical relationships focus on the order in which change occurs to explain the prevalence of a given structure (Johnsen 1985, 1986; Chase 1980). Sequence also offers insight on network expansion and contraction by using the order in which changes occur to isolate potential catalysts for further

examination. Further, sequence is an important theoretical consideration when investigating the relevance of an actor's position or role with respect to network dynamics and has the potential to aid our understanding of power and influence. The intersection of pace and sequence lends itself to new complexities and may seriously impact the modeling and understanding of social networks making dynamic network visualization an effective tool for capturing the temporal aspects of social networks.

Tie Decay

New ties that form within social networks are generally attributed to network expansion. This is particularly true when the number of actors in a given network increases. However, when the number of actors remains constant, new ties are generally indicative of an increase in network density. This seemingly simple observation of network dynamics becomes more complicated when tie decay, or the erosion of ties over time is factored into the equation.

Tie decay occurs when relationships between actors weaken and disappear (Burt 2000a). Although the causes of decay vary, there appears to be some consistency in its functions. One study on the functions of tie decay in a population of bankers and their colleagues in a financial organization reveals patterns in both pace and sequence. Burt's four year study on the function of tie decay supports three conclusions; 1) ties tend to decay slowly when actors have previous relationships, work in the same corporate division, are of the same status, or enjoy redundant ties; 2) The rate of decay slows with time; and 3) embedding slows decay (Burt 2000a). Although this study does not consider pace in its analysis, it does consider sequence as a factor in both the formation and decay of ties. Additionally, while generalizability across different types of

networks, or different industries may be difficult, the findings support the existence of patterns in decay that may prove interesting in dissimilar networks.

Tie Churn

In longitudinal network analysis, data is collected at several points in time, then compared to determine the extent of network change. Researchers commonly focus on ties between actors, calculating the number of new ties while adjusting for tie decay. However, the effectiveness of this approach is dubious and critics claim that it fails to capture the nuances of change that affect the composition and structure of the network (Halgin and Borgatti 2012, 23). Newly developed software routines address the complexity of tie churn to offer a more accurate view of the changes that take place over time.

Tie churn occurs when network ties are either lost or gained. In absolute terms, if an actor gains three ties and loses one, that actor realizes a net change of two ties. This simple, straightforward calculation fails to capture the extent of the change. A more accurate approach would consider the absolute number of changes, with three ties gained and one lost resulting in a total of four changes. Viewing change from this perspective increase the activity of the actor by 100 percent. While this modified method of calculating change is more effective in revealing network activity by calculating the total number of changes, it ignores the patterns of change that affect network composition; what effect did the changes have on the positions and roles within the network? In terms of network composition, it is important to view the type of change taking place by recognizing that tie gain and decay alters the network in unique ways, even when controlling for network size.

UCInet software provides routines that reveal tie churn patterns that are not possible to detect using a simple comparison approach. “By considering new, kept, and dropped ties we can differentiate those who increase their brokerage from those who seek closure, those who seek diversity from those who seek homophily, and those who add ties to alters of higher status from those who add ties to alter of the same or lower status” (Halgin 2012, 27). It is these types of changes that elicit interesting questions in network dynamics.

This chapter presented network concepts and measures moving from simple to complex phenomena. It addressed the differences between ego-centric and socio-centric networks, highlighting the universally accepted measures of size, ties and pairs. The discussion continued with an overview of weak components, reach and efficiency, network concepts that provide insight on the value of maintaining certain actors although the cost to do so may be high. It also discussed roles and positions within a given network pointing to brokerage as a salient position based on the potential power afforded its actor. Structural holes and dyadic redundancy come to the fore as indicators of brokerage allowing analysts to isolate and examine those actors that occupy the valuable brokerage positions. The chapter closes with a discussion of longitudinal network analysis using static flip books and dynamic movies to illustrate and animate pace and sequence, tie decay, and tie churn. The next chapter will provide an analysis of the case studies using the network concepts and measures discussed in this chapter.

CHAPTER VI ANALYSIS AND INTERPRETATION

Chapter Five presents network concepts and measures used in social network analysis. It also discusses longitudinal network analysis using static flip books to illustrate and animate changes that take place in dynamic networks. This chapter continues the discussion by linking the case study narratives from Chapter Four to the network concepts in Chapter Five to discuss the dynamics of *guanxi* in Chinese social networks.

This study considers two distinct *guanxi* networks, each containing $n=34$ actors, to confirm or disconfirm the hypotheses. The networks are vastly different from one another; the first network is based in an established, low-tech manufacturing firm in south China while the second network finds itself in the complex, high-tech field of aviation in a newly emerging firm in China's northern capital, Beijing. Conventional wisdom dictates considerable differences in the way that *guanxi* might function in each of these networks. However, the hypotheses are tested in both networks with equal application making the diversity of the networks theoretically interesting.

The chapter is organized to address each hypothesis, with an analysis of KS Gongchang preceding American Flight Academy. A brief overview of the salient actors and distinguishing characteristics of each firm is followed by a discussion of the hypotheses as presented in Chapter One. Matrices containing symmetrical binary and valued data used in the analysis are presented in their entirety. All tables and figures can be located in the Appendices.

KS Gongchang

The KS Gongchang network is illustrated in its complete form in Appendix C. Figure 1 AKS T1 KS Gongchang illustrates the entire network at T1 setting a baseline for comparison to T2 and T3, Figures 2 AKS T2 KS Gongchang and 3 AKS T3 KS Gongchang respectively. Figures 4 through 8 in Appendix C provide a comprehensive view of network change over time and include valued data.

In the case of KS Gongchang, there are seven specific actors of interest found in five separate organizations, the primary firm and four organizational subunits.¹³² The first actor is ego and is located at the center of the network. All other actors (or nodes) radiate from this node. Centrally placed, the KS President's position is crucial to the firm and network, and his departure will cause the collapse of the entire network.

The second actor of interest is the KS Rep whose role lies with the primary firm, but whose position becomes fluid as we will see. While the integrity of the network may not depend on this actor, the data will show that the actor is used to strengthen the primary firm. The third actor of interest is the KS UL Specialist whose role lies with the KS firm and whose position links to the UL/WM Independent Agent. These two actors create a bridge connecting one firm to the other rendering the relationship crucial, not only for its singular dyadic connection, but because of the importance of the two firms it connects. Loss of either actor could jeopardize both the primary firm and the entire network. The fourth actor, the UL/WM independent agent links the KS firm with the UL firm bringing together three additional actors, the UL Lead

¹³²The actors are KS Pres[ident], KS Rep, KS UL Specialist, UL/WM Ind. Agent, UL Lead Engineer, BS HK Partner, and BS Partner and can be found in the following firms: KS, UL, UL/WM, BS HK and BS.

Engineer, UL Assistant Engineer and the UL Test Technician. The UL firm is crucial to both the network and the primary firm and its loss will compromise the ability of the primary firm to function. Interestingly, the loss of one or all of the actors within the UL firm will have no effect on the network if the roles are filled with new actors. Consequently, it is the role that is important in this case, and not the specific actor. These six actors are found in three separate firms: KS, UL/WM, and UL.

The fourth and fifth firms form separate organizational subunit and serve a different function. Both firms, BS HK and BS, are linked through a single independent actor. The BS HK Partner's role is with BS HK and his position as broker links the BS Partner through the BS HK Partner Rep. While these three actors are not crucial to the integrity of the network, the data will show that the actors and their firms strengthen the primary firm.

American Flight Academy

The AKH American Flight Academy network is illustrated in its complete form in Appendix C, Figure 9 AKH T1 American Flight Academy. The figure illustrates the entire network at T1 setting a baseline for comparison to T2 and T3, Figures 10 AKH T2 American Flight Academy and 11 AKH T3 American Flight Academy respectively. Figures 12 through 16 in Appendix C provides a comprehensive view of network change over time and include valued data.

In the case of American Flight Academy, there are ten specific actors of interest found in five separate firms, the primary firm along with four organizational subunits.¹³³ The AFA Dean

¹³³The actors are AFA Dean Int'l Studies, AFA Pres/Dean, Test Student, CFS Dir. Of Flight, Cent[ral] Minister of Ed[ucation], Prov. M[inister] of Ed[ucation], Student Recruiter, XU Pres[ident] and Chair, YU Pres[ident], and Aviation Consultant and can be found in the following firms: AFA, CFS, M[inistry] of Ed[ucation], XU, and YU.

of International Studies is central to the network and all other actors radiate from this single node (ego). As in the previous network, the loss of this actor will cause the collapse of the entire network.

The second actor of interest is the AFA President/Dean whose role lies with the primary firm (AFA), and whose position is used to strengthen the network. The third actor, the Test Student, is independent and assumes the position of broker acting as a conduit between AFA and CFS, strengthening the primary firm. The fourth actor, the CFS Director of Flight plays a crucial role in the network, heading CFS firm and acting as its only link to AFA. Loss of this actor prior to the establishment of the primary firm may temporarily impede operations, but will not collapse the network. CFS will have to fill the roles within its firm before operations can resume, or CFS can simply be replaced with another similar type firm. The fifth and sixth actors, both Ministers of Education act as brokers, serving an ephemeral, albeit crucial position linking the fourth organizational subunit, XU, to the network. The XU President occupies an important, but not crucial position in the network, and both the actor and the firm can be replaced by a similar actor and firm. Likewise, YU, the fifth firm and its President, introduced to the network through the Student Recruiter, an independent agent, can also be replaced by a similar actor and firm. The final actor, the Aviation Consultant occupies an independent role that strengthens both the network and the primary firm.

Mapping the Changes in the Network

Data on each network was gathered through participant observation over the course of several years with “snapshots” being taken at six month intervals within a specific eighteen month period. The selection of the “data year” is based on the dynamics of the network with

respect to the actions of specific actors. Panel data are recorded as T1, T2 and T3 for each network and stored in data files in Appendix B, Tables 5 through 16.

Longitudinal studies of networks are relatively new and tools for their analysis are still being refined (Moody, McFarland and Skye 2005; Feld, Suitor and Hoegh 2007; Batjargal 2010; Halgin and Borgatti [2011] 2012). This research uses two of the more commonly used tools in social network analysis; UNINet Software for data analysis and NetDraw for dynamic network visualization (Borgatti 2002). The data are contained in two sets of matrices, each reflecting T1, T2 and T3 for a total of six matrices; the first set of matrices reflects binary data with “1” indicating a connection and “0” indicating no connection. All connections are reported with respect to the specified time period and only as they apply to the operation of the primary firm and organizational subunits, the ultimate level of analysis. A second set of graphs contains valued data for the same periods and reflects guanxi quality based on the combined values of three well-established guanxi concepts: reciprocity (Hwang 1987, 953-960; Kipnis 1997; Yang 1957; Yang 1994; Fei 1992), intensity (Hwang 1987; Tsang 1998, 68), and durability (Yang 1994, 111-119; Chen and Chen 2004, 308). Each concept is assigned a full rank ordinal value as listed in Chapter 1, Table 1. Variable Definitions and Measures. Quality Valuation calculation tables are listed in Appendix B, Tables 17 through 22.

Both networks are one-mode with the binary matrices undirected and the valued network directed. Hence, the binary matrices look only for existing connections between two actors without regard for hierarchy while the valued matrices consider all connections directed toward ego and flowing toward the center of the network.

Addressing the Hypotheses

Each of the three hypotheses is addressed through organizational subunits, or firms that exist within the network, but outside of the primary firm under investigation. Variables appear in italics and their associated definitions can be found in Table 2. Network Concepts and Table 3. Variable Definitions and Measures, Chapter One.

H1— Improved Organizational Guanxi and Individual Guanxi Quality

H₁ — *Firms* continually seek to improve their *organizational guanxi* by improving existing employees' *guanxi quality* within the firm and by recruiting new actors from outside the firm.

The first hypothesis focuses on the dynamics of *organizational guanxi*. In T1, I establish a baseline for *guanxi quality* by measuring three separate but closely related variables, *Reciprocity*, *Intensity* and *Durability* as key indicators of guanxi quality. *Reciprocity* measures the frequency of interaction between actors, while *Intensity* measures the strength of the relationship and *Durability* reflects the underlying commitment to the relationship. Specific to individual actors, these three measures reflect the collective quality of organizational guanxi. Using UCINet software, I construct a series of matrixes to compare longitudinal data on guanxi quality. Since firms actively recruit new actors to increase guanxi quality, I include these new actors as they are introduced to the network. If my hypothesis is true, then the data will demonstrate an upward trend in the quality of organizational guanxi over time.

$$H_1 \text{ — } (n \uparrow \Rightarrow n_q \uparrow)(n_i \uparrow \Rightarrow n_q \uparrow)(n_d \uparrow \Rightarrow n_q \uparrow)$$

The Case of KS Gongchang

A comparison of T1, T2 and T3 reveals three separate, but related changes that occur over time in the AKS Network. All three occurrences involve actors from organizational subunits and directly affect the firm's overall guanxi quality. Although each organizational subunit performs a different function for the primary firm, they all strengthen both the network and the firm. In AKS Qual T1, I establish a baseline for guanxi quality for comparison to T2 and T3 then offer a brief discussion on each actor's position and their immediate ties.

In AKS Qual T1, the KS President is linked to the Bank Agent with a guanxi quality of 5.0 (Figure 17, Appendix D). Similarly, the KS Treasurer links to the Bank Agent with a value of 4.0. The KS Vice President is not linked to the Bank Agent or the KS Treasurer. In AKS Qual T2, changes begin to take place (Figure 18, Appendix D). Guanxi quality between the KS President and the Bank Agent increases to 7.0 and an additional link appears between the KS Vice President and Bank agent having a guanxi quality of 6.0. The upward trend in guanxi quality continues in T3, revealing an increase in guanxi quality to 8.0 between the KS President and Bank Agent (Figure 19, Appendix D). Surrounding actors are equally affected. Guanxi quality between the KS Treasures and Bank Agent increases to 8.0 while guanxi quality between the KS Vice President and Bank Agent increases to 8.0.

So then, what accounts for this upward trend? The rise in guanxi quality is attributable to the marriage between the Bank Agent and the KS President, drawing both the KS Treasurer and the KS Vice President into a kinship relation. While it cannot be said that the marriage between the Bank Agent and the KS President took place for the benefit of the organization, the union

improved the firm's guanxi quality and affected more than just a single node (intensity and durability).¹³⁴

The situation with the second set of actors becomes more complicated (Figure 20, Appendix D). In T1, there exists a guanxi value of 5.0 between the KS President and the KS UL Specialist, and between the KS UL Specialist and the UL/WM Independent Agent, a relationship with a guanxi quality of 5.0. Guanxi quality between the UL/WM Independent Agent and the UL Engineers is relatively weak with a value of 4.0. However, T2 reveals substantial changes in the network that open the way for improving the firm's guanxi quality (Figure 21, Appendix D). The KS Representative establishes a weak, albeit direct connection with the UL Lead Engineer and UL Assistant Engineer. This opens the way for the KS President to establish a direct connection to the UL Engineers through the KS Representative, a more willing broker than the UL/WM Independent Agent. At its mature stage in T3 (shown in Figure 22, Appendix D), the KS President improves the firm's overall guanxi quality through repeated, personal contact with the UL Lead Engineer (reciprocity, intensity, and durability) to establish a direct connection with a guanxi quality of 5.0.

The third set of actors reveals an equally complex set of changes in the network that strengthens the firm's overall guanxi quality. This final set of actors includes the KS President, BS HK Partner, BS HK Partner Representative, and BS Partner (shown in Figure 23, Appendix D). A baseline is set in T1 with the first change to be noted in T2 where a newly formed link between the BS Partner and the BS HK Partner reflects strong guanxi with a quality index of 7.0 (Figure 24, Appendix D). Finally, in T3 the BS Partner links directly to the KS President with a

¹³⁴“Guanxi-based credit-worthiness (Xinyong) enhances ease of capital formation” (Kuo 1996, 128).

guanxi quality of 5.0, lower than the 7.0 enjoyed with the BS HK Partner, but through a direct connection opening the way to even greater strengthening (Figure 25, Appendix D). The dynamics that brought about the change are rooted in the legally binding contract between the two firms, although correlation does not imply causation; causation cannot be determined as there is no indication as to whether the contract brought about a closer relationship or the relationship brought about the contract.

All of these changes involve actors within a single network and serve to strengthen the firm's overall guanxi quality by either strengthening an individual actor's existing network ties or by reducing the number of actors that function as brokers bringing the more valuable actors in the network closer together. Analysis of the network in the second case reveals similar results.

The Case of American Flight Academy

Using AKH Qual T1 as a baseline, we can detect several changes in guanxi quality that support the hypothesis in the second case (Figure 26, Appendix D). The diagram in T2 reveals several interesting phenomena (Figure 27, Appendix D). First, guanxi quality between the Test Student and the CFS Director of Flight and between the AFA Dean of International Studies and the AFA President/Dean improves. Next, a new link is established between the AFA President/Dean and the CFS Director of Flight, although guanxi quality is initially weak. Then, moving from T2 to T3, guanxi quality between the AFA President/Dean and the CFS Flight Director continues its upward trend, while a new link forms between the AFA Dean of International Studies and the CFS Director of Flight revealing a guanxi quality that exceeds that of the AFA Pres/Dean and the CFS Director of Flight (Figure 28, Appendix D). Guanxi quality among all four actors remains on an upward trend strengthening both the primary firm and the

entire network. Adept at guanxixue, the AFA Dean of International Studies waits until the AFA Pres/Dean establishes a relationship with the CFS Dir. of Flight, then uses the AFA Pres/Dean to introduce him to the CFS Dir. of Flight placing himself in a more “trusted” position through association.

A second set of actors from the same network reveals a similar upward trend in guanxi quality (Figure 29, Appendix D). The focal actors include the AFA Dean of International Studies and three others: the XU President and Chair, the YU President and the Student Recruiter. Initially linked in Qual T2 the AFA Dean of International Studies and the XU President share a guanxi quality of 5.0 increasing to 6.0 in T3 (Figure 30, Appendix D). Similarly, the AFA Dean of International Studies and the Student Recruiter share a guanxi quality of 6.0 in T2, and 7.0 in T3. Finally, the AFA Dean of International Studies establishes a link to the YU President revealing a relatively strong guanxi quality value of 5.0, repeating the pattern demonstrated in the link between the AFA Dean of International Studies and the XU President (Figure 31, Appendix D).

The final set of focal actors in this network includes the AFA Dean of International Studies and the Aviation Consultant (Figures 32, 33 and 34, Appendix D). The AFA Dean of International Studies shares a guanxi quality of 7.0 in T3 (Figure 34, Appendix D), having recently connected to the Aviation Consultant through the AFA President/Dean in T2 (Figure 33, Appendix D). At the same time, the link between the Aviation Consultant and the AFA President/Dean decays. This brings the Aviation Consultant closer to the AFA Dean of International Studies strengthening both the firm and the network.

H2 — Expansion of Guanxi Networks

H₂ — ***Firms*** use ***organizational guanxi*** to expand their networks by forming cooperative partnerships with complementary organizations that enhance the attributes or potential of both organizations.

In the second hypothesis, I test the use of ***organizational guanxi*** as a tool for expanding and enhancing networks by running a series of UCINET routines that identify an actor's relative position in the network and the contacts attributable to that ***actor***. Cooperative partnerships are accomplished through individual ***actors*** within their respective firms linking complementary organizations for mutual benefit. ***Brokerage*** occurs when an actor occupies an exclusive position in the network linking ***contacts*** or ***organizational subunits*** to the host organization. ***Brokerage*** relationships exhibit singular dyadic ties to a ***contact*** or ***organizational subunit***. If my hypothesis is true, then data will demonstrate the presences of single ***actors*** linking ***contacts*** or ***organizational subunits*** to the host expanding or enhancing the host network.

$$\mathbf{H_2} \text{ — } (A)BR \Rightarrow (C)OS$$

The Case of KS Gongchang

Using T1 as a baseline, a comparison of T2 and T3 reveals changes in the network that are consistent with the hypothesis (Table 23, Appendix E). While the number of ties to the KS President increases by 1, existing ties also decay by the same number resulting in a net change of 2, one lost and one gained. On its surface, it appears that the network has remained stable. However, the change reflects an increase in density and an increase in the number of actors within a “two step reach” of the KS President (Tables 25 through 28, Appendix E). A similar change occurs with the KS Vice President who experiences a 50 percent increase in the total

number of ties, although in absolute numbers adds only one connection. Unlike the KS President, the KS Vice President does not suffer tie decay realizing a net increase in the number of ties while increasing network density. A third actor, the Bank Agent realizes a 50 percent increase in the total number of ties, also limited to a single connection in absolute numbers. Similarly, there is no tie decay resulting in a net increase in the number of ties, but a decrease in network density. The BS Partner and the BS HK Partner also experience increases of 50 percent and 100 percent respectively with a net increase in density from T1 to T3, while the UL Lead Engineer adds an additional tie to his existing three, resulting in a total of four ties and a net increase in density from T1 to T3. These results suggest that the network is becoming “closer” through tie decay shedding “nonessential” actors while reducing the number of “steps” it takes to reach others in the network. There is also an increase in the absolute number of ties between existing actors. This increase is reflected in Table 33, Appendix E, which demonstrates an upward trend in dyadic redundancy. A closer look at the organizational subunits hosting these changes highlights the dynamics of the network.

A comparison of AKS T1 to T2 and then T2 to AKS T3 illustrates two unique organizational subunits, or firms of interest demonstrating network expansion through brokerage relationships. The first organizational subunit consists of a single actor linking the KS Firm with its financial institution (Figures 35, 36 and 37, Appendix D). The connection is made through the Bank Agent, and then strengthened by marriage forming a kinship bond between the Bank Agent and the KS President, and by extension, the KS Treasurer, drawing the financial institution closer to the network. The financial institution is crucial to the operation of the KS Firm who depends upon short term loans for manufacturing. This link enhances the relationship between

the two firms with expectations of more favorable loan terms while providing added incentive for loan repayment.

The dynamics within a second set of actors offers an interesting, albeit more complex change in the network. The second set of actors includes the KS President, KS Representative, KS UL Specialist and the UL Lead Engineer and involves a critical function: access to product testing and subsequent safety approvals (Figures 38, 39 and 40, Appendix D). Without the proper government safety approvals, KS products cannot pass through US Customs and are effectively unmarketable in the United States, the firm's most profitable market. Hence, UL is unique and crucial to KS operations. In T1, access to UL is severely restricted through brokerage. To expand and strengthen the network connections between KS and UL, the KS President redirects his approach, bypassing an uncooperative broker who enjoys a unique position that he is unwilling to relinquish, in favor of a more willing broker who acts as a bridge. Using the KS Representative to extend a personal wedding invitation to the UL Engineers, the KS President creates an opportunity to build *guanxi*. The effects of the invitation can be seen by comparing T1, T2 and T3. The weak relationship evident in T1 is enhanced through redundant connections visible in T2, then replaced by a direct connection in T3, stabilizing both the firm and the network.

The third subunit of interest includes three actors, the BS HK Partner, BS HK Representative, and the BS Partner (Figures 41, 42 and 43, Appendix D). Initially, the organizational subunit acts as an "informal partner" or distributor of KS products in the US. The BS HK Partner handles all financial transactions between KS and BS using the BS HK Partner Representative to assist with operations. Products are sold and shipped to a warehouse in the US

for distribution. In T2, a direct link is established between the BS HK Partner and the BS Partner with T3 revealing a direct link between these complementary organizations.

In the case study narrative, the BS HK Partner employs the BS HK Representative to service the BS Partner in America. However, the “partnership” is simply an informal agreement to “cooperate.” The firms exist as separate entities and are not legally bound except by various short-term contracts in the form of purchase orders for specific goods at a predetermined price. After the KS President establishes a direct link to the BS Partner, the two firms formalize the partnership through a written contract transferring ownership shares between the firms. Having gained legal interest in one another, the KS President proceeds to incorporate the merits and accomplishments of the foreign partner’s long history into his own firm’s “history” while ensuring product orders and direct access to American markets. The BS HK Partner remains intact to effect international financial transactions and the BS HK Partner Representative continues to oversee operations. Both firms benefit from this arrangement.

The Case of American Flight Academy

American Flight Academy reveals similar results to those found in the previous case. A comparison of T1, T2 and T3 reveals changes in the network that are consistent with the hypothesis (Table 24, Appendix E). While the number of ties to the AFA Dean of International Studies increases by 125 percent (5 ties), existing ties show no decay at all. At the same time the number of actors in the network remains constant. This suggests an increase in overall density as well as an increase in the number of actors within a “two step reach” of the AFA Dean of International Studies and is confirmed in a comparison between T1, T2 and T3 (Tables 29 through 32, Appendix E). While the AFA President/Dean adds a single tie increasing the total

number from 5 to 6, there is also decay which is masked by the total number of ties. However, further analysis reveals substantial changes taking place. With one new link added and two in decay the net change is 3, and not 1. More important, there is a net decrease in density suggesting a “loosening” of this actor from the network. A third actor, the CFS Director of Flight realizes a 16 percent increase in the total number of ties, limited to two connections in absolute numbers with no change in density. As there is no tie decay, it appears that this organizational subunit is being pulled closer into the network. This is confirmed in Table 34,, Appendix E which reveals an increase from 0 to .14 eliminating brokerage. The XU President and the YU President also experience substantial increases in the number of ties to others in the network while the Student Recruiter adds two additional ties increasing the number of his ties from 1 to 3 in absolute numbers. These results suggest that the network is increasing in density and reducing the number of “steps” it takes to reach other actors in the network by shedding “nonessential” actors while increasing the absolute number of ties between existing actors. This is confirmed in Table 34, Appendix E, where dyadic redundancy either increases or remains stable. A closer look at the organizational subunits hosting these changes highlights the dynamics of the network.

In the case of American Flight Academy, a comparison of AKH T1 to T2 and then T2 to AKH T3 illustrates five unique organizational subunits (or firms) of interest demonstrating network expansion through brokerage relationships. Interestingly, the primary firm AFA, could survive even if it were to lose all of its actors so long as they are replaced. That is to say, once

AFA is established, only the loss of its center, the AFA Dean of International Studies, would cause network collapse.¹³⁵

The first point of interest exists within the primary firm, AFA and includes the AFA Dean of International Studies, AFA President/Dean, AFA Vice President, AFA Public Relations Director, and AFA Director of Logistics (Figures 44, 45 and 46, Appendix D). These actors exist with the implied approval of the AFA President/Dean and remain intact throughout T1, T2 and T3 serving a comparatively minor role in the network. Their function is to provide a way for the AFA Dean of International Studies to extract profit from the arrangement and to act as an organizer of housing and student oversight, a function that similar actors can perform once the network is operational. This interesting point is highlighted in the changes that take place with the Aviation Consultant (Figures 47, 48 and 49, Appendix D).

The Aviation Consultant, initially linked to the AFA Dean of International Studies through the WH Controller, redirects its connection from the AFA President/Dean in T2 to link directly with the AFA Dean of International Studies in T3 where a clearer picture of the network emerges. The value of the Aviation Consultant is inherent in both technical knowledge and experience in the field of Aviation, skills immediately identified and embraced by the AFA Dean of International Studies. In an effort to reinforce his own position, the AFA Dean of International Studies puts forth his “expert” to strengthen the relationship with both the YU and XU Presidents. At the same time, the Aviation Consultant moves away from the AFA

¹³⁵“Having been established, this ethnic-based particularistic exchange network has the tendency to preserve itself as a closed system and to protect and perpetuate an existing monopoly” (Kuo 1996, 128).

President/Dean to ally with the AFA Dean of International Studies strengthening the core of the firm as is demonstrated in a comparison of T1, T2 and T3.

The most dynamic expansion of the network, as illustrated in AKH T3, is concentrated in the organizational subunits responsible for the recruitment of students, YU and XU. It is here where connections start to become redundant and the density of the network increases exponentially (Figure 11, Appendix C). The AFA Dean of International Studies now acts as a broker connecting this dynamic portion of the network to the more stable CFS as the center of training. The primary firm requires the flow of students to function, and two organizational subunits have access to new students. Consequently, establishing strong guanxi with organizational subunits capable of securing similar resources strengthens both the firm and the network.

The final organizational subunit of interest includes the CFS Director of Flight and his connections (Figure 51, Appendix D). T1 illustrates a connection between the AFA Dean of International Studies through the Test Student. In T2, the AFA President/Dean establishes a connection to the CFS Director of Flight (Figure 52, Appendix D). In T3, the AFA Dean of International Studies establishes a direct link to the CFS Director of Flight (Figure 53, Appendix D). The case study narrative outlines the relationship process while AFA reveals the relative importance of the subunit. Advertising literature identifies CFS as “one of its many designated partners” suggesting that the organizational subunit would not remain exclusive. Its initial importance served to establish both AFA and its reputation by providing AFA its “long history” and impressive “achievements.” However, once AFA becomes established, CFS will be replicated.

Network expansion in the case of KS Gongchang and AFA occurs in essentially the same way, albeit not at the same pace. The difference in pace is directly attributable to the age of the firms. AKS is a relatively stable firm having been founded 10 years before this research. Conversely, AKH is a new firm undergoing its initial organization and is expected to remain exceptionally dynamic for several years.

H3 — Network Brokerage

H₃ — ***Firms*** initially exploit ***brokerage*** in organizational guanxi, then attempt to stabilize the network by fostering new ties to exclusive contacts.

The third hypothesis focuses on an actor's relative position in the network and the dynamics of ***Brokerage*** over time. While this exclusive position brings benefits to both the individual actor and the host organization, it also threatens network stability. Absolute exclusivity creates a tenuous link where the loss of a single actor may result in the loss of that actors' contacts, including the organizational subunit(s) linked to the host. Actors who enjoy ***brokerage*** strive to retain their exclusivity and relative value, while networks dependent on the organizational subunits attempt multiple bridges to other actors within the subunit to dilute exclusivity. If my hypothesis is true, then the data will show an upward trend in ***dyadic redundancy*** where brokerage relationships occur, increasing the number of ties from the host organization to the organizational subunit. Alternately, where ***dyadic redundancy*** does not increase, data will demonstrate the formation of alternate subunits capable of securing the same or similar resources.

$$H_3 \text{ — } BR \Rightarrow DR \uparrow$$

The Case of KS Gongchang

The case of KS Gongchang is unique in the firm's need to interact with very specific organizational subunits (Figure 20 through 22, Appendix D). Forced to interface with UL, product testing and approval becomes crucial to the KS Firm. Initially, the KS Firm utilizes a broker, believed to have a unique relationship with UL Engineers, to gain access to UL resources. However, this situation changes dramatically in T3, when redundant ties lead to the elimination of brokerage, directly connecting the KS President to the UL Lead Engineer. Table 33, Appendix E, reflects an increase in dyadic redundancy indicating erosion of the KS UL Specialist's exclusivity. The increase becomes apparent when moving from T2 to T3.

Similarly, Figures 23 through 25, Appendix D, illustrates the BS Partner, once linked to the KS President through a broker as illustrated in T1, now enjoying a direct connection in T3. Prior to the establishment of this direct connection, redundancy remained level from T1 to T2, then increased dramatically from 0 to .33 as shown in Table 33, Appendix E.

The Case of American Flight Academy

The case of American Flight Academy is interesting with respect to its use of brokerage and appears to have mitigated its effects. With the AFA Dean of International Studies at its center, two of its organizational subunits, CFS and XU are inherently designed for redundancy. CFS serves as a flight training center with YU providing the students. AFA is already in negotiations with XU to become an additional source of new students while AFA literature openly identifies CFS as "*one of its many designated partners*" although no other partner

currently exists. Consequently, alternate organizational subunits capable of securing the same or similar resources are inherent in AFAs business model as demonstrated in Table 34, Appendix E.

Additionally, the AFAs President/Dean, AFA Vice President, AFA Director of Logistics and AFA Public Relations Director remain unessential to the functioning of the network and can either be dispensed of once the network is established, or replaced by an aviation consultant, of which the AFA Dean of International Studies has already established a relationship.

This chapter examined two distinct guanxi networks, each containing $n=34$ actors (held constant), to confirm or disconfirm the hypotheses. Although the networks vary in a number of crucial aspects, the hypothesis are tested in both networks with equal application. The discussion highlights the dynamics of each network pointing out salient changes that effect both the firm and structure of the network. The next chapter will summarize these findings in a narrative pointing out the differences and similarities in each network. Integral to the discussion are the limitations of the study with comments on both implications and recommendations for future research.

CHAPTER VII CONCLUSION

Understanding how guanxi networks are initiated, built and used provides valuable insights on China's remarkable economic growth. Distinct from Western models of development, Chinese social networks, embedded in the stable belief systems of its cultural histories, inculcated from birth and employed throughout life, continue to provide the framework for social, economic, and political transactions. While the West relies on the rule of law and governmental institutions to support its market economy, China commands a passive system embedded in the psyche of its citizens. The implications that arise from the intersection of these two systems are fascinating.

Adherence to the rule of law presupposes acceptance of its legitimacy by those who are bound by it, whereas culturally embedded Confucian belief systems become "written on the hearts of the people." This seemingly innocuous distinction has profound implications. Codified laws remain rigidly fixed in constantly evolving environments, frequently outliving their usefulness or applicability. Incompatible or inconsistent laws tend to be ignored or "bent" to suit the situation leading to the criminalization of culturally acceptable behavior, with litigation as the predominant means to resolve disputes. Conversely, Chinese who subscribe to the tenets of Confucianism, either actively through their affiliations or passively through their upbringing, rely on the flexibility inherent in those philosophical teachings, limiting the number of "acceptable"

responses while the threat of ostracization provides incentive for compliance with established social norms. This creates a more stable environment, reducing transaction costs.

Adherence to the tenets of Confucianism also provides a stable foundation for the continued existence of the Chinese Communist Party and its ability to respond quickly to the economic environment. There exists a hierarchy where each person, content to remain in his assigned role, brings harmony to oneself, ones family, and society. Disruption creates disharmony and must be corrected. This is generally done through ones family, colleagues and social peer group. The CCP exists at the top of the pyramid, a position predicated on continued economic growth and continually improving living standards. As long as its subject are content, the CCPs legitimacy remains unchallenged and the Party is free to use its political power to respond quickly and decisively to changing macroeconomic conditions. This has allowed China to retain its communist political system while developing its market economy turning on its head the commonly held belief that democracy and capitalism are inextricable linked.

China's political legitimacy, coupled with its increasingly capitalist markets, brings to the fore some very important questions about China's meteoric rise in particular, and the path to economic development in general. While quantitative analysis plays an important role in understanding growth patterns, it fails to illuminate the more salient question of "how." This research examines the empirical evidence to provide insight on China's recent rise, redirecting the spotlight away from "hard" statistical analysis and refocusing on the "soft" cultural aspects of international transactions through ethnic networks to explore the fundamental question; "How do firms initiate, build and use guanxi networks?"

Basis of the Study

The preceding chapters form the basis of this research. Chapter One introduces the reader to guanxi and its basic concepts while grounding the study in rational choice theory. It offers a detailed discussion on the research design, justifying participant observation as an appropriate method of data collection. Chapter Two expounds on the concept of guanxi discussing the foundational roots from which it emerged. The chapter explicates Confucianism, Taoism and Buddhism as the philosophical underpinnings of Chinese society, then speaks to the correlation that exists between China's physical and psychological worlds to demonstrate the degree to which these belief systems are embedded in Chinese society. The discussion draws on interdisciplinary literature to highlight the uniqueness of guanxi then expounds on its historical rise and use throughout the centuries. The discussion points to the internalized values that drive guanxi relationships acknowledging both the positive and negative effects, concluding with comments on both the fate and impact of guanxi in contemporary Chinese society. Chapter Three illustrates the social, political, and economic conditions that existed in China beginning in the late Qing court, then moves chronologically through its pre-revolutionary, post-revolutionary, and Maoist eras to emphasize the violent political, social, and economic upheavals that ripped through the very fabric of Chinese society. The *laobaixing* struggled to survive the harsh conditions brought about first by its decaying dynastic system, then its civil war and finally by its postwar reconstruction. Mao Zedong emerged as China's paramount leader in 1949, only to thrust China into deeper decay, exacerbating the misery suffered by the common people in an attempt to break the bonds that anchor Chinese to their philosophical roots. The violent campaigns designed to eradicate guanxi only served to ensure its survival among Chinese who

came to regard guanxi relationships as the only reliable currency in Chinese society. The chapter concludes with a discussion of the intractable problems facing China, factoring in both the internal and external pressures facing China's leaders. Although guanxi remains a stabilizing force in Chinese society, it presents difficulties where economics and politics intersect. The tensions between economic development and environmental degradation often give way to guanxi relationships that involve political actors who trade economic favors for political power. The common Chinese people, and the international community are left to deal with the consequences of China's rapid economic development: environmental degradation, uneven development, an ever widening income gap between the rich and poor, and social and political instability. Together, these three chapters provide a comprehensive overview of the social, economic and political environment in which Chinese social networks emerged and continue to thrive in contemporary society.

Chapter Four presents two case study narratives of guanxi networks in action. Each case study is grounded in a comprehensive discussion of the industry in which the network operates laying the foundation for the rich details that follow. Both accounts illustrate how guanxi networks are initiated, built and used over time using "snapshots" at three time periods spaced at six month intervals to capture the dynamics of the network. Chapter Five introduces social network analysis as a methodological approach to understanding guanxi networks. The chapter provides an overview of the network concepts used to explore specific cultural phenomena presented in the case studies. The discussion ties cultural values and concepts to network concepts and their measures as the foundation for the analysis and interpretation that follows. Chapter Six offers an analysis and interpretation of the case study narratives, highlighting the

salient actors and their actions. Drawing on mathematical data, UCINET routines reveal patterns that support the hypotheses. This final chapter presents the conclusions, limitations and implications of the research findings.

Summary of Findings

This study raises several research questions, then identifies a number of substantive hypotheses drawing from an interdisciplinary literature to understand the nuances of guanxi in contemporary Chinese society. It employs relevant guanxi concepts, cultural histories, and rational choice theory as the conceptual framework with social network analysis as the methodological tool in a mixed method approach to examine how firms initiate, build and use guanxi networks. Both qualitative and quantitative data were collected through participant observations in a longitudinal study. The following findings resulted from the analysis of the data collected.

Improving Organizational Guanxi

Organizational guanxi quality improved over time as a result of improved personal guanxi quality. In the case of KS Gongchang, three separate events lead to significant changes in the overall quality of organizational guanxi: marriage, friendship and the elimination of brokerage. Similarly, three separate events lead to significant changes in the overall guanxi quality in the AFA network: friend-of-a-friend introductions, network expansion through brokerage, and the elimination of brokerage to stabilize the network. The tactics used to improve guanxi quality are typical. However, the benefits enjoyed by the organization are unique. As individual actors improved their personal guanxi, organizational guanxi also improved demonstrating that Chinese use their guanxi for the benefit of their respective organizations.

The Dynamics of Brokerage

Brokerage relationships eroded over time in both networks suggesting that a broker's position is transitive. Erosion of brokerage occurs when additional ties dilute exclusivity while preserving the organizational subunits that connect to the host. An increase in both dyadic redundancy and density coupled with a fixed number of actors, confirms these findings. In some cases, brokers are simply eliminated leaving behind a more densely connected network. In other cases, brokers reasserted their exclusivity by finding new subunits to connect to the host, growing the network. Conversely, the departure of a broker can impair the network if the link between the host and subunit is broken although this did not occur in either of the networks under investigation.

Network Expansion

The data demonstrates significant network expansion through the use of brokers, single dyadic ties that link contacts or firms to the host, connecting complementary organizations that enhance the attributes and/or potential of each firm. The value of a potential broker is directly related to the resources that the organizational subunit controls. Similarly, the amount of effort expended on nurturing brokerage relationships is directly related to the value of the broker. Brokerage relationships are ephemeral, ending in a variety of ways; brokers are either displaced by more valuable brokers, replaced by new firms or eliminated through redundancy. The host firm generally refrains from actively recruiting a broker from an organizational subunit into its own firm so as to preserve the connection between the two firms. However, an actor that departs from an organizational subunit of his own accord may be recruited by the host firm to reassert his

relationship with his former organization, then act as a broker on behalf of the new firm if his departure from the subunit was amicable and his guanxi with the subunit is “good.”

New Insights

New insights into guanxi networks emerged from this study reminding us of the inherent complexity of guanxi relationships. While both networks contain the same number of actors, they vary in significant ways. Contrasting and comparing these two distinct networks highlights some interesting similarities and differences.

Similarities and Differences

The two networks under investigation are equal in size, but vary dramatically in many other ways. The first network is based in a Town and Village Enterprise (TVE), owned by the community and assumes a partner as it matures. The second network is based in a privately owned company and is founded on a formal partnership agreement. The TVE is a low-tech manufacturing firm based in South China, while the private firm provides high-tech training to China’s aspiring youths and is based in the nation’s capital, Beijing. Despite these vast differences, interesting similarities between the two networks emerge.

In both cases, local government officials directly invest in their respective “hometown” firms while higher level provincial officials expedited necessary licenses and government approvals. In both cases, the central actors manufactured guanxi with foreign actors drawing them into the network through “friendships” based on personal contact. Both networks exploited their foreign “partners” by expropriating their histories then assuming them as their own; the first Chinese firm boasts “100 years of service” although it was founded in 1995, while the second Chinese firm advertises itself as being “established in 1986” although it was founded in 2012. In

carefully worded, albeit deliberately misleading advertising, both Chinese firms expropriate their partner's accomplishments as their own. In the case of American Flight Academy, the Chinese firm listed its partner's student training record as its own. All of its graduates were credited to the Chinese firm although the Chinese firm had not yet enrolled its first student. The Chinese firm also claimed ownership of the many prominent achievements made by other unrelated firms that operate within the vicinity of the same public airport that hosts the Chinese firm's "campus." Transfer of these accomplishments was achieved first by associating the airport with the Chinese firm's "campus," then presenting the "campus" as though it were exclusive to the Chinese firm. In both cases, the tenured foreign partner's reputation transferred to the newer Chinese partner, projecting a sense of competence and experience for the benefit of potential clients.

Transcend Formal Institutions

More interesting still, is the way that Chinese social networks transcend formal economic and political structures. Once a connection is made between actors linking an organizational subunit to the host, the relationship between the parties is guided by Confucian values that both regulate and restrain the actions of each party. The foreign partner is drawn into the relationship by being constantly reminded of his "friendship" with the Chinese firm. Banquets, excursions, and social interaction are generally included in all business arrangements creating a sense of obligation to repay, or to offer some concession equal to, or exceeding the value of the "gift." The obligation to repay in kind removes the "arms length" barrier typical of Western business relationships. Once the "arms length" barrier has been breached, the Chinese host creates a sense of indebtedness that opens the way for manipulation.

Reliance on informal institutions precludes contractual obligations, although it is not uncommon for commercial contracts to exist. Frequently, agreements with a foreign firm contain a clause that provides legal avenues to resolve disputes, but only after all attempts at “friendly compromise” have been exhausted.¹³⁶ In reality, disputes seldom reach the courts. In the rare instances that they do, “Chinese law prevails.”

Neither do the parties recognize legal constraints intended to regulate commerce if there is a way to bypass the “impediment,” as was shown in both case studies. In the case of KS Gongchang, having an agent able to circumvent legal testing procedures was money well spent. Similarly, the “agent” was obligated to assist a “friend” in need — in this case, by “fixing” products so that they meet testing standards.¹³⁷ In the case of American Flight Academy, basing a flight school in the same location as a previously established firm to make it appear legitimate, simply expedited the long and expensive process of having to locate and lease airport space for itself. While each firm may have acted in accordance with their own objectives, the results remain the same: legal constraints were removed to expedite commerce.

Cultural Homogeneity and Diversity

Another fascinating point is the way in which Chinese actors assume perfect cultural homogeneity regarding social networks. In both case studies, the central actor employed traditional strategies to build and promote guanxi relationships with actors in foreign organizational subunits. Foreign “partners” are often treated to banquets, sightseeing tours, and

¹³⁶The term “friendly compromise” frequently appears in Chinese contracts along with a clause that provides “financial help should one of the two parties need assistance.”

¹³⁷It is important to note here that all UL product testing was performed in accordance with stated standards. There are no known deviations from standard product testing requirements.

gifts in an attempt to build guanxi relationships. In reality, the foreign partner is generally unaware of the cultural implications that guanxi relationships entail and the relationship is driven by feelings of indebtedness that bind the parties creating a sense of obligation. The response of the foreign partner is frequently misread by the Chinese who believe that guanxi drives the relationship.

Some foreigners are able to avoid the entanglements of guanxi by failing to reciprocate. In these cases, the Chinese host would be unlikely to acknowledge any breach in guanxi etiquette for fear of exposing his own inadequacies. Acknowledging the inability to create and foster guanxi to ones colleagues could undermine the Chinese actor's position and expose them as either incompetent in their ability to utilize or manufacture guanxi when necessary.

Limitations of the Study

Issues of accuracy, validity and reliability were addressed in the early stages of the research design process. In summary, accuracy becomes an issue when collecting data through interviews or surveys. These two modes are the most common method of data collection. However, concerns about the accuracy of self-reported interaction lead to studies that compared respondents' reports with researchers' observations. Findings showed that nearly half the information that people reported about their own interactions is incorrect (Bernard and Killworth 1977; Bernard, Killworth and Sailer 1982; Bernard *et al.* 1985). Validity emerges as a second concern when determining whether intended concept measurements reflect the concepts that were intended to be measured. This weakness is inherent in statistical analysis. However, it is diminished when network data is supplemented by the rich contextual detail of an accompanying case study narrative (George and Bennett 2005, 19). Finally, sociometric data creates some

difficulty with traditional concepts of reliability. Traditional measures seek a test-retest framework. Since social network data is inherently dynamic, stasis cannot be assumed but for the shortest period of time (Wasserman 1994, 58). Consequently, traditional concepts of reliability do not apply to sociometric data.

Generalizability

While accuracy, validity and reliability do not compromise the integrity of data, several limitations of the current research should be acknowledged. In addressing guanxi networks, demographics play an important role in determining behavior. As in any country, regions differ one from another, cities differ from rural areas, and generational changes drive and respond to cultural change. Additionally, guanxi networks are contextually embedded. While every effort was made to examine two distinct networks, there is insufficient evidence to conclude that all guanxi networks will behave in the same way. Consequently, the findings are not generalizable across populations or industries.

Limitations of Participant-Observation

This research employs participant observation as a primary source of data with document analysis serving as a secondary and confirmatory source. This is an appropriate albeit less-traveled path when investigating social networks due to both the time and expense involved in data collection. While this method of data collection provides exceptional insights into interpersonal behaviors and motives, it also creates bias due to the participant-observer's opportunity to manipulate events (Yin 2009, 102). However, the ability to influence events is a two-edged sword providing opportunities to "produce a greater variety of situations for the purpose of collecting data" (Yin 2009, 112). Similarly, one cannot see everything that takes

place among network actors or the connections they have outside the network. These limitations must be considered when seeking causal mechanisms.

A second issue comes to the fore when collecting data through participant observation. It is often difficult to discern which public events might produce the most salient data. This becomes increasingly difficult when engaged in longitudinal studies or when multiple events are scheduled simultaneously. Discerning which public events to attend and which ones to pass, borders between art and science and improves with experience and knowledge of the industry in which the network operates. When events are both local and highly publicized, public announcements reveal both the venue and the topic or objectives of the event. In the case of televised interviews, future events are often highlighted to increase attendance. This was the case with American Flight Academy. Also, brochures, handouts, and other promotional materials are frequently made available to the public. Televised interviews provide a plethora of information, especially when viewers are encouraged to “call in” with questions. However, it can be difficult to sift through the “noise” to collect rich data.

Unweighted Variables

This study is also limited by an inability to weigh the variables that determine guanxi quality. Reciprocity, intensity and durability are assigned accurate and reliable ordinal values. However, there is no distinction between the value of each variable. That is to say, we do not know whether reciprocity is more important than intensity, or whether durability is more important than reciprocity. In fact, it is entirely possible that the value of these three variables is dependent upon the circumstance of the actors, the environment in which they operate, and the context in which they are situated.

Contribution to the Body of Knowledge

While this study acknowledges its limitations, it also makes significant contributions to our understanding of guanxi networks. The accompanying literature review highlights several important points that have been traditionally overlooked in guanxi studies. There is a vast gulf between Eastern and Western perspectives that can result in dramatically different understandings of the same event. Researchers must recognize the cultural and historical context from which guanxi operates to gain an accurate understanding of its use. They must also recognize the relationship between China's built environment and its philosophical underpinnings to grasp the depths of Chinese traditions. This study links China's physical world with its philosophical beliefs to demonstrate the passive restraints that regulate and control hierarchical relationships, the basis of guanxi relationships.

This study opens a relatively unstudied area of network analysis. Few studies trace the initiation, development, and use of guanxi (Chen and Chen 2004, 321). Consequently, very little is known about the dynamics of guanxi, how it functions in everyday situations, and how it is used by those who possess it. "It is notoriously difficult to get an insight into such guanxi relationships or transactions as they are shrouded in secrecy and are not shared with an outsider" (Fan 2002a, 375). These two case studies demonstrate how firms utilize individual guanxi to grow and strengthen their networks, shedding actors thought to be "expendable" while retaining the contacts and relationships of those they linked to the network.

The majority of studies on guanxi networks utilize questionnaires or interviews as the primary method of data collection. This research moves beyond self-reported data to capture the interaction that actually takes place among actors. Further, longitudinal studies of guanxi

networks are rare. Yet longitudinal studies are required to understand questions pertaining to network dynamics. Few researchers perform in country network analysis due to opportunity, cost and time constraints, focusing instead on Chinese diaspora for data. Although data collected in diaspora communities has the potential to reveal interesting phenomena, it misses the opportunity to gather rich data taken from the environment that supports and nurtures guanxi relationships.

This study is also unique in its use of dynamic network visualization. Dynamic network visualization captures changes in network structure over time using static flip books that recreates the changes in “real time.” It is also unique in its use of UCInet, a computer software package designed for social network analysis. UCInet eases the task of teasing out correlations between variables and highlights the need for supplemental qualitative narratives to accompany mathematical analysis. Meaningful descriptions of changes within particular networks provide the building blocks for general understandings of processes and outcomes of changes of social networks over time (Feld *et al.* 2007).

Implications and Recommendations

Network studies of complex societies are crucial to economic and political engagement. Guanxi forms the basis of Chinese social networks and brings with it a unique framework that both define and regulate social interaction. As concluding remarks, I propose the following dimensions for future research in this area.

Chapter Four discusses specific strategies employed by China’s newly emerging industries that have allowed them to gain near equal footing with foreign competitors who possess decades of experience, advanced technology, and refined management systems. The case studies point to cooperative partnerships that allow Chinese firms to assume the credentials and

reputations of their more tenured partners. The present research does not sufficiently examine the implications that stem from these partnerships. An important contribution in future research therefore is to examine whether these types of partnerships enhance or impair the firm and industries they represent.

A related question emerges from the former suggestion concerning foreign enterprise in China. As capitalism supplants China's planned economy, Chinese entrepreneurs are more free to engage in commercial activities and foreign corporations face fewer obstacles when competing in China's markets. Access to China's 1.4 billion consumers has attracted more than a few multinational corporations as well as smaller "mom and pop" operations that look to China as a viable source for manufacturing. Although some foreign firms engage Chinese consultants to assist in navigating the complexities of doing business in China, few companies are equipped to manage *guanxi* relationships on their own. Still fewer are aware of their consultants' *guanxi* relationships, opening the way to potential conflicts of interest. This raises a series of salient questions for both Chinese and foreign firms alike. What impact will the prevalence of *guanxi* networks have on foreign enterprises that do business or invest in China? Further, is it necessary for the foreign organization or its actors to subscribe to the tenets of *guanxi* for the networks to be effective? What are the implications for those who fail to understand the mechanics of *guanxi*? Finally, how do non-Chinese benefit or protect themselves from *guanxi* practices? These and other similar questions point to a second important avenue for future research concerning the impact of *guanxi* in a globalizing world.

China is deepening its links with Africa as part of its broader strategy of “Third World” engagement in a quest for natural resources.¹³⁸ Energy resources have become a matter of national security for China and remain crucial for economic growth; the Chinese Communist Party’s legitimacy is predicated on its ability to maintain its current rate of GDP while improving the living standards of its citizenry. In addition to buying approximately 33 percent of its oil from Angola, China is heavily invested in Angola’s post-civil war infrastructure reconstruction efforts. Additionally, timber is cut from forests in Mozambique, Liberia, Gabon, Cameroon, Democratic Republic of Congo, and Equatorial Guinea, while Zimbabwe supplies China with gold, silver and platinum. There are also a growing number of entrepreneurs experimenting with Chinese production facilities based in Africa that employ local workers who subscribe to their own unique economic networks. With China’s increasing engagement with Africa, a third question arises; is it possible for states to integrate culturally based economic networks to promote economic development, exploiting the strengths inherent in their own cultural histories? Future studies can focus on the effectiveness of cross-cultural adaptation of foreign economic networks in developing nations focusing on questions such as, how to do cross-cultural networks operate in the same environment? What effects do they have on society? Will one type of network supplant the other? Will they coexist as separate systems or will they integrate to form a new type of network? And, to what degree do they promote economic development?

Corruption?

¹³⁸See Walther, Olivier. 2012. “*Regional Trade and Economic Networks in West Africa*.” for a discussion on economic networks in Africa.

Having already proven that democracy does not necessarily follow capitalism, China is leading the way for other nondemocratic nations to pursue economic development through market liberalization. Additionally, China has led the way in achieving economic expansion despite having underdeveloped capitalist institutions that are believed to be essential to market economies. Lively debates in academic circles focus on the sequence in which democratization, market freedom, and rule of law should take place.¹³⁹ However, in light of China's recent success, it may be more prudent to ask whether China has developed an alternate model of economic growth for emerging economies suffering from limited resources or those that are unable to build the institutions required to support Western systems. Further research should focus on whether Western political and economic systems disrupt stable, self-regulating cultural institutions, supplanting an otherwise functional system. How might ethnic networks be utilized to promote economic development in the LDCs? What essential elements within ethnic networks are necessary for success?

My final suggestion for future research revolves around a much broader topic, terrorist networks. Network studies in general, and this study specifically, demonstrates the salience of an actor's position in the network. This research shows how the removal of a single actor could disrupt the entire network, especially when an actor assumes the position of broker. Brokers link organizational subunits to both the host and each other through a single dyadic tie, the weakest link in any network. If this specific phenomenon is generalizable to other types of networks, it raises a series of interesting questions: Do brokers in terrorist networks try to maintain their exclusivity to retain their value? If so, does brokerage have the same destabilizing effects on

¹³⁹For a full discussion on economic liberalization see Heller 2009, Buchanan 2000, Stiglitz 2000, and Weber 1978.

terrorist networks? What tactics could governments utilize to exploit the tenuous links that connect one subunit to another? How might terrorist cells be isolated and neutralized?

This chapter presents conclusions, limitations, and directions for future research pertaining to the findings discussed in previous chapters. It also outlines multiple new insights on guanxi networks. The case study narratives and accompanying data provide a provocative glimpse into the ways that guanxi networks operate. I trust the addition of these new case studies will draw more scholarly attention to guanxi networks and their impact on economic development.

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APPENDIX A: ICAO CONTRACTING STATES

International Civil Aviation Organization
Contracting States

Afghanistan	Chile	Grenada
Albania	China*	Guatemala*
Algeria	Colombia*	Guinea
Andorra	Comoros	Guinea-Bissau
Angola	Congo	Guyana
Antigua and Barbuda	Cook Islands	Haiti
Argentina*	Costa Rica	Honduras
Armenia	Côte d'Ivoire	Hungary
Australia*	Croatia	Iceland
Austria	Cuba*	India*
Azerbaijan	Cyprus	Indonesia
Bahamas	Czech Republic	Iran (Islamic Republic of)
Bahrain	Democratic People's	Iraq
Bangladesh	Republic of Korea	Ireland
Barbados	Democratic Republic of	Israel
Belarus	the Congo	Italy*
Belgium*	Denmark*	Jamaica
Belize	Djibouti	Japan*
Benin	Dominican Republic	Jordan
Bhutan	Ecuador	Kazakhstan
Bolivia (Plurinational State	Egypt*	Kenya
of)	El Salvador	Kiribati
Bosnia and Herzegovina	Equatorial Guinea	Kuwait
Botswana	Eritrea	Kyrgyzstan
Brazil*	Estonia	Lao People's Democratic
Brunei Darussalam	Ethiopia	Republic
Bulgaria	Fiji	Latvia
Burkina Faso*	Finland	Lebanon
Burundi	France*	Lesotho
Cambodia	Gabon	Liberia
Cameroon*	Gambia	Libya
Canada*	Georgia	Lithuania
Cape Verde	Germany*	Luxembourg
Central African Republic	Ghana	Madagascar
Chad	Greece	Malawi

Malaysia*
 Maldives
 Mali
 Malta
 Marshall Islands
 Mauritania
 Mauritius
 Mexico*
 Micronesia (Federated
 States of)
 Monaco
 Mongolia
 Montenegro
 Morocco*
 Mozambique
 Myanmar
 Namibia
 Nauru
 Nepal
 Netherlands
 New Zealand
 Nicaragua
 Niger
 Nigeria*
 Norway
 Oman
 Pakistan
 Palau
 Panama
 Papua New Guinea
 Paraguay*
 Peru*
 Philippines

Poland
 Portugal
 Qatar
 Republic of Korea*
 Republic of Moldova
 Romania
 Russian Federation*
 Rwanda
 Saint Kitts and Nevis
 Saint Lucia
 Saint Vincent and the
 Grenadines
 Samoa
 San Marino
 Sao Tome and Principe
 Saudi Arabia*
 Senegal
 Serbia
 Seychelles
 Sierra Leone
 Singapore*
 Slovakia
 Slovenia*
 Solomon Islands
 Somalia
 South Africa*
 South Sudan
 Spain*
 Sri Lanka
 Sudan
 Suriname
 Swaziland*
 Sweden

Switzerland
 Syrian Arab Republic
 Tajikistan
 Thailand
 The former Yugoslav
 Republic of Macedonia
 Timor-Leste
 Togo
 Tonga
 Trinidad and Tobago
 Tunisia
 Turkey
 Turkmenistan
 Uganda*
 Ukraine
 United Arab Emirates*
 United Kingdom*
 United Republic of
 Tanzania
 United States*
 Uruguay
 Uzbekistan
 Vanuatu
 Venezuela (Bolivarian
 Republic of)
 Viet Nam
 Yemen
 Zambia
 Zimbabwe

***Council Member State**
Total Contracting States:
191

APPENDIX B: NETWORK MATRICES

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    9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4
K K K K K K K B K K B B B K K K K K K U U U U K K K C C C L
- - - - - - - - - - - - - - - - - - - - - - - - - - - 
1   KS Pres          0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2   KS V Pres        9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3   KS Sec           6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
4   KS Tres          9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
5   KS Dir Sales     7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6   KS Gen Mgr       0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7   KS Exp Mgr       4 0 0 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
8   Bank Agent       5 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
9   KS Rep           5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
10  KS Driver        4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
11  BS Partner       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
12  BS HK Partner    6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
13  BS HK Partner Rep 0 0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
14  KS Floor Mgr     0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15  KS Line Mgr      0 0 0 0 0 0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0
16  KS Line Workers  0 0 0 0 0 0 0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0 0
17  KS Prod Design Eng 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
18  KS Prod Draftsman 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0 0 0 0
19  KS Elec Design Eng 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0 7 7 0 0 0 0 0 0 0 0 0 0
20  KS UL Specialist  5 0 0 0 0 0 0 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
21  UL/WM Ind Agent  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0 0 0
22  UL Lead Eng      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0
23  UL Asst Eng      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 7 0 0 0 0 0 0 0 0
24  UL Test Tech     0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0
25  KS CN Sales Cd   0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
26  KS AM/EU Sales Cd 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27  KS AM/EU Sales Asst 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 5 0 0 0 0 0 0 0
28  KS Sales Sec     0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
29  Client TWN       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 0 0 0 0 0 0 0
30  Client GRM       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 0 0 0 0 0 0 0
31  Client AMR LC    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 0 0 0 0 0 0 0
32  Client AMR CM    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 0 0 0 0 0 0 0
33  Client PAK WBI   0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 0 0 0 0 0 0 0
34  Local Investor   7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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Table 12 AKH T2 American Flight Academy

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      A A A A A A A S A C C C C C C C C C C W S A A S C P T X X Y Y Y Y Y
1  AFA Dean Int'l Stdys 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0
2  AFA Pres/Dean       1 0 1 1 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0
3  AFA VP              0 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
4  AFA Dir. Log        0 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
5  AFA Pub. Rel. Dir.  0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6  AFA Eng Teacher 1   0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7  AFA Eng Teacher 2   0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
8  S. Medical Advisor  0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
9  A. Medical Advisor  0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
10 CFS Dir. Of Flight  0 1 0 0 0 0 0 0 1 1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0
11 CFS CFI 1           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
12 CFS CFI 2           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
13 CFS CFI 3           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
14 CFS CFI 4           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15 CFS CFI 5           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
16 CFS CFI 6           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
17 CFS CFI 7           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
18 CFS CFI 8           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
19 CFS CFI 9           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
20 WH Comptroller      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
21 Stock Sales         0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
22 Aviation Consultant 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
23 Airline Flight Director 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
24 Student Recruiter   1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
25 Cent. M. of Ed      1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
26 Prov. M. of Ed      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 Test Student        1 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
28 XU Pres. & Chair     1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
29 XU Eng. Teacher      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
30 YU Investor          0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
31 YU Pres              0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
32 YU VP & Party Sec    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
33 YU Dean T            0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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Table 13 AKH T3 American Flight Academy

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Files\Doctoral Dissertation\UCINET Files\AKH T3)

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      A A A A A A A S A C C C C C C C C C C W S A A S C P T X X Y Y Y Y Y
1  AFA Dean Int'l Stcys 0 1 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 1 1 0 0 1 0 0 0
2  AFA Pres/Dean       1 0 1 1 1 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3  AFA VP              0 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
4  AFA Dir. Log        0 1 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
5  AFA Pub. Rel. Dir.  0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6  AFA Eng Teacher 1   0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7  AFA Eng Teacher 2   0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
8  S. Medical Advisor  0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
9  A. Medical Advisor  0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
10 CFS Dir. Of Flight  1 1 0 0 0 0 0 0 1 1 0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0
11 CFS CFI 1           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
12 CFS CFI 2           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
13 CFS CFI 3           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
14 CFS CFI 4           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15 CFS CFI 5           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
16 CFS CFI 6           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
17 CFS CFI 7           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
18 CFS CFI 8           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
19 CFS CFI 9           0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
20 WH Comptroller      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
21 Stock Sales         0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
22 Aviation Consultant 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
23 Airline Flight Director 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
24 Student Recruiter   1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
25 Cent. M. of Ed      1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
26 Prov. M. of Ed      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 Test Student        1 0 0 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
28 XU Pres. & Chair     1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
29 XU Eng. Teacher      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
30 YU Investor          0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
31 YU Pres              1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
32 YU VP & Party Sec    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
33 YU Dean T            0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
34 YU Dean Z            0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
```

Matrix has 34 rows, 34 columns, and 1 levels.

```
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Running time: 00:00:01
Output generated: 13 Jun 13 10:56:41
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```

[illegible]

```

DISPLAY
-----
Width of field:          0
# of decimals:          0
Rows to display:        all
Columns to display:      all
Row partition:
Column partition:
Input dataset:           AKH Qual T2 (C:\Users\Patricia\Documents\SD Card
Files\Doctoral Dissertation\UCINET Files\AKH Qual T2)

    1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4
    A A A A A A A S A C C C C C C C C C W S A A S C P T X X Y Y Y Y Y Y Y Y
1   AFA Dean Int'l Studys 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
2       AFA Pres/Dean    7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3           AFA VP       0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
4       AFA Dir. Log     0 6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
5   AFA Pub. Rel. Dir.   0 6 6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
6       AFA Eng Teacher 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7       AFA Eng Teacher 2 0 0 0 0 0 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
8   S. Medical Advisor   0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
9   A. Medical Advisor   0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
10  CFS Dir. Of Flight    0 3 0 0 0 0 0 0 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
11  CFS CFI 1            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
12  CFS CFI 2            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
13  CFS CFI 3            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
14  CFS CFI 4            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15  CFS CFI 5            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
16  CFS CFI 6            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
17  CFS CFI 7            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
18  CFS CFI 8            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
19  CFS CFI 9            0 0 0 0 0 0 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
20  WH Comptroller       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
21  Stock Sales         0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
22  Aviation Consultant  0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
23 Airline Flight Director 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
24 Student Recruiter     6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
25 Cent. M. of Ed        7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
26 Prov. M. of Ed        0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 Test Student         9 0 0 0 0 0 0 0 0 0 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
28 XU Pres. & Chair       5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 0 7 0 0 0 0 0 0 0 0 0 0
29 XU Eng. Teacher       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3 0 0 0 0 0 0 0 0
30 YU Investor          0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
31 YU Pres              0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
32 YU VP & Party Sec      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
33 YU Dean T            0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
34 YU Dean Z            0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Matrix has 34 rows, 34 columns, and 1 levels.

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Running time: 00:00:01
Output generated: 13 Jun 13 11:22:42
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[illegible]

Table 17 AKS Qual Valuation T1 KS Gongchang

1 AKS Network Workbook (version 1)										AKS Qual Valuation T1										Printed on 6/17/2013 4:20 PM										
Reciprocity 0-2 Intensity 1-3 Durability 1-4																														
AKS T1 10098																														
KS Pres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS V Pres 2,3,4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Sec 2,2,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Ttes 2,3,4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Dir Sales 2,2,3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Gen Mgt 0,2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Exp Mgt 2,1,1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank Agent 2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Rep 2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Driver 2,1,1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BS Partner	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BS HK Partner 2,2,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HK Partner Rep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Floor Mgt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Line Mgt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Line Workers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prod Design Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prod Draftsman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Elec Design Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS UL Specialist 2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL/MM Ind Agent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Lead Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Asst Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Test Tech	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS CN Sales Cd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MM/EO Sales Cd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MM/EO Sales Asst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Sales Sec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client TNN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client GRM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR LC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR CM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client PAK WBI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Investor 2,2,3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reciprocity 2=Repeated (>3/Month) 1=Limited (<2/Month) 0=Absent																														
Intensity 3=Emotional/Instrumental 1=Instrumental																														
Durability 4=Kinship 3=Social Identity 2=Voluntarily Constructed 1=Anticipatory																														

Table 18 AKS Qual Valuation T2 KS Gongchang

1 AKS Network Workbook (version 1)										AKS Qual Valuation T2										Printed on 6/17/2013 4:21 PM													
AKS T2 02099																																	
KS Pres	0	0	0	0	0	0	0	0	0	KS Pres	0	0	0	0	0	0	0	0	0	KS Pres	0	0	0	0	0	0	0	0	0	0	0		
KS V Pres 2,3,4	0	0	0	0	0	0	0	0	0	KS V Pres	2,3,4	0	0	0	0	0	0	0	0	KS V Pres	2,3,4	0	0	0	0	0	0	0	0	0	0	0	
KS Sec 2,2,2	0	0	0	0	0	0	0	0	0	KS Sec	2,2,2	0	0	0	0	0	0	0	0	KS Sec	2,2,2	0	0	0	0	0	0	0	0	0	0	0	
KS Tres 2,3,4	0	0	0	0	0	0	0	0	0	KS Tres	2,3,4	0	0	0	0	0	0	0	0	KS Tres	2,3,4	0	0	0	0	0	0	0	0	0	0	0	
KS Dir Sales 2,2,3	0	0	0	0	0	0	0	0	0	KS Dir Sales	2,2,3	0	0	0	0	0	0	0	0	KS Dir Sales	2,2,3	0	0	0	0	0	0	0	0	0	0	0	
KS Gen Mgr 0,2,1,2	0	0	0	0	0	0	0	0	0	KS Gen Mgr	0,2,1,2	0	0	0	0	0	0	0	0	KS Gen Mgr	0,2,1,2	0	0	0	0	0	0	0	0	0	0	0	
KS Exp Mgr 2,1,1	0	0	0	0	0	0	0	0	0	KS Exp Mgr	2,1,1	0	0	0	0	0	0	0	0	KS Exp Mgr	2,1,1	0	0	0	0	0	0	0	0	0	0	0	
KS Exp Mgr 2,1,1	0	0	0	0	0	0	0	0	0	KS Exp Mgr	2,1,2	0	0	0	0	0	0	0	0	KS Exp Mgr	2,1,2	0	0	0	0	0	0	0	0	0	0	0	
Bank Agent 2,2,3	1,2,3	0	0	0	0	0	0	0	0	Bank Agent	2,2,3	1,2,3	0	0	0	0	0	0	0	Bank Agent	2,2,3	1,2,3	0	0	0	0	0	0	0	0	0	0	
KS Rep 2,1,2	0	0	0	0	0	0	0	0	0	KS Rep	2,1,2	0	0	0	0	0	0	0	0	KS Rep	2,1,2	0	0	0	0	0	0	0	0	0	0	0	
KS Driver 2,1,1	0	0	0	0	0	0	0	0	0	KS Driver	2,1,1	0	0	0	0	0	0	0	0	KS Driver	2,1,1	0	0	0	0	0	0	0	0	0	0	0	
BS Partner	0	0	0	0	0	0	0	0	0	BS Partner	0	0	0	0	0	0	0	0	0	BS Partner	0	0	0	0	0	0	0	0	0	0	0	0	
BS HK Partner 2,2,2	0	0	0	0	0	0	0	0	0	BS HK Partner	2,2,2	0	0	0	0	0	0	0	0	BS HK Partner	2,2,2	0	0	0	0	0	0	0	0	0	0	0	0
KS Floor Mgr	0	0	0	0	0	0	0	0	0	KS Floor Mgr	0	0	0	0	0	0	0	0	0	KS Floor Mgr	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Line Mgr	0	0	0	0	0	0	0	0	0	KS Line Mgr	0	0	0	0	0	0	0	0	0	KS Line Mgr	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Line Workers	0	0	0	0	0	0	0	0	0	KS Line Workers	0	0	0	0	0	0	0	0	0	KS Line Workers	0	0	0	0	0	0	0	0	0	0	0	0	0
Prod Design Eng	0	0	0	0	0	0	0	0	0	Prod Design Eng	0	0	0	0	0	0	0	0	0	Prod Design Eng	0	0	0	0	0	0	0	0	0	0	0	0	0
Prod Draftsman	0	0	0	0	0	0	0	0	0	Prod Draftsman	0	0	0	0	0	0	0	0	0	Prod Draftsman	0	0	0	0	0	0	0	0	0	0	0	0	0
Elec Design Eng	0	0	0	0	0	0	0	0	0	Elec Design Eng	0	0	0	0	0	0	0	0	0	Elec Design Eng	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Specialist 2,1,2	0	0	0	0	0	0	0	0	0	UL Specialist	2,1,2	0	0	0	0	0	0	0	0	UL Specialist	2,1,2	0	0	0	0	0	0	0	0	0	0	0	0
UL/MM Ind Agent	0	0	0	0	0	0	0	0	0	UL/MM Ind Agent	0	0	0	0	0	0	0	0	0	UL/MM Ind Agent	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Lead Eng	0	0	0	0	0	0	0	0	0	UL Lead Eng	0	0	0	0	0	0	0	0	0	UL Lead Eng	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Asst Eng	0	0	0	0	0	0	0	0	0	UL Asst Eng	0	0	0	0	0	0	0	0	0	UL Asst Eng	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Test Tech	0	0	0	0	0	0	0	0	0	UL Test Tech	0	0	0	0	0	0	0	0	0	UL Test Tech	0	0	0	0	0	0	0	0	0	0	0	0	0
KS CN Sales Cd	0	0	0	0	0	0	0	0	0	KS CN Sales Cd	0	0	0	0	0	0	0	0	0	KS CN Sales Cd	0	0	0	0	0	0	0	0	0	0	0	0	0
AM/EU Sales Cd	0	0	0	0	0	0	0	0	0	AM/EU Sales Cd	0	0	0	0	0	0	0	0	0	AM/EU Sales Cd	0	0	0	0	0	0	0	0	0	0	0	0	0
W/EU Sales Asst	0	0	0	0	0	0	0	0	0	W/EU Sales Asst	0	0	0	0	0	0	0	0	0	W/EU Sales Asst	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Sales Sec	0	0	0	0	0	0	0	0	0	KS Sales Sec	0	0	0	0	0	0	0	0	0	KS Sales Sec	0	0	0	0	0	0	0	0	0	0	0	0	0
Client TWN	0	0	0	0	0	0	0	0	0	Client TWN	0	0	0	0	0	0	0	0	0	Client TWN	0	0	0	0	0	0	0	0	0	0	0	0	0
Client GPM	0	0	0	0	0	0	0	0	0	Client GPM	0	0	0	0	0	0	0	0	0	Client GPM	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR IC	0	0	0	0	0	0	0	0	0	Client AMR IC	0	0	0	0	0	0	0	0	0	Client AMR IC	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR CM	0	0	0	0	0	0	0	0	0	Client AMR CM	0	0	0	0	0	0	0	0	0	Client AMR CM	0	0	0	0	0	0	0	0	0	0	0	0	0
Client PAK WBI	0	0	0	0	0	0	0	0	0	Client PAK WBI	0	0	0	0	0	0	0	0	0	Client PAK WBI	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Investor 2,2,3	0	0	0	0	0	0	0	0	0	Local Investor	2,2,3	0	0	0	0	0	0	0	0	Local Investor	2,2,3	0	0	0	0	0	0	0	0	0	0	0	0

Reciprocity 2=Repeated (>3/Month) 1=Limited (>2/Month) 0=Absent
Intensity 3=Emotional 2=Emotional/Instrumental 1=Instrumental
Durability 4=Kinship 3=Social Identity 2=Voluntarily Constructed 1=Anticipatory

Reciprocity 2=Repeated (>3/Month) 1=Limited (<2/Month) 0=Absent
Intensity 3=Emotional/Instrumental 1=Instrumental
Durability 4=Kinship 3=Social Identity 2=Voluntarily constructed 1=Anticipatory

Table 19 AKS Qual Valuation T3 KS Gongchang

1 AKS Network Workbook

AKS Qual Valuation T3

Printed on 6/21/2013
1:51 PM

Reciprocity 0-2
Intensity 1-3
Durability 1-4

AKS T3 09099	KS Pres	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS V Pres 2,3,4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Sec 2,2,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Tres 2,3,4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Dir Sales 2,2,3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Gen Mgr 0,2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Exp Mgr 2,1,1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank Agent 2,2,4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Rep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Driver 2,1,1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BS Partner 2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BS HK Partner Rep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Floor Mgr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Line Mgr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Line Workers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S Prod Design Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S Prod Draftsman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S Elec Design Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS UL Specialist 2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL/MM Ind Agent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Lead Eng 2,1,2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Asst Eng	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UL Test Tech	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS CN Sales Cd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS AM/EU Sales Cd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM/EU Sales Asst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KS Sales Sec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client TWM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR CM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR LC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client AMR CM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Client PAK MBI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Investor 2,2,3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Reciprocity 2=Repeated (>3/Month) 1=Limited (>2/Month) 0=Absent
Intensity 3=Emotional 2=Emotional/Instrumental 1=Instrumental
Durability 4=Kinship 3=Social Identity 2=Voluntarily Constructed 1=Anticipatory

Reciprocity 2-Repeated (>3/Month) 1-Limited (>2/Month) 0-Absent
Intensity 3-Emotional/Instrumental 1-Instrumental
Durability 4-Kinship 3-Social Identity 2-Voluntarily Constructed 1-Anticipatory

Table 20 AKH Qual Valuation T1 American Flight Academy

1 AKH Network Workbook (version 1)		AKH Qual Valuation T1		Printed on 6/17/2013 4:06 PM	
Routines 06011					
Dean Int'l Stdy	0	AFA Dean Int'l	0	AFA Pres/Dean	0
AFA VP	0	AFA VP	0	AFA VP	0
AFA Dir. Log	0	AFA Dir. Log	0	AFA Dir. Log	0
A Pub. Rel. Dir.	0	A Pub. Rel. Dir.	0	A Pub. Rel. Dir.	0
FA Eng Teacher 1	0	FA Eng Teacher 1	0	FA Eng Teacher 1	0
FA Eng Teacher 2	0	FA Eng Teacher 2	0	FA Eng Teacher 2	0
Medical Advisor	0	Medical Advisor	0	Medical Advisor	0
Medical Advisor	0	Medical Advisor	0	Medical Advisor	0
3 Dir. Of Flight	0	3 Dir. Of Flight	0	3 Dir. Of Flight	0
CFS CFI 1	0	CFS CFI 1	0	CFS CFI 1	0
CFS CFI 2	0	CFS CFI 2	0	CFS CFI 2	0
CFS CFI 3	0	CFS CFI 3	0	CFS CFI 3	0
CFS CFI 4	0	CFS CFI 4	0	CFS CFI 4	0
CFS CFI 5	0	CFS CFI 5	0	CFS CFI 5	0
CFS CFI 6	0	CFS CFI 6	0	CFS CFI 6	0
CFS CFI 7	0	CFS CFI 7	0	CFS CFI 7	0
CFS CFI 8	0	CFS CFI 8	0	CFS CFI 8	0
CFS CFI 9	0	CFS CFI 9	0	CFS CFI 9	0
WH Controller	0	WH Controller	0	WH Controller	0
Stock Sales	0	Stock Sales	0	Stock Sales	0
ation Consultant	0	ation Consultant	0	ation Consultant	0
Flight Director 1,2,3	0	Flight Director 1,2,3	0	Flight Director 1,2,3	0
tudent Recruiter	0	tudent Recruiter	0	tudent Recruiter	0
Cent. M. of Ed 2,2,3	0	Cent. M. of Ed 2,2,3	0	Cent. M. of Ed 2,2,3	0
Prov. M. of Ed	0	Prov. M. of Ed	0	Prov. M. of Ed	0
Test Student 2,3,4	0	Test Student 2,3,4	0	Test Student 2,3,4	0
XU Pres. & Chair	0	XU Pres. & Chair	0	XU Pres. & Chair	0
XU Eng. Teacher	0	XU Eng. Teacher	0	XU Eng. Teacher	0
YU Investor	0	YU Investor	0	YU Investor	0
YU Pres	0	YU Pres	0	YU Pres	0
J VP & Party Sec	0	J VP & Party Sec	0	J VP & Party Sec	0
YU Dean T	0	YU Dean T	0	YU Dean T	0
YU Dean Z	0	YU Dean Z	0	YU Dean Z	0
Reciprocity 2=Repeated (>3/Month) 1=Limited (<2/Month) 0=Absent					
Intensity 3=Emotional/Instrumental 2=Emotional/Instrumental 1=Instrumental					
Durability 4=Kinship 3=Social Identity 2=Voluntarily Constructed 1=Anticipatory					

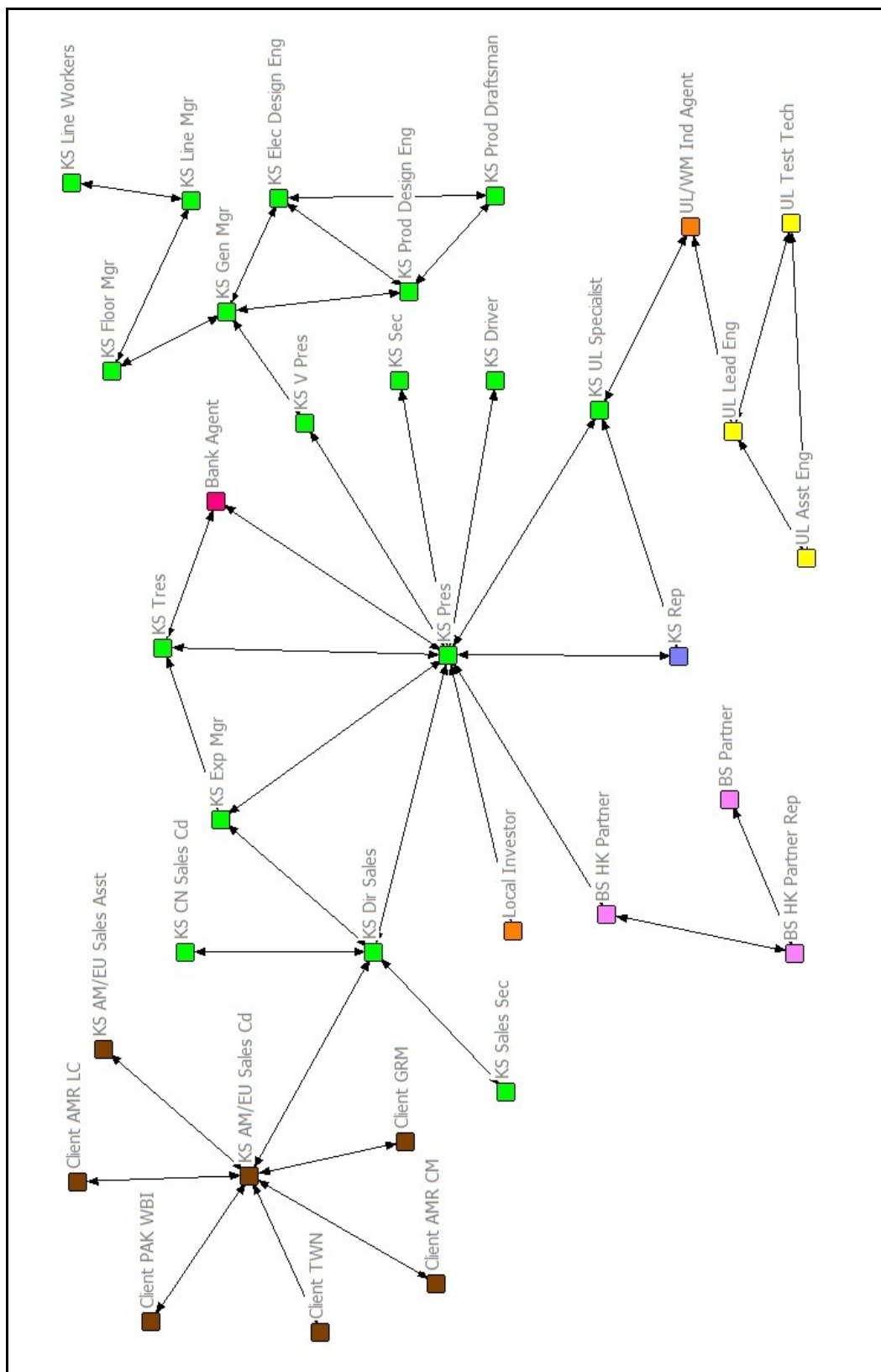
Table 21 AKH Qual Valuation T2 American Flight Academy

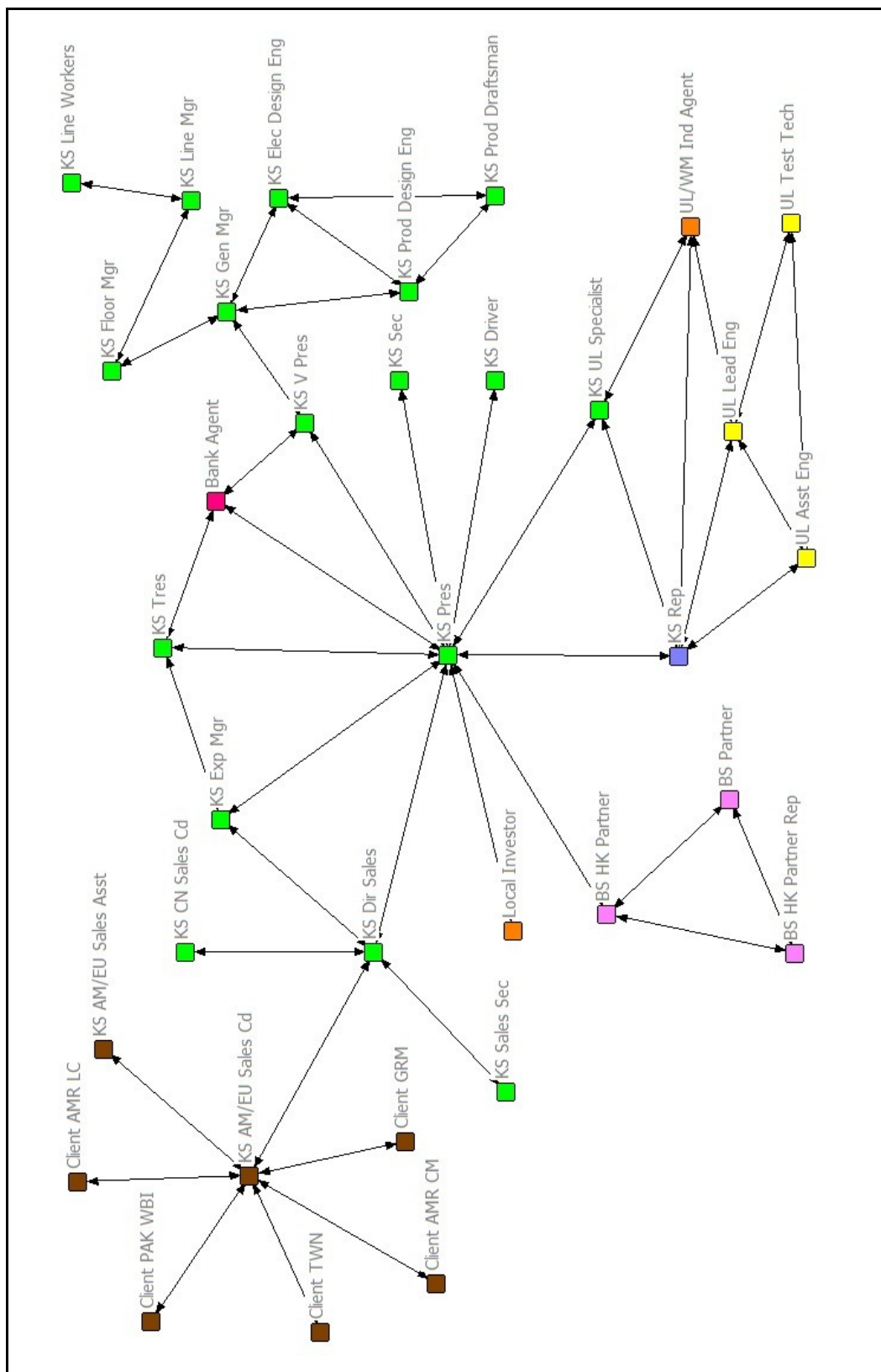
1 AXH Network Workbook		AXH Qual Valuation T2		Printed on 6/17/2013 3:52 PM	
Reciprocity 0-2	Intensity 1-3	Durability 1-4			
Routines 11011	AXH Dean Int'l	AXH VP	AXH Dir. Log	AXH Pub. Hel.	AXH Eng Teach
AXH Pres/Dean 2,2,3	0	0	0	0	0
AXH VP	0,2,2,2	0	0	0	0
AXH Dir. Log	0,2,2,2	0	0	0	0
AXH Pub. Hel.	0,2,2,2	0	0	0	0
AXH Eng Teacher 1	0,2,2,2	0	0	0	0
AXH Eng Teacher 2	0	0	0	0	0
AXH Medical Advisor	0	0	0	0	0
AXH Medical Advisor	0	0	0	0	0
AXH Dir. of Flight	0,1,1,1	0	0	0	0
CFS CF1 1	0	0	0	0	0
CFS CF1 2	0	0	0	0	0
CFS CF1 3	0	0	0	0	0
CFS CF1 4	0	0	0	0	0
CFS CF1 5	0	0	0	0	0
CFS CF1 6	0	0	0	0	0
CFS CF1 7	0	0	0	0	0
CFS CF1 8	0	0	0	0	0
CFS CF1 9	0	0	0	0	0
WH Comptroller	0	0	0	0	0
Stock Sales	0	0	0	0	0
Flight Consultant	0,2,1,2	0	0	0	0
Flight Director	0	0	0	0	0
Student Recruiter	2,2,2	0	0	0	0
Cent. M. of Ed	2,2,3	0	0	0	0
Prov. M. of Ed	0	0	0	0	0
Test Student	2,3,4	0	0	0	0
AXH Pres. & Chair	2,1,2	0	0	0	0
AXH Eng. Teacher	0	0	0	0	0
AXH Investor	0	0	0	0	0
AXH VP & Party Sec	0	0	0	0	0
AXH Dean T	0	0	0	0	0
AXH Dean Z	0	0	0	0	0
AXH Pres.	0	0	0	0	0
AXH Eng. Teach	0	0	0	0	0
AXH Pres & Chs	0	0	0	0	0
AXH Eng. Teach	0	0	0	0	0
AXH Investor	0	0	0	0	0
AXH VP & Party	0	0	0	0	0
AXH Dean T	0	0	0	0	0
AXH Dean Z	0	0	0	0	0

Table 22 AKH Qual Valuation T3 American Flight Academy

1 AXH Network Workbook		AXH Qual Valuation T3										Printed on 6/17/2013 3:57 PM		
Routines 06011														
Dean Int'l StcDys														
AFA Pres/Dean 2,2,3														
AFA VP														
AFA Dir. Log														
A Pub. Rel. Dir.														
AFA Eng Teacher 1														
AFA Eng Teacher 2														
Medical Advisor														
Medical Advisor														
S Dir. of Flight 2,1,2														
CFS CF1 1														
CFS CF1 2														
CFS CF1 3														
CFS CF1 4														
CFS CF1 5														
CFS CF1 6														
CFS CF1 7														
CFS CF1 8														
CFS CF1 9														
NH Comptroller														
Stock Sales														
ation Consultant 2,2,3														
Flight Director 1,2,3														
Student Recruiter 2,2,3														
Cent. N. of Ed 2,2,3														
Prov. N. of Ed														
Test Student 2,3,4														
XU Pres. & Chair 2,2,2														
XU Eng. Teacher														
XU Investor														
YU VP & Party Sec														
YU Dean T														
YU Dean Z														
AFA Pres/Dean														
AFA VP														
AFA Dir. Log														
AFA Pub. Rel.														
AFA Eng Teach														
S. Medical Ad														
A. Medical Ad														
CFS Dir. of F														
CFS CF1 1														
CFS CF1 2														
CFS CF1 3														
CFS CF1 4														
CFS CF1 5														
CFS CF1 6														
CFS CF1 7														
CFS CF1 8														
CFS CF1 9														
NH Comptrolle														
Stock Sales														
Aviation Cons														
Airline Fligh														
Student Recru														
Cent. M. of B														
Prov. M. of B														
Test Student														
XU Pres & Cha														
XU Eng. Teach														
YU Investor														
YU Pres.														
YU VP & Party														
YU Dean T														
YU Dean Z														
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APPENDIX C: NETWORK ILLUSTRATIONS





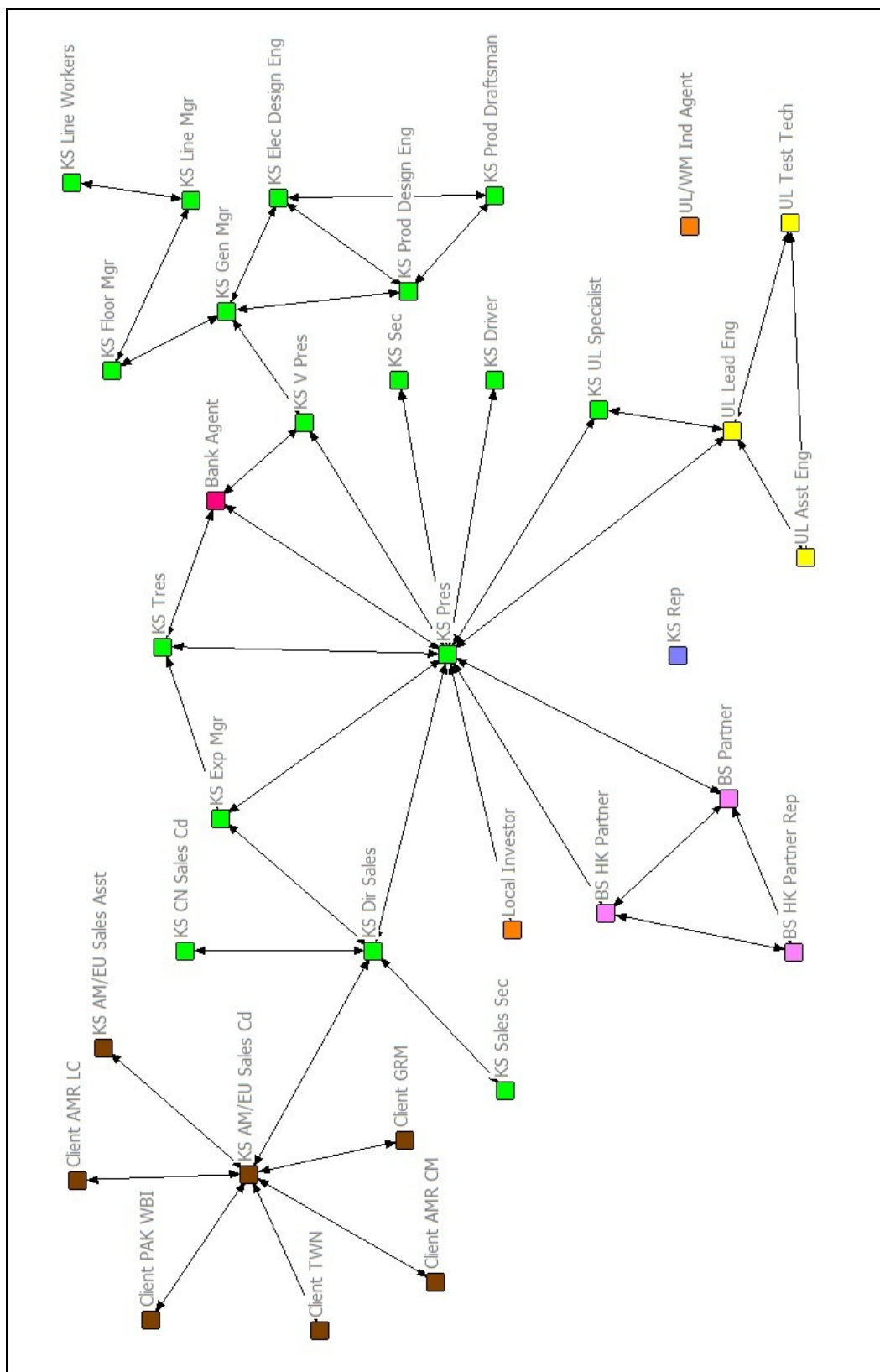


Figure 3 AKS T3 KS Gongchang

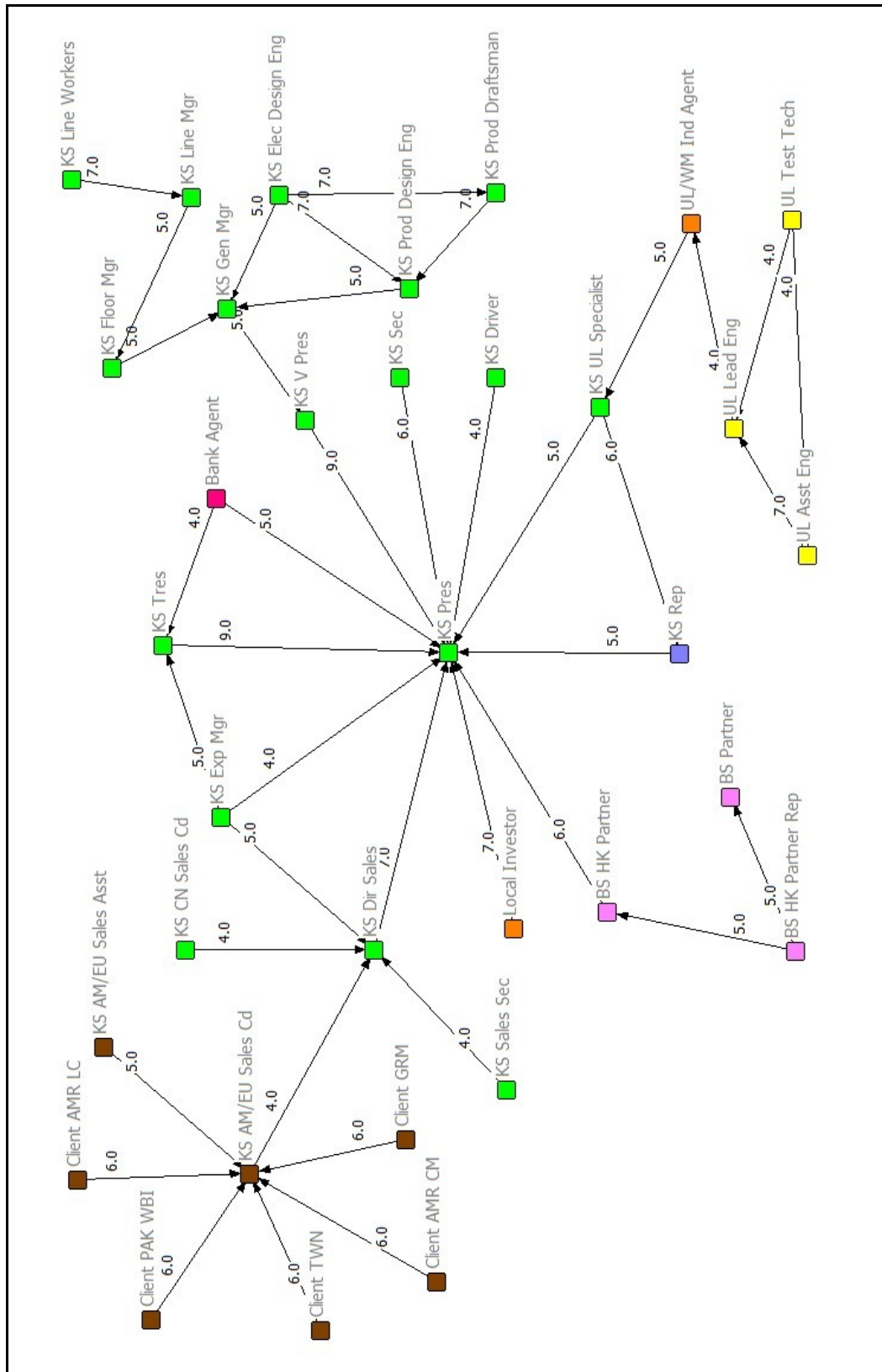
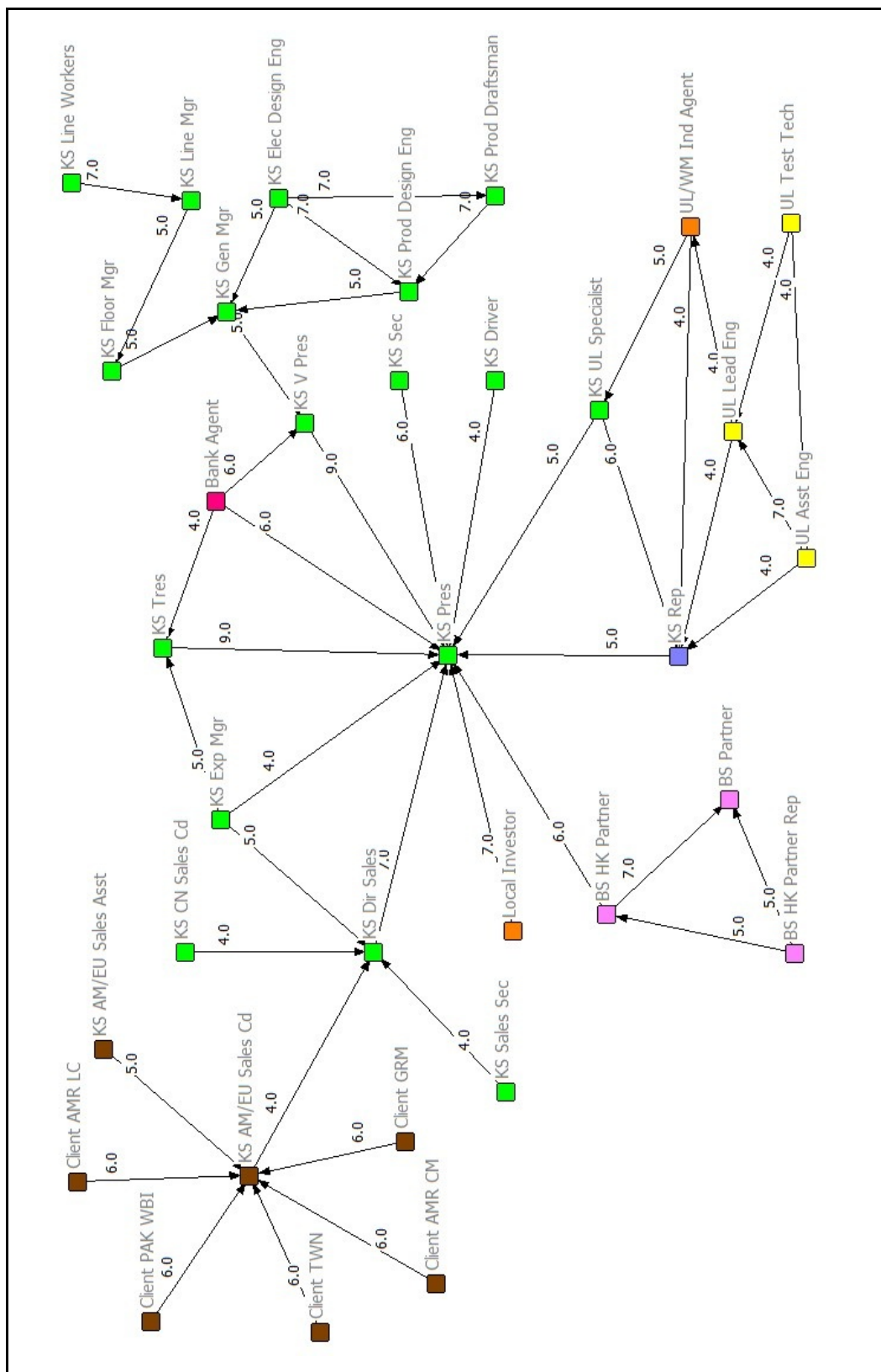


Figure 4 AKS Qual T1 KS Gongchang



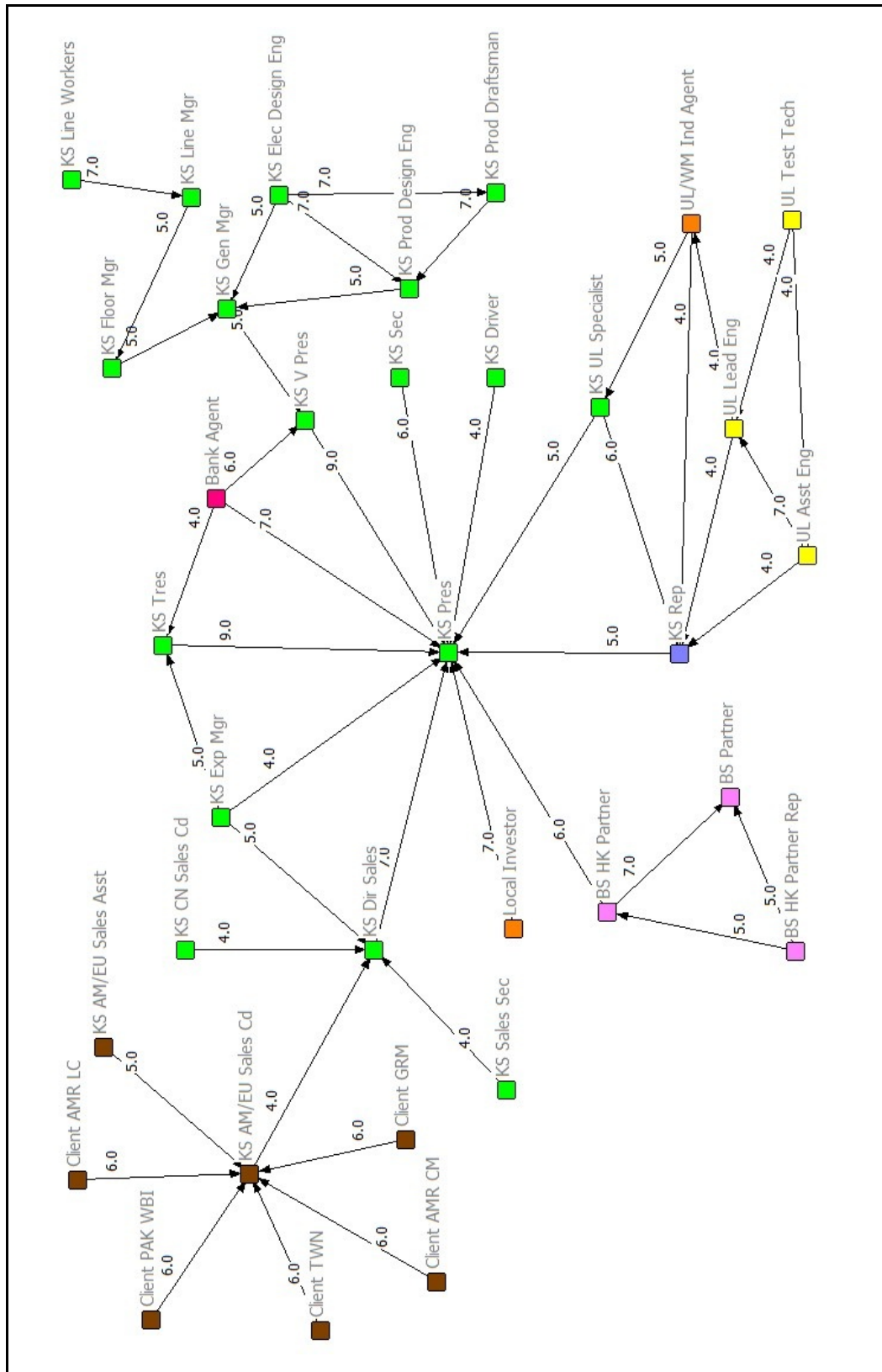


Figure 6 AKS Qual T2 KS Gongchang

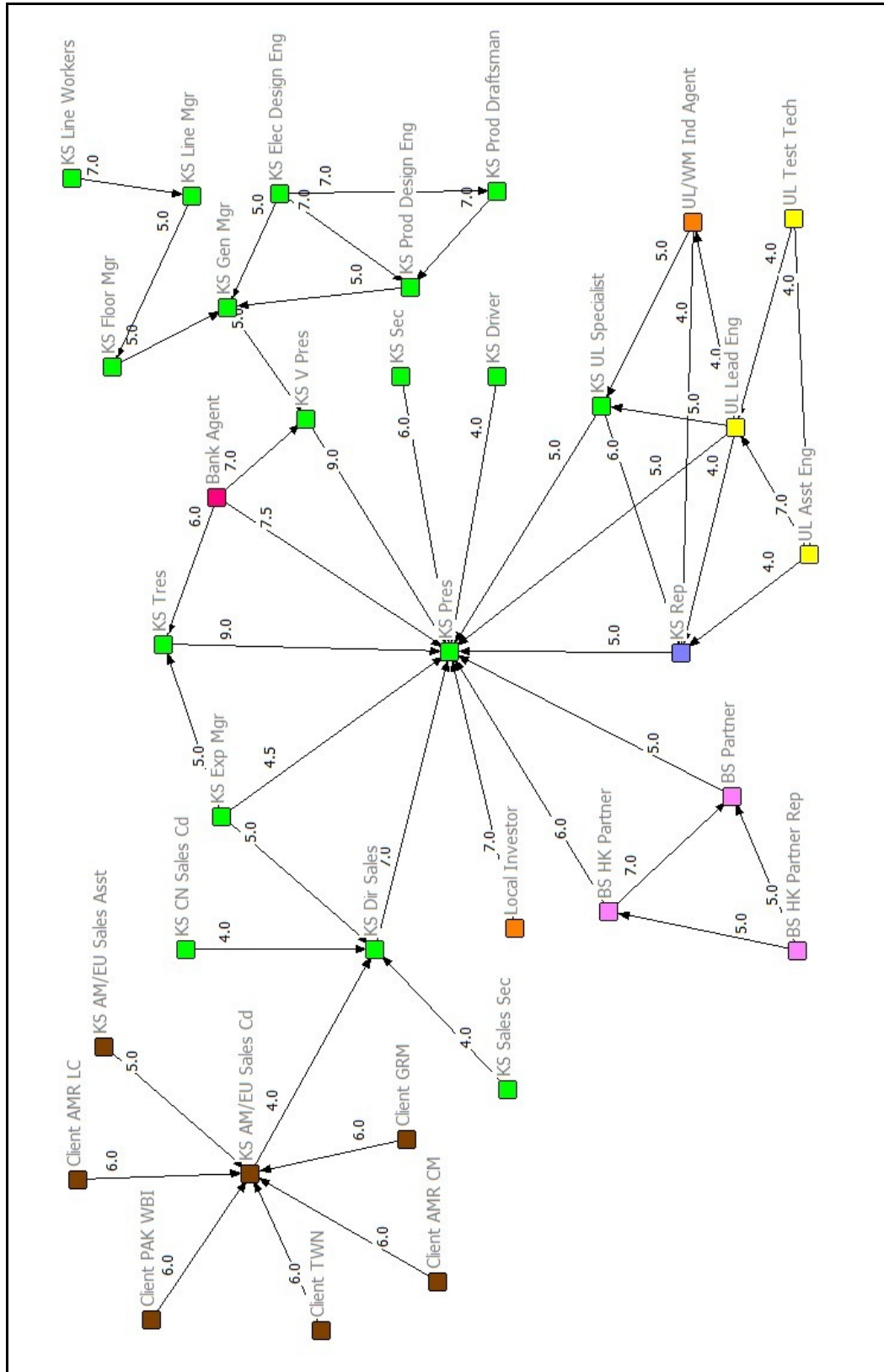


Figure 7 AKS Qual T2 T3 KS Gongchang

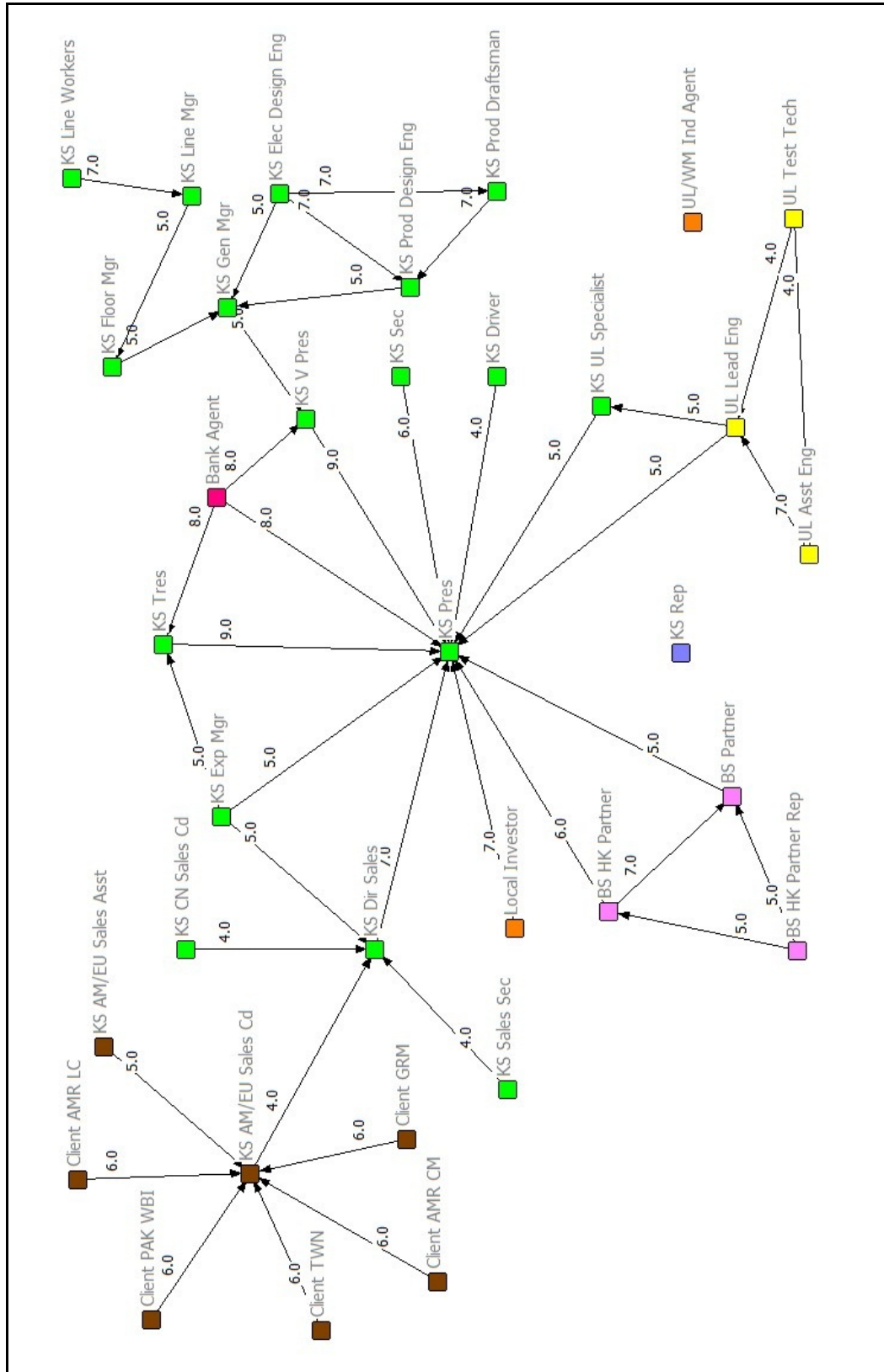


Figure 8 AKS Qual T3 KS Gongchang

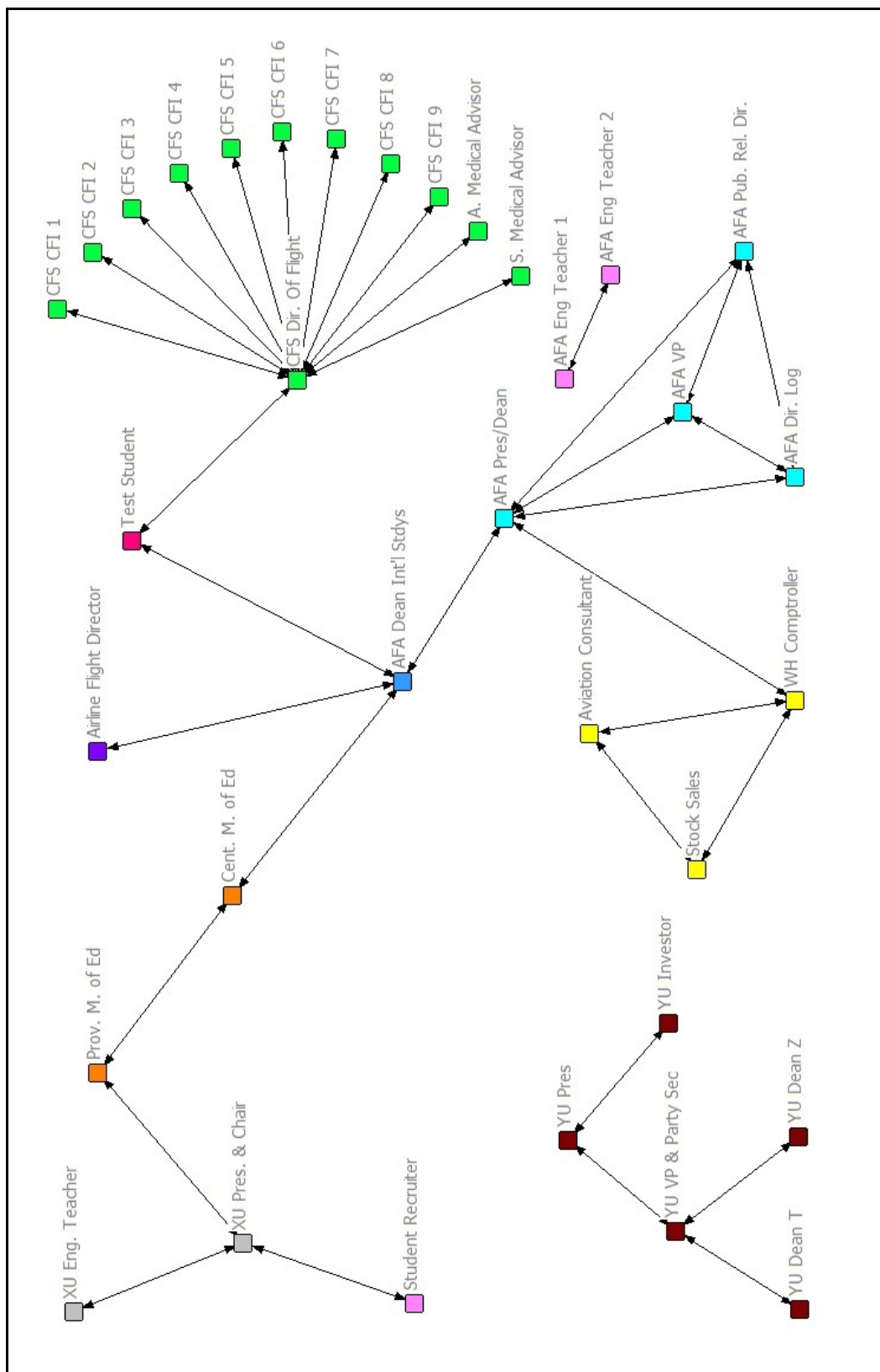


Figure 9 AKH T1 American Flight Academy

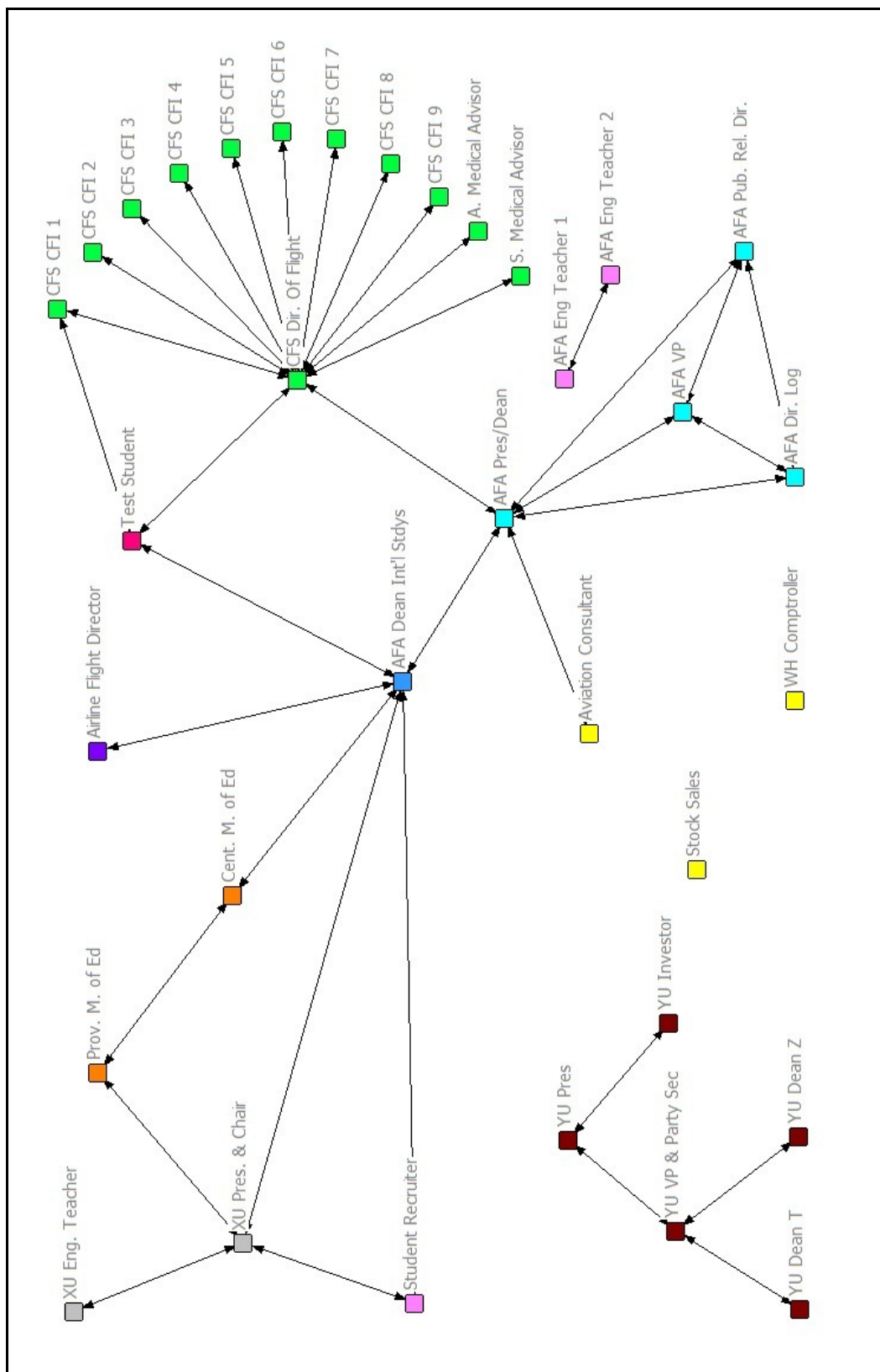


Figure 10 AKH T2 American Flight Academy

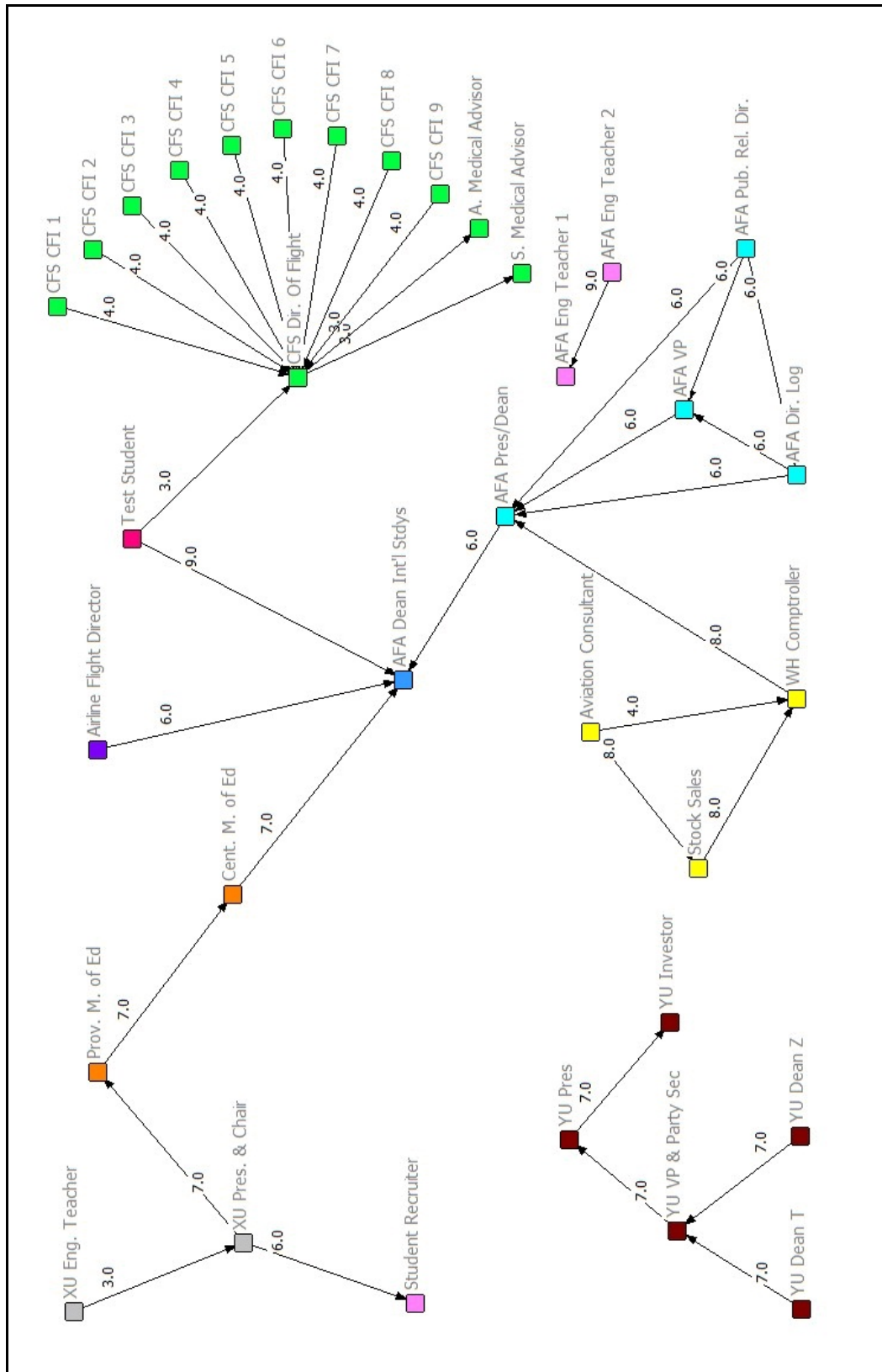


Figure 12 AKH Qual T1 American Flight Academy

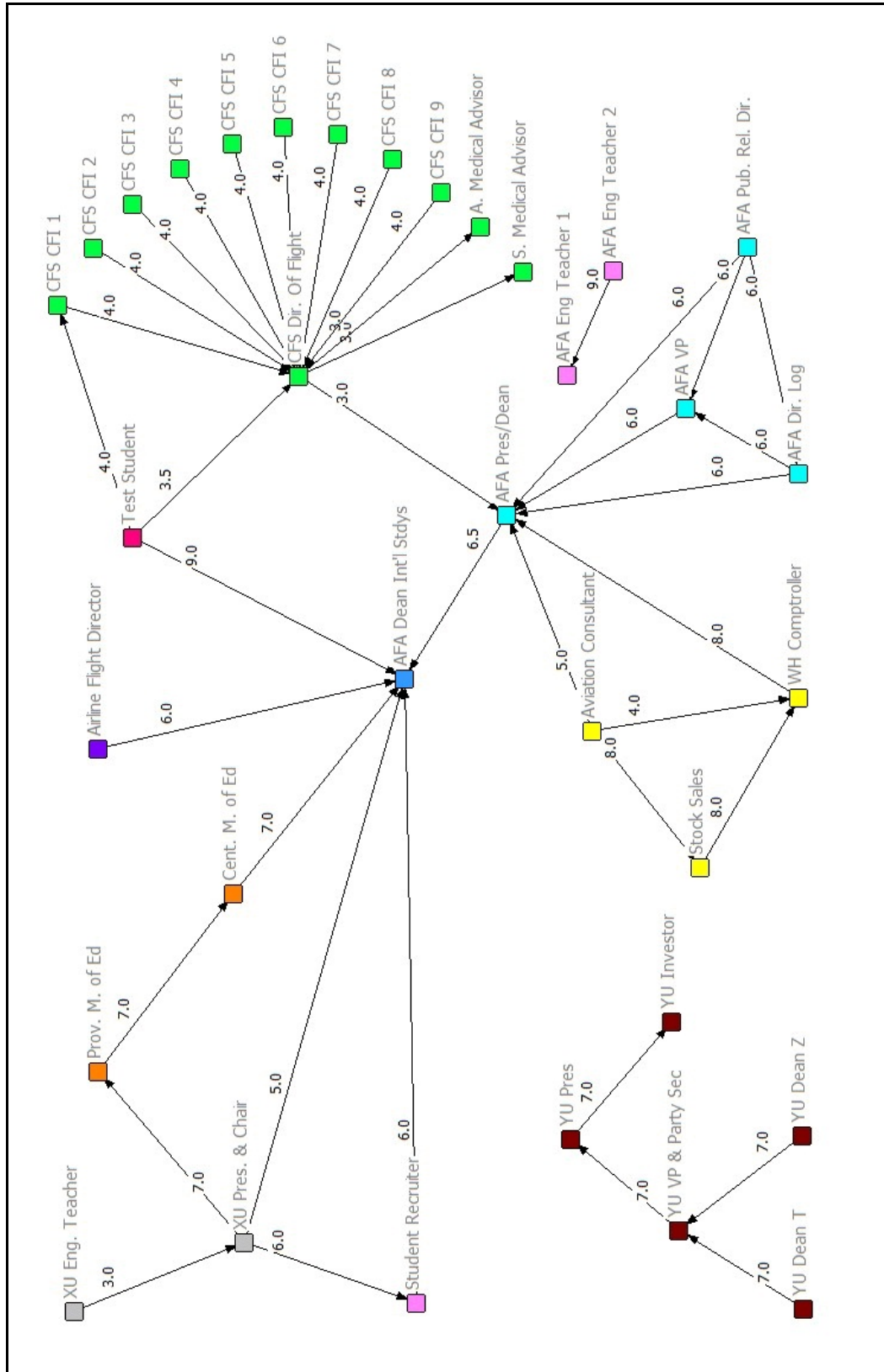


Figure 13 AKH Qual T1 T2 American Flight Academy

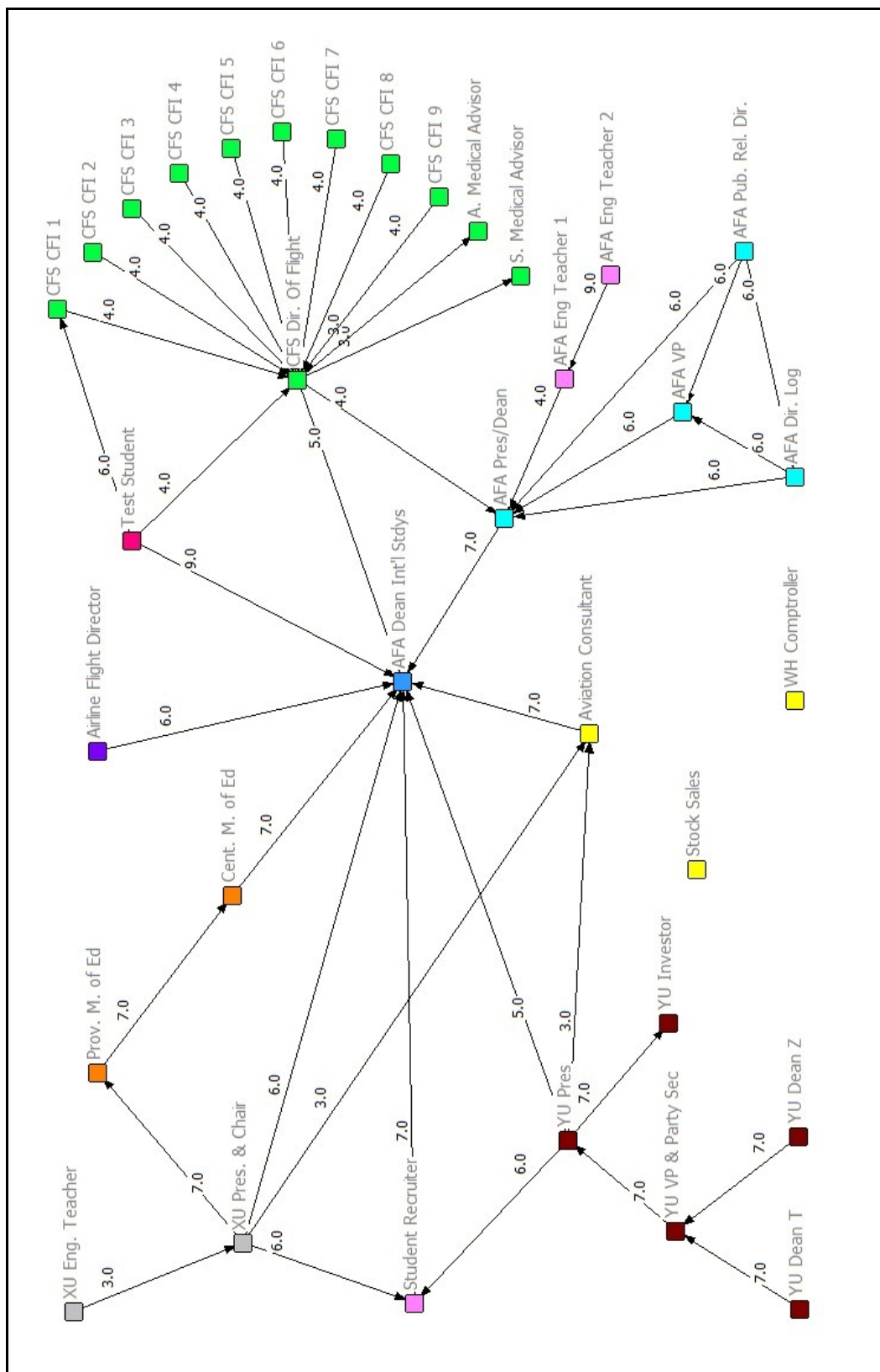


Figure 16 AKH Qual T3 American Flight Academy

APPENDIX D: NETWORK CUTAWAYS

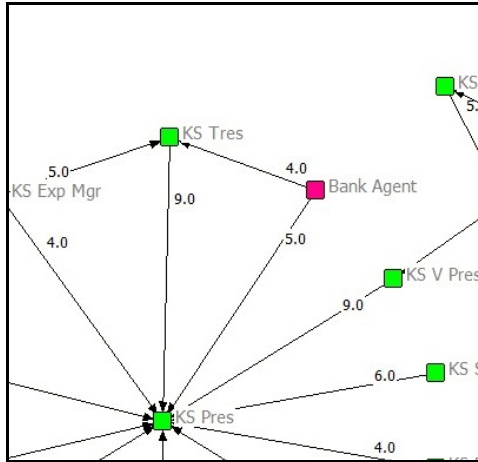


Figure 17 AKS Qual T1 Bank Agent

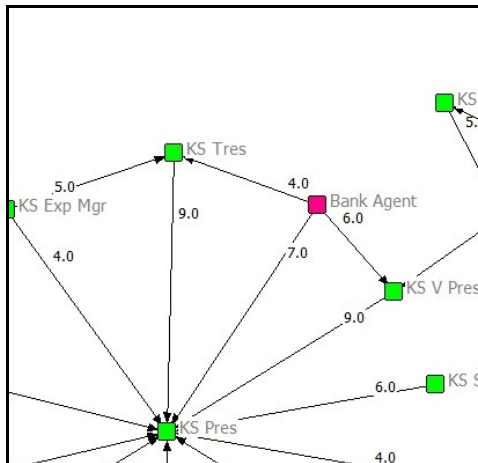


Figure 18 AKS Qual T2 Bank Agent

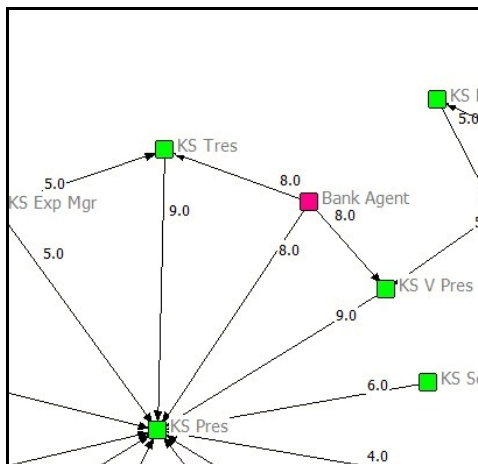


Figure 19 AKS Qual T3 Bank Agent

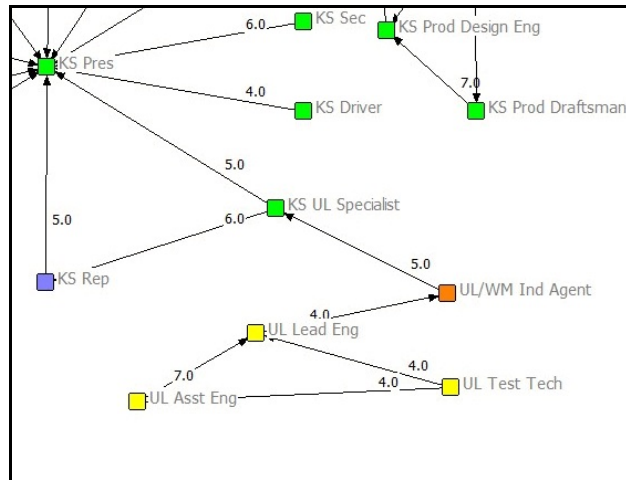


Figure 20 AKS Qual T1 UL

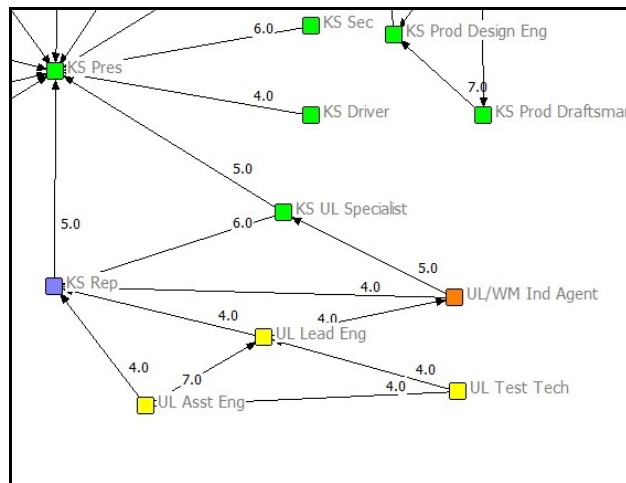


Figure 21 AKS Qual T2 UL

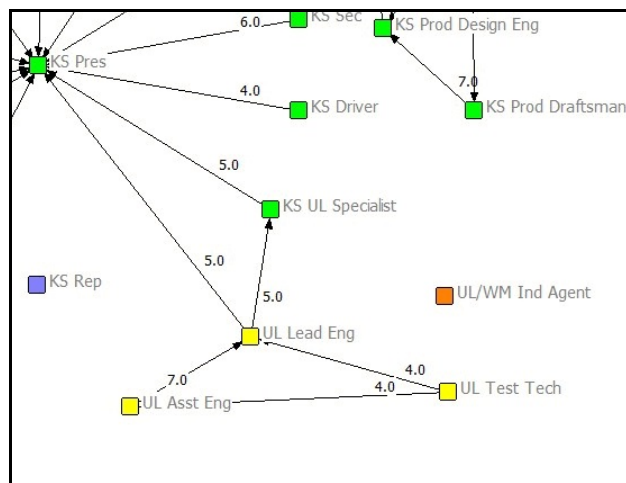


Figure 22 AKS Qual T3 UL

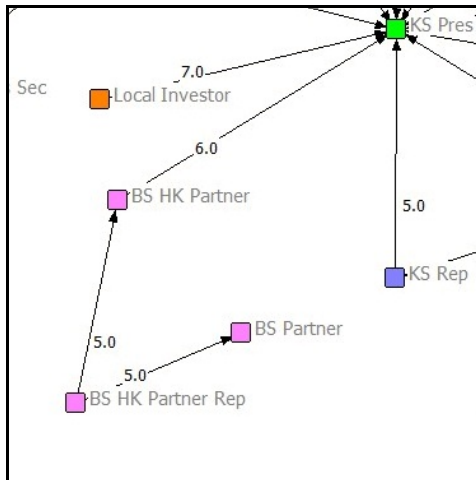


Figure 23 AKS Qual T1 BS

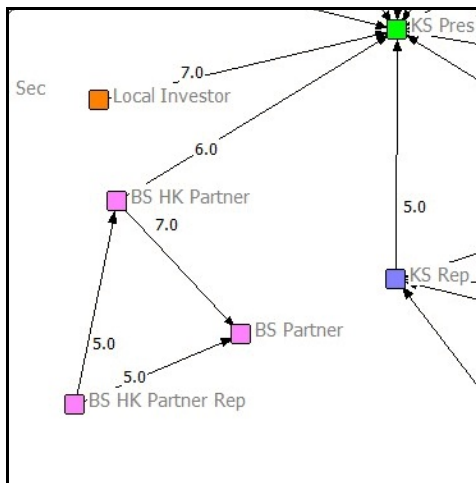


Figure 24 AKS Qual T2 BS

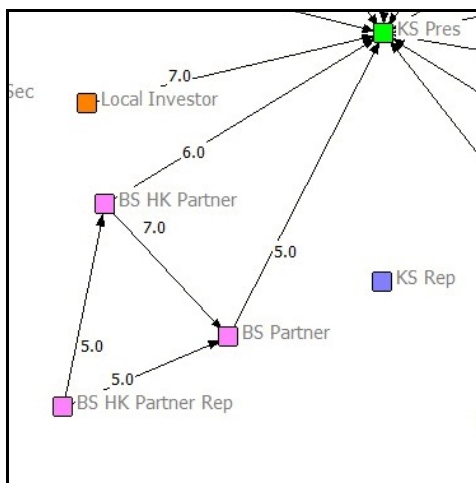


Figure 25 AKS Qual T3 BS

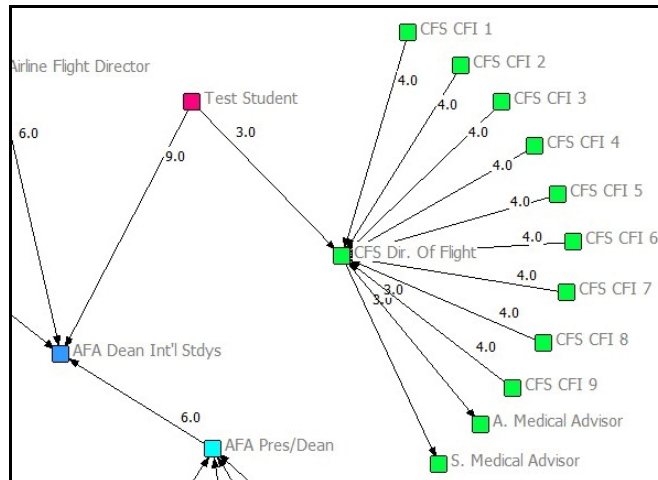


Figure 26 AKH Qual T1 CFS

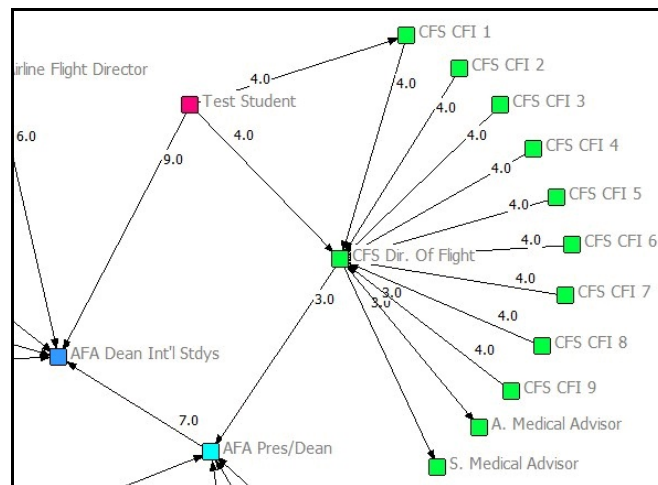


Figure 27 AKH Qual T2 CFS

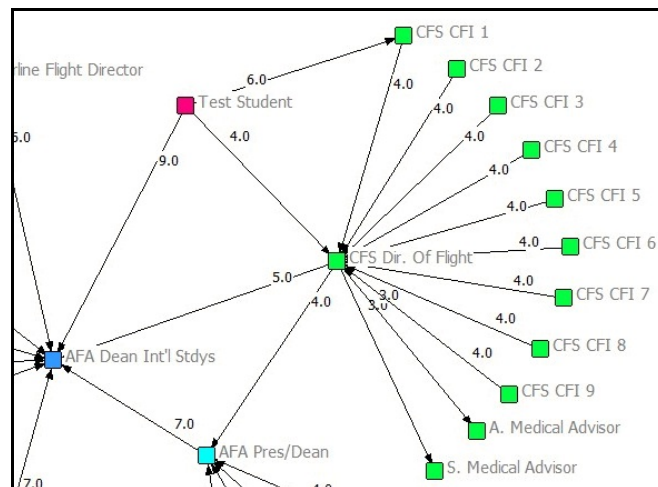


Figure 28 AKH Qual T3 CFS

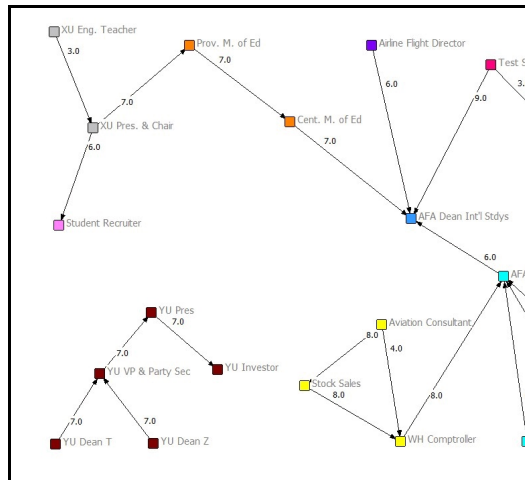


Figure 29 AKH Qual T1 Universities

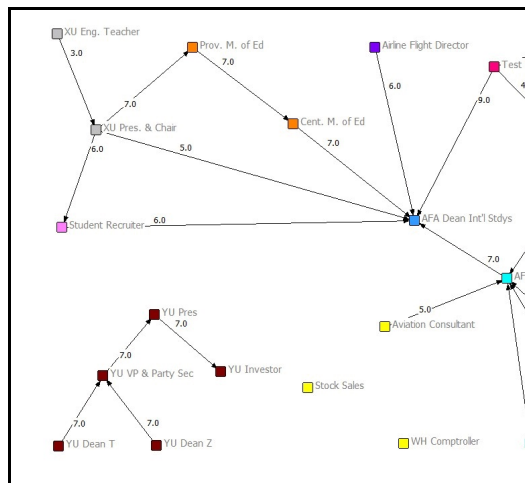


Figure 30 AKH Qual T2 Universities

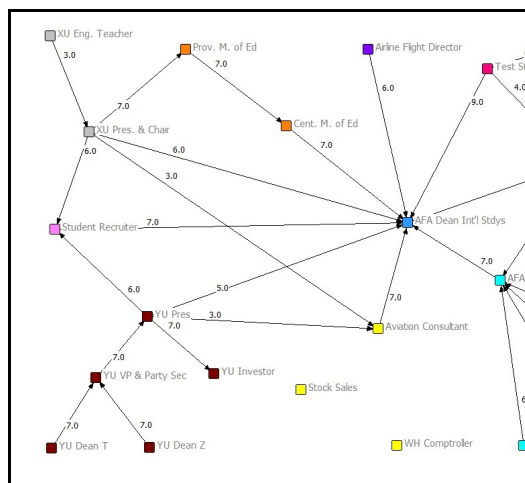


Figure 31 AKH Qual T3 Universities

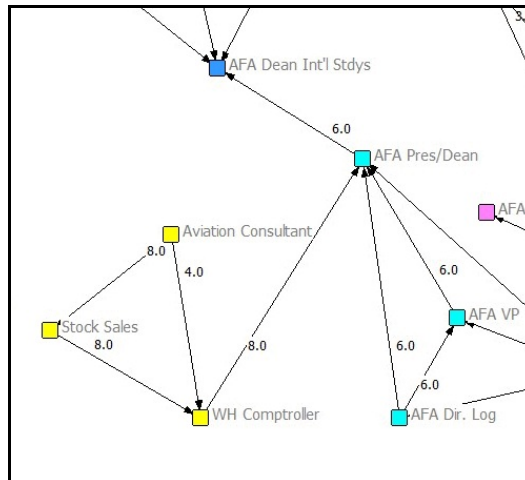


Figure 32 AKH Qual T1 Consultant

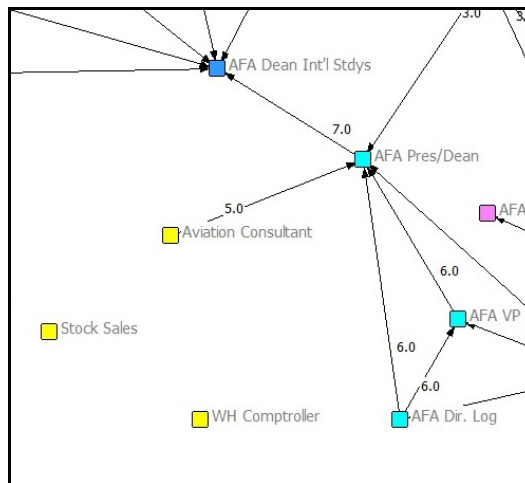


Figure 33 AKH Qual T2 Consultant

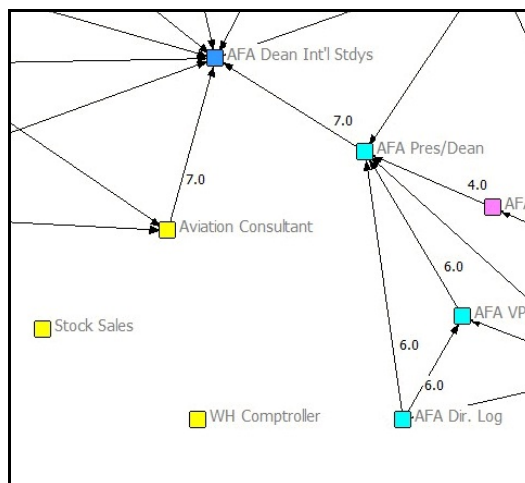


Figure 34 AKH Qual T3 Consultant

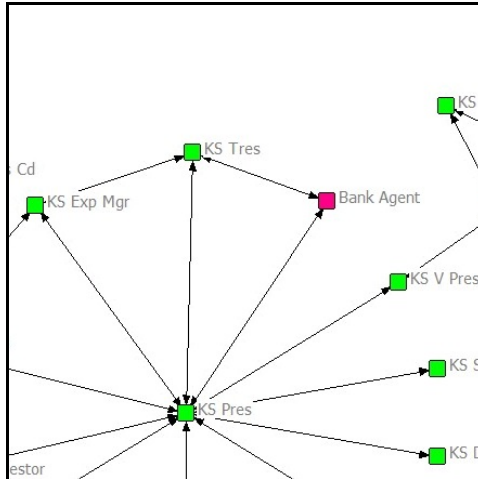


Figure 35 AKS T1 Bank Agent

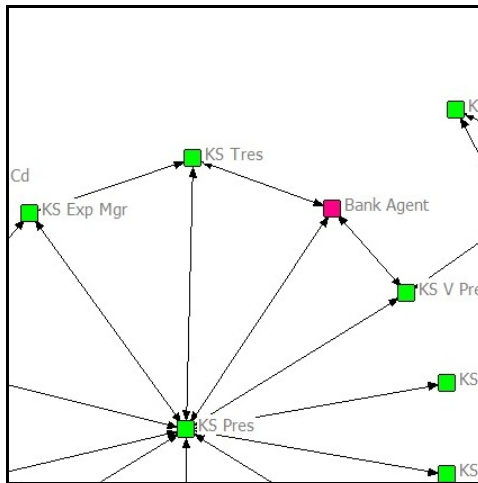


Figure 36 AKS T2 Bank Agent

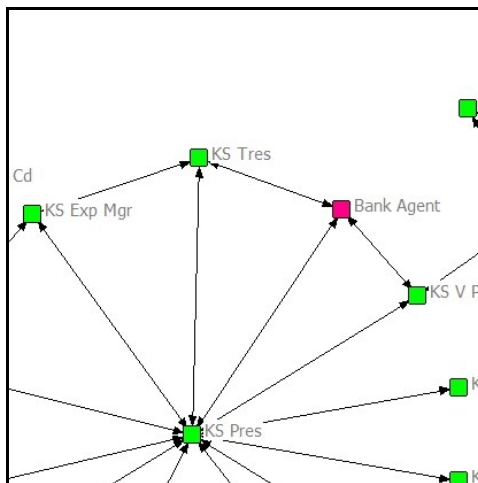


Figure 37 AKS T3 Bank Agent

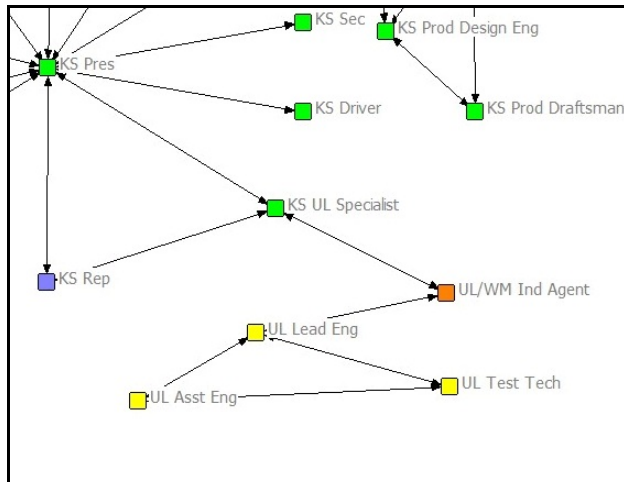


Figure 38 AKS T1 UL

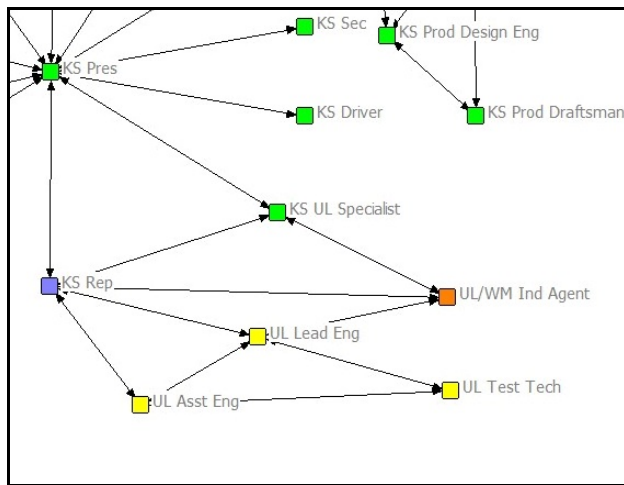


Figure 39 AKS T2 UL

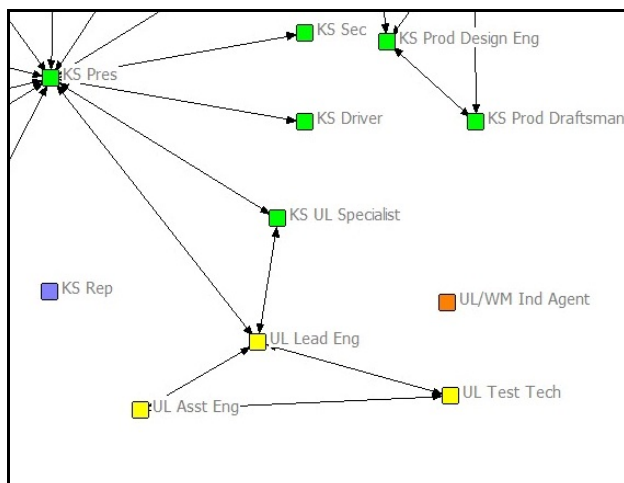


Figure 40 AKS T3 UL

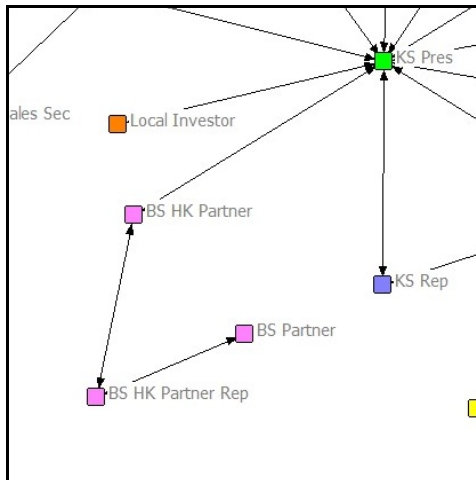


Figure 41 AKS T1 BS

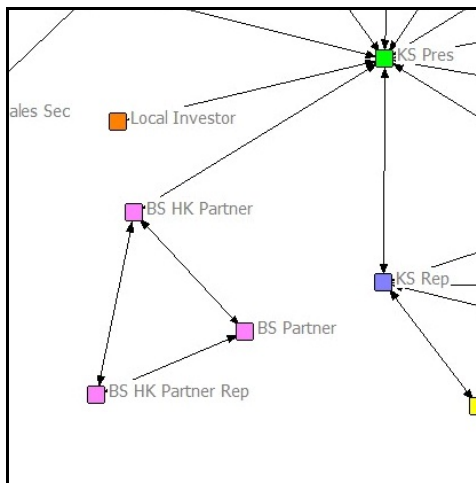


Figure 42 AKS T2 BS

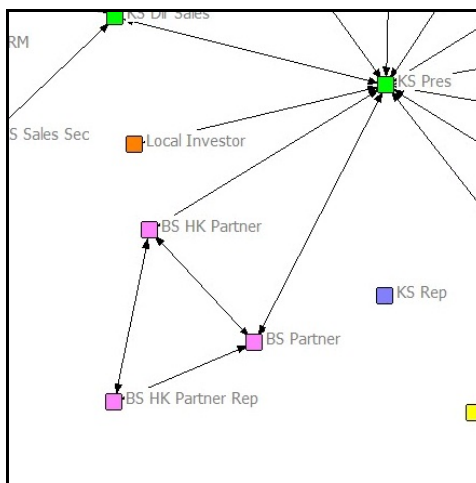


Figure 43 AKS T3 BS

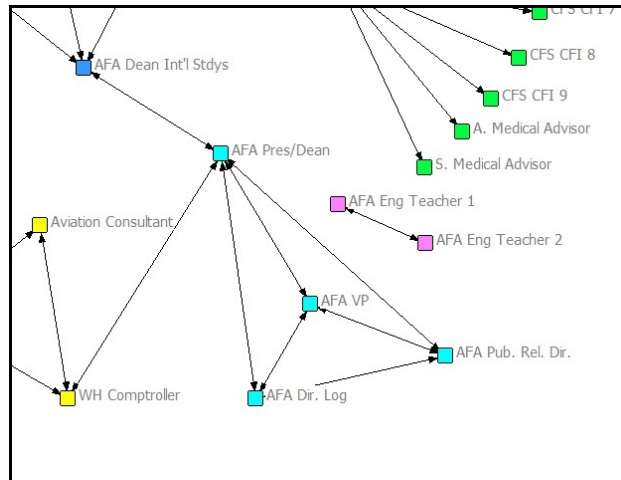


Figure 44 AKH T1 AFA

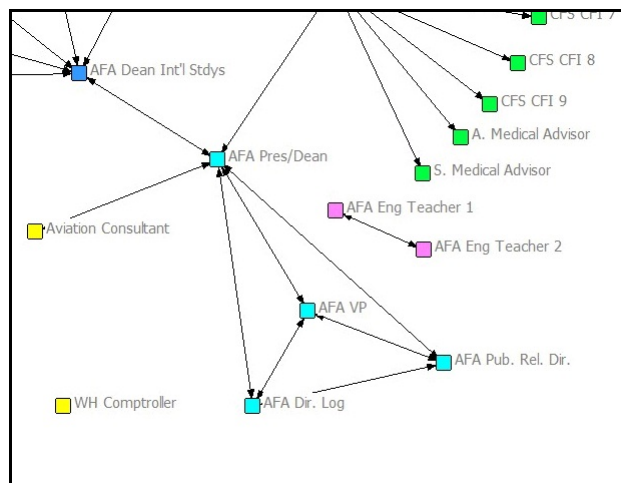


Figure 45 AKH T2 AFA

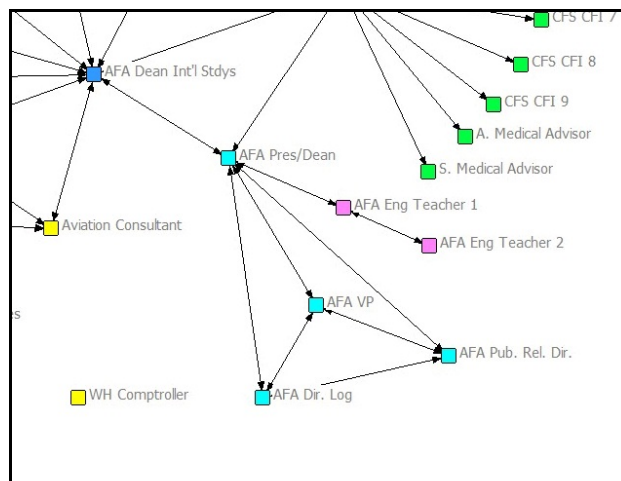


Figure 46 AKH T3 AFA

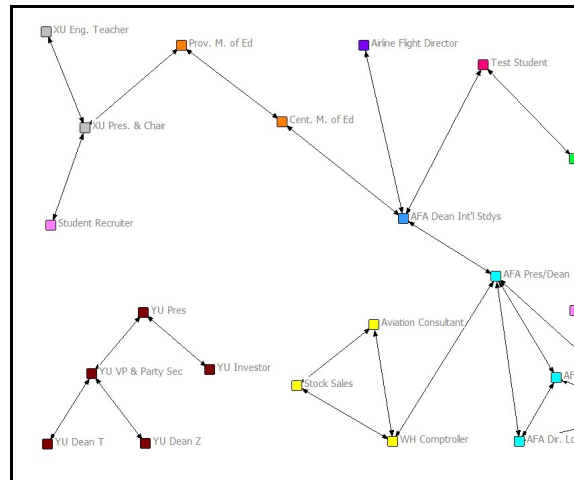


Figure 47 AKH T1 Consultant

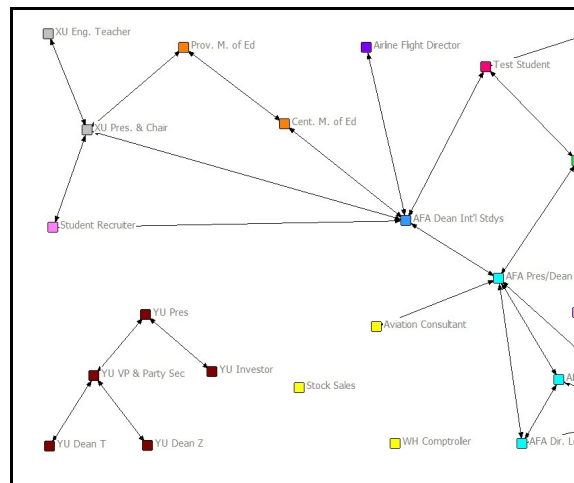


Figure 48 AKH T2 Consultant

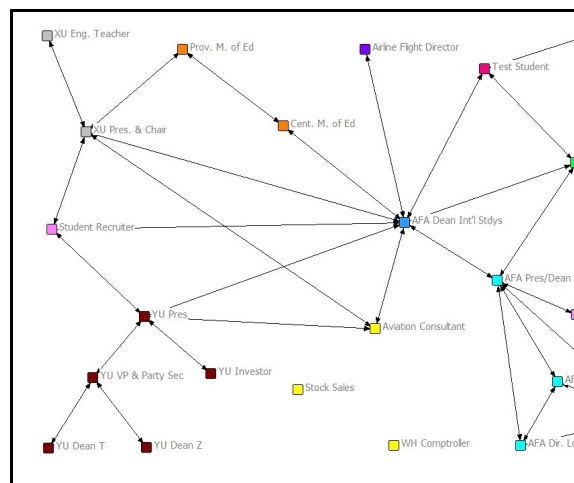


Figure 49 AKH T3 Consultant

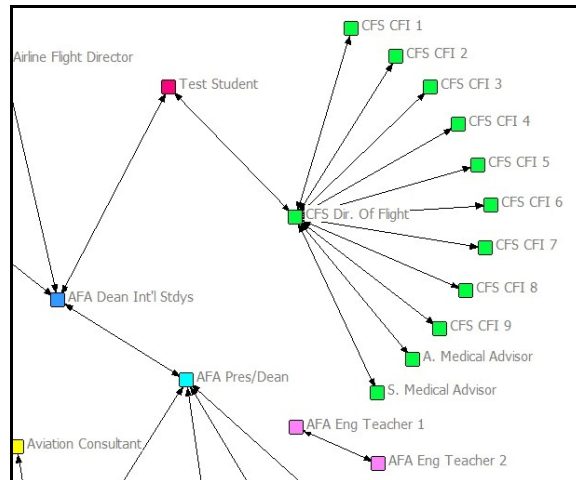


Figure 50 AKH T1 CFS

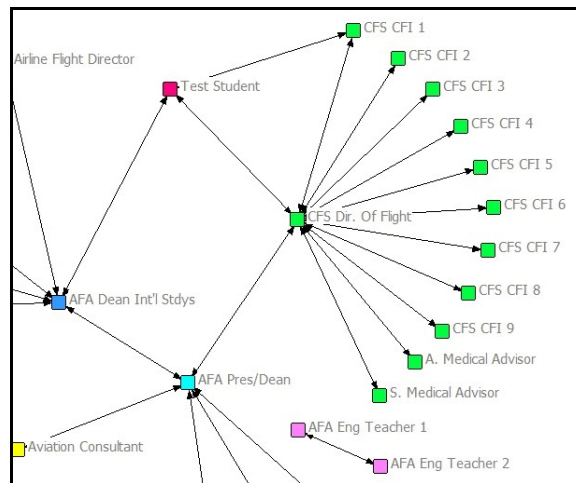


Figure 51 AKH T2 CFS

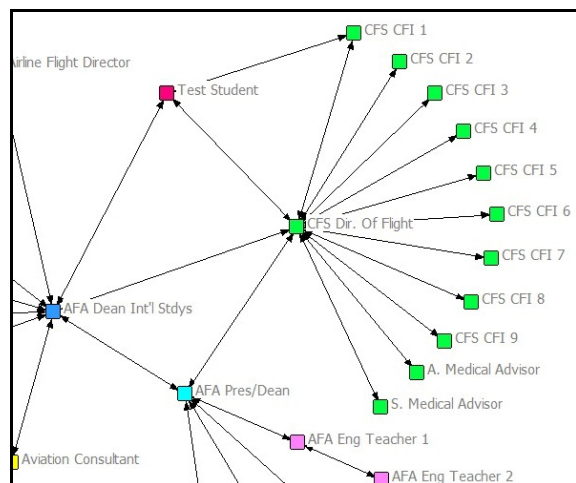


Figure 52 AKH T3 CFS

APPENDIX E: NETWORK TABLES

Table 23 AKS Ego Net Change KS Gongchang

1 AKS Network Workbook

Egonet Change

Printed on 6/17/2013
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Egonet Change	Size			New			Ties					
	T1	T2	T3	T1 to T2	T2 to T3	Total	Lost		Kept		Absent	
							T1 to T2	T2 to T3	T1 to T2	T2 to T3	T1 to T2	T2 to T3
KS Pres	11	11	12	0	1	1	0	1	11	10	22	20
KS V Pres	2	3	3	1	0	1	0	0	2	3	30	30
KS Sec	1	1	1	0	0	0	0	0	1	1	32	32
KS Tres	3	3	3	0	0	0	0	0	3	3	30	30
KS Dir Sales	5	5	5	0	0	0	0	0	5	5	28	28
KS Gen Mgr	4	4	4	0	0	0	0	0	4	4	29	29
KS Exp Mgr	3	3	3	0	0	0	0	0	3	3	30	30
Bank Agent	2	3	3	1	0	1	0	0	2	3	30	30
KS Rep	2	5	0	3	1	2	0	5	2	0	28	28
KS Driver	1	1	1	0	0	0	0	0	1	1	32	32
BS Partner	1	2	3	1	1	2	0	0	1	2	31	30
BS HK Partner	2	3	3	1	0	1	0	0	2	3	30	30
BS HK Partner Rep	2	2	2	0	0	0	0	0	2	2	31	31
KS Floor Mgr	2	2	2	0	0	0	0	0	2	2	31	31
KS Line Mgr	2	2	2	0	0	0	0	0	2	2	31	31
KS Line Workers	1	1	1	0	0	0	0	0	1	1	32	32
KS Prod Design Eng	3	3	3	0	0	0	0	0	3	3	30	30
KS Prod Draftsman	2	2	2	0	0	0	0	0	2	2	31	31
KS Elec Design Eng	3	3	3	0	0	0	0	0	3	3	30	30
KS UL Specialist	3	3	2	0	-1	-1	0	2	3	1	30	29
UL/WM Ind Agent	2	3	0	1	-3	-2	0	3	2	0	30	30
UL Lead Eng	3	4	4	1	0	1	0	2	3	2	29	27
UL Asst Eng	2	3	2	1	-1	0	0	1	2	2	30	30
UL Test Tech	2	2	2	0	0	0	0	0	2	2	31	31
KS CN Sales Cd	1	1	1	0	0	0	0	0	1	1	32	32
KS AM/EU Sales Cd	7	7	7	0	0	0	0	0	7	7	26	26
KS AM/EU Sales Asst	1	1	1	0	0	0	0	0	1	1	32	32
KS Sales Sec	1	1	1	0	0	0	0	0	1	1	32	32
Client TWN	1	1	1	0	0	0	0	0	1	1	32	32
Client GRM	1	1	1	0	0	0	0	0	1	1	32	32
Client AMR LC	1	1	1	0	0	0	0	0	1	1	32	32
Client AMR CM	1	1	1	0	0	0	0	0	1	1	32	32
Client PAK WBI	1	1	1	0	0	0	0	0	1	1	32	32
Local Investor	1	1	1	0	0	0	0	0	1	1	32	32

Size Number of Ties at Tx

New Ties Number of NEW ties added / Net number of new ties

Lost Ties Number of lost ties present at T1 and not T2 or T2 an

Kept Ties Number of ties present at both times

Absent Ties Number of absent ties at both time

Table 24 AKH Ego Net Change American Flight Academy

1 AKH Network Workbook

Egonet Change

Printed on 6/17/2013
3:17 PM

	Size			New			Ties				Absent	
	T1	T2	T3	T1 to T2	T2 to T3	Total	Lost T1 to T2	Kept T2 to T3	Kept T1 to T2	Kept T2 to T3	T1 to T2	T2 to T3
Egonet Change												
AFA Dean Int'l Stdys	4	6	9	2	3	5	0	0	4	6	27	24
AFA Pres/Dean	5	6	6	1	0	1	1	1	4	5	26	26
AFA VP	3	3	3	0	0	0	0	0	3	3	30	30
AFA Dir. Log	3	3	3	0	0	0	0	0	3	3	30	30
AFA Pub. Rel. Dir.	3	3	3	0	0	0	0	0	3	3	30	30
AFA Eng Teacher 1	1	1	2	0	1	1	0	0	1	1	32	31
AFA Eng Teacher 2	1	1	1	0	0	0	0	0	1	1	32	32
S. Medical Advisor	1	1	1	0	0	0	0	0	1	1	32	32
A. Medical Advisor	1	1	1	0	0	0	0	0	1	1	32	32
CFS Dir. Of Flight	12	13	14	1	1	2	0	0	12	13	20	19
CFS CFI 1	1	2	2	1	0	1	0	0	1	2	31	31
CFS CFI 2	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 3	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 4	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 5	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 6	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 7	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 8	1	1	1	0	0	0	0	0	1	1	32	32
CFS CFI 9	1	1	1	0	0	0	0	0	1	1	32	32
WH Comptroller	3	0	0	-3	0	-3	3	0	0	0	30	33
Stock Sales	2	0	0	-2	0	-2	2	0	0	0	31	33
Aviation Consultant	2	1	3	-1	2	1	2	1	0	0	30	29
line Flight Director	1	1	1	0	0	0	0	0	1	1	32	32
Student Recruiter	1	2	3	1	1	2	0	0	1	2	31	30
Cent. M. of Ed	2	2	2	0	0	0	0	0	2	2	31	31
Prov. M. of Ed	2	2	2	0	0	0	0	0	2	2	31	31
Test Student	2	3	3	1	0	1	0	0	2	3	30	30
XU Pres. & Chair	3	4	5	1	1	2	0	0	3	4	29	28
XU Eng. Teacher	1	1	1	0	0	0	0	0	1	1	32	32
YU Investor	1	1	1	0	0	0	0	0	1	1	32	32
YU Pres	2	2	5	0	3	3	0	0	2	2	31	28
YU VP & Party Sec	3	3	3	0	0	0	0	0	3	3	30	30
YU Dean T	1	1	1	0	0	0	0	0	1	1	32	32
YU Dean Z	1	1	1	0	0	0	0	0	1	1	32	32

Size Number of Ties at Tx

New Ties Number of NEW ties added / Net number of new ties

Lost Ties Number of lost ties present at T1 and not T2 or T2 at

Kept Ties Number of ties present at both times

Absent Ties Number of absent ties at both time

Table 25 AKS T1 Ego Net KS Gongchang

EGO NETWORKS		AKS T1 (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\AKS T1)													
Input dataset:		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Density Measures		Size	Ties	Pairs	Densit	AvgDis	Diamet	nWeakC	pWeakC	zStepR	ReachE	BrokE	nBroke	EgoBet	nEgoBe
1	KS Pres	11.00	8.00	110.00	7.27			7.00	63.64	51.52	68.00	51.00	0.93	50.00	90.91
2	KS V Pres	2.00	0.00	2.00	0.00			2.00	100.00	45.45	100.00	1.00	1.00	1.00	100.00
3	KS Sec	1.00	0.00	0.00		0.00	0.00	1.00	100.00	33.33	100.00	0.00		0.00	
4	KS Tres	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	33.33	68.75	1.00	0.33	0.50	16.67
5	KS Dir Sales	5.00	2.00	20.00	10.00			4.00	80.00	60.61	86.96	9.00	0.90	9.00	90.00
6	KS Gen Mgr	4.00	2.00	12.00	16.67			3.00	75.00	21.21	70.00	5.00	0.83	5.00	83.33
7	KS Exp Mgr	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	42.42	73.68	1.00	0.33	0.50	16.67
8	Bank Agent	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	33.33	78.57	0.00	0.00	0.00	0.00
9	KS Rep	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	36.36	85.71	0.00	0.00	0.00	0.00
10	KS Driver	1.00	0.00	0.00		0.00	0.00	1.00	100.00	33.33	100.00	0.00		0.00	
11	BS Partner	1.00	0.00	0.00		0.00	0.00	1.00	100.00	6.06	100.00	0.00		0.00	
12	BS HK Partner	2.00	0.00	2.00	0.00			2.00	100.00	39.39	100.00	1.00	1.00	1.00	100.00
13	BS HK Partner Rep	2.00	0.00	2.00	0.00			2.00	100.00	9.09	100.00	1.00	1.00	1.00	100.00
14	KS Floor Mgr	2.00	0.00	2.00	0.00			2.00	100.00	18.18	100.00	1.00	1.00	1.00	100.00
15	KS Line Mgr	2.00	0.00	2.00	0.00			2.00	100.00	9.09	100.00	1.00	1.00	1.00	100.00
16	KS Line Workers	1.00	0.00	0.00		0.00	0.00	1.00	100.00	6.06	100.00	0.00		0.00	
17	KS Prod Design Eng	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	15.15	55.56	1.00	0.33	0.50	16.67
18	KS Prod Draftsman	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	50.00	0.00	0.00	0.00	0.00
19	KS Elec Design Eng	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	15.15	55.56	1.00	0.33	0.50	16.67
20	KS UL Specialist	3.00	2.00	6.00	33.33			2.00	66.67	39.39	86.67	2.00	0.67	2.00	66.67
21	UL/MM Ind Agent	2.00	0.00	2.00	0.00			2.00	100.00	18.18	100.00	1.00	1.00	1.00	100.00
22	UL Lead Eng	3.00	2.00	6.00	33.33			2.00	66.67	12.12	66.67	2.00	0.67	2.00	66.67
23	UL Asst Eng	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	60.00	0.00	0.00	0.00	0.00
24	UL Test Tech	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	60.00	0.00	0.00	0.00	0.00
25	KS CN Sales Cd	1.00	0.00	0.00		0.00	0.00	1.00	100.00	15.15	100.00	0.00		0.00	
26	KS AM/EU Sales Cd	7.00	0.00	42.00	0.00			7.00	100.00	33.33	100.00	21.00	1.00	21.00	100.00
27	KS AM/EU Sales Asst	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
28	KS Sales Sec	1.00	0.00	0.00		0.00	0.00	1.00	100.00	15.15	100.00	0.00		0.00	
29	Client TWN	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
30	Client GRM	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
31	Client AMR LC	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
32	Client AMR CM	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
33	Client PAK WBI	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
34	Local Investor	1.00	0.00	0.00		0.00	0.00	1.00	100.00	33.33	100.00	0.00		0.00	

EGO NETWORKS

Table 26 AKS T2 Ego Net KS Gongchang

Input dataset: AKS T2 (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\AKS T2)
Density Measures

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Size	Ties	Pairs	Densit	AvgDis	Diamet	nWeakC	pWeakC	StepR	Reache	Broke	nBroke	EgoBet	nEgoBe	
1	11.00	10.00	110.00	9.09			6.00	54.55	60.61	64.52	50.00	0.91	48.50	88.18
2	3.00	2.00	6.00	33.33			2.00	66.67	45.45	83.33	2.00	0.67	2.00	66.67
3	1.00	0.00	0.00		0.00	0.00	1.00	100.00	33.33	100.00	0.00		0.00	
4	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	33.33	64.71	1.00	0.33	0.50	16.67
5	5.00	2.00	20.00	10.00			4.00	80.00	60.61	86.96	9.00	0.90	9.00	90.00
6	4.00	2.00	12.00	16.67			3.00	75.00	24.24	72.73	5.00	0.83	5.00	83.33
7	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	42.42	73.68	1.00	0.33	0.50	16.67
8	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	36.36	70.59	1.00	0.33	0.50	16.67
9	5.00	8.00	20.00	40.00	2.00	4.00	1.00	20.00	45.45	62.50	6.00	0.60	4.50	45.00
10	1.00	0.00	0.00		0.00	0.00	1.00	100.00	33.33	100.00	0.00		0.00	
11	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	60.00	0.00	0.00	0.00	0.00
12	3.00	2.00	6.00	33.33			2.00	66.67	39.39	86.67	2.00	0.67	2.00	66.67
13	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	60.00	0.00	0.00	0.00	0.00
14	2.00	0.00	2.00	0.00			2.00	100.00	18.18	100.00	1.00	1.00	1.00	100.00
15	2.00	0.00	2.00	0.00			2.00	100.00	9.09	100.00	1.00	1.00	1.00	100.00
16	1.00	0.00	0.00		0.00	0.00	1.00	100.00	6.06	100.00	0.00		0.00	
17	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	15.15	55.56	1.00	0.33	0.50	16.67
18	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	50.00	0.00	0.00	0.00	0.00
19	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	15.15	55.56	1.00	0.33	0.50	16.67
20	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	42.42	73.68	1.00	0.33	0.50	16.67
21	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	18.18	50.00	1.00	0.33	0.50	16.67
22	4.00	6.00	12.00	50.00	1.67	3.00	1.00	25.00	18.18	46.15	3.00	0.50	2.00	33.33
23	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	18.18	54.55	1.00	0.33	0.50	16.67
24	2.00	2.00	2.00	100.00	1.00	1.00	1.00	50.00	12.12	57.14	0.00	0.00	0.00	0.00
25	1.00	0.00	0.00		0.00	0.00	1.00	100.00	15.15	100.00	0.00		0.00	
26	7.00	0.00	42.00	0.00			7.00	100.00	33.33	100.00	21.00	1.00	21.00	100.00
27	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
28	1.00	0.00	0.00		0.00	0.00	1.00	100.00	15.15	100.00	0.00		0.00	
29	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
30	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
31	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
32	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
33	1.00	0.00	0.00		0.00	0.00	1.00	100.00	21.21	100.00	0.00		0.00	
34	1.00	0.00	0.00		0.00	0.00	1.00	100.00	33.33	100.00	0.00		0.00	

EGO NETWORKS
Input dataset: AKS T3 (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\AKS T3)

Table 27 AKS T3 Ego Net KS Gongchang

Density Measures													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Size	Ties	Pairs	Densit	AvgDis	Diamet	nWeakC	pWeakC	2StepR	ReachE	Broker	nBroke	EgoBet	nEgoBe
1	12.00	12.00	132.00	9.09		6.00	50.00	57.58	59.38	60.00	0.91	58.50	88.64
2	3.00	2.00	6.00	33.33		2.00	66.67	48.48	84.21	2.00	0.67	2.00	66.67
3	1.00	0.00	0.00		0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	
4	3.00	4.00	6.00	66.67		1.00	33.33	36.36	66.67	1.00	0.33	0.50	16.67
5	5.00	2.00	20.00	10.00	1.33	2.00	4.00	80.00	63.64	87.50	0.90	9.00	90.00
6	4.00	2.00	12.00	16.67		3.00	75.00	24.24	72.73	5.00	0.83	5.00	83.33
7	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	45.45	75.00	1.00	0.33	0.50
8	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	39.39	72.22	1.00	0.33	0.50
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	1.00	0.00	0.00		0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	
11	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	39.39	76.47	1.00	0.33	0.50
12	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	39.39	76.47	1.00	0.33	0.50
13	BS HK Partner Rep	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	50.00	0.00	0.00	0.00
14	KS Floor Mgr	2.00	0.00	0.00		2.00	100.00	18.18	100.00	1.00	1.00	1.00	100.00
15	KS Line Mgr	2.00	0.00	0.00		2.00	100.00	9.09	100.00	1.00	1.00	1.00	100.00
16	KS Line Workers	1.00	0.00	0.00	0.00	0.00	1.00	100.00	6.06	100.00	0.00	0.00	
17	KS Prod Design Eng	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	15.15	55.56	1.00	0.33
18	KS Prod Draftsman	2.00	2.00	100.00	1.00	1.00	1.00	50.00	9.09	50.00	0.00	0.00	0.00
19	KS Elec Design Eng	3.00	4.00	6.00	66.67	1.33	2.00	1.00	33.33	15.15	55.56	1.00	0.33
20	KS UL Specialist	2.00	2.00	100.00	1.00	1.00	1.00	50.00	42.42	87.50	0.00	0.00	0.00
21	UL/MM Ind Agent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	UL Lead Eng	4.00	4.00	12.00	33.33	2.00	2.00	50.00	42.42	77.78	4.00	0.67	4.00
23	UL Asst Eng	2.00	2.00	100.00	1.00	1.00	1.00	50.00	12.12	66.67	0.00	0.00	0.00
24	UL Test Tech	2.00	2.00	100.00	1.00	1.00	1.00	50.00	12.12	66.67	0.00	0.00	0.00
25	KS CN Sales Cd	1.00	0.00	0.00	0.00	0.00	1.00	100.00	15.15	100.00	0.00	0.00	0.00
26	KS AM/EU Sales Cd	7.00	0.00	42.00	0.00	7.00	100.00	33.33	100.00	21.00	1.00	21.00	100.00
27	KS AM/EU Sales Asst	1.00	0.00	0.00	0.00	0.00	1.00	100.00	21.21	100.00	0.00	0.00	
28	KS Sales Sec	1.00	0.00	0.00	0.00	0.00	1.00	100.00	15.15	100.00	0.00	0.00	
29	Client TWN	1.00	0.00	0.00	0.00	0.00	1.00	100.00	21.21	100.00	0.00	0.00	
30	Client GRM	1.00	0.00	0.00	0.00	0.00	1.00	100.00	21.21	100.00	0.00	0.00	
31	Client AMR LC	1.00	0.00	0.00	0.00	0.00	1.00	100.00	21.21	100.00	0.00	0.00	
32	Client AMR CM	1.00	0.00	0.00	0.00	0.00	1.00	100.00	21.21	100.00	0.00	0.00	
33	Client PAK WBI	1.00	0.00	0.00	0.00	0.00	1.00	100.00	21.21	100.00	0.00	0.00	
34	Local Investor	1.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	

Table 28 AKS Ego Net KS Gongchang

Calculations	
1. Size. Size of ego network.	
2. Ties. Number of directed ties.	
3. Pairs. Number of ordered pairs.	
4. Density. Ties divided by Pairs.	
5. AvgDist. Average geodesic distance.	
6. Diameter. Longest distance in egonet.	
7. nWeakComp. Number of weak components.	
8. pWeakComp. NWeakComp divided by Size.	
9. 2StepReach. # of nodes within 2 links of ego.	
10. ReachEffic. 2StepReach divided Size.	
11. Broker. # of pairs not directly connected.	
12. Normalized Broker. Broker divided by number of pairs.	
13. Ego Betweenness. Betweenness of ego in own network.	
14. Normalized Ego Betweenness. Betweenness of ego in own network.	
Ego network measures saved as dataset EgoNet (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\EgoNet)	

Running time: 00:00:01	
Output generated: 14 Jun 13 08:30:11	
UCINET 6.471 Copyright (c) 1992-2012 Analytic Technologies	

Table 29 AKH T1 Ego Net American Flight Academy

AKH T1 (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\AKH T1)														
Density Measures														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Size	Ties	Pairs	Densit	AvgDis	Diamet	nWeakC	pWeakC	2StepR	ReachE	Broker	nBroke	EgoBet	nEgoBe
1	AFA Dean Int'l Studys	4.00	0.00	12.00	0.00		4.00	100.00	30.30	100.00	6.00	1.00	6.00	100.00
2	AFA Pres/Dean	5.00	6.00	20.00	30.00		3.00	60.00	30.30	62.50	7.00	0.70	7.00	70.00
3	AFA VP	3.00	6.00	6.00	100.00	1.00	1.00	33.33	15.15	45.45	0.00	0.00	0.00	0.00
4	AFA Dir. Log	3.00	6.00	6.00	100.00	1.00	1.00	33.33	15.15	45.45	0.00	0.00	0.00	0.00
5	AFA Pub. Rel. Dir.	3.00	6.00	6.00	100.00	1.00	1.00	33.33	15.15	45.45	0.00	0.00	0.00	0.00
6	AFA Eng Teacher 1	1.00	0.00	0.00	0.00	0.00	1.00	100.00	3.03		0.00	0.00	0.00	0.00
7	AFA Eng Teacher 2	1.00	0.00	0.00	0.00	0.00	1.00	100.00	3.03		0.00	0.00	0.00	0.00
8	S. Medical Advisor	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
9	A. Medical Advisor	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
10	CFS Dir. Of Flight	12.00	0.00	132.00	0.00		12.00	100.00	39.39	100.00	66.00	1.00	66.00	100.00
11	CFS CFI 1	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
12	CFS CFI 2	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
13	CFS CFI 3	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
14	CFS CFI 4	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
15	CFS CFI 5	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
16	CFS CFI 6	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
17	CFS CFI 7	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
18	CFS CFI 8	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
19	CFS CFI 9	1.00	0.00	0.00	0.00	0.00	1.00	100.00	36.36	100.00	0.00	0.00	0.00	0.00
20	WH Comptroller	3.00	2.00	6.00	33.33		2.00	66.67	21.21	77.78	2.00	0.67	2.00	66.67
21	Stock Sales	2.00	2.00	2.00	100.00	1.00	1.00	50.00	9.09	60.00	0.00	0.00	0.00	0.00
22	Aviation Consultant	2.00	2.00	2.00	100.00	1.00	1.00	50.00	9.09	60.00	0.00	0.00	0.00	0.00
23	Airline Flight Director	1.00	0.00	0.00	0.00	0.00	1.00	100.00	12.12	100.00	0.00	0.00	0.00	0.00
24	Student Recruiter	1.00	0.00	0.00	0.00	0.00	1.00	100.00	9.09	100.00	0.00	0.00	0.00	0.00
25	Cent. M. of Ed	2.00	0.00	2.00	0.00		2.00	100.00	18.18	100.00	1.00	1.00	1.00	100.00
26	Prov. M. of Ed	2.00	0.00	2.00	0.00		2.00	100.00	15.15	100.00	1.00	1.00	1.00	100.00
27	Test Student	2.00	0.00	2.00	0.00		2.00	100.00	48.48	100.00	1.00	1.00	1.00	100.00
28	XU Pres. & Chair	3.00	0.00	6.00	0.00		3.00	100.00	12.12	100.00	3.00	1.00	3.00	100.00
29	XU Eng. Teacher	1.00	0.00	0.00	0.00	0.00	1.00	100.00	9.09	100.00	0.00	0.00	0.00	0.00
30	YU Investor	1.00	0.00	0.00	0.00	0.00	1.00	100.00	6.06	100.00	0.00	0.00	0.00	0.00
31	YU Pres	2.00	0.00	2.00	0.00		2.00	100.00	12.12	100.00	1.00	1.00	1.00	100.00
32	YU VP & Party Sec	3.00	0.00	6.00	0.00		3.00	100.00	12.12	100.00	3.00	1.00	3.00	100.00
33	YU Dean T	1.00	0.00	0.00	0.00	0.00	1.00	100.00	9.09	100.00	0.00	0.00	0.00	0.00
34	YU Dean Z	1.00	0.00	0.00	0.00	0.00	1.00	100.00	9.09	100.00	0.00	0.00	0.00	0.00

Table 30 AKH T2 Ego Net American Flight Academy

EGO NETWORKS

Input dataset:

Density Measures

AKH T2 (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\AKH T2)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Size	Ties	Pairs	Densit	AvgDis	Diamet	nWeakC	pWeakC	2StepR	ReachE	Broker	nBroke	EgoBet	nEgoBe
1	AFA Dean Int'l Stdys	6.00	2.00	30.00	6.67		5.00	83.33	42.42	77.78	14.00	0.93	14.00	93.33
2	AFA Pres/Dean	6.00	6.00	30.00	20.00		4.00	66.67	66.67	75.86	12.00	0.80	12.00	80.00
3	AFA VP	3.00	6.00	6.00	100.00	1.00	1.00	33.33	18.18	50.00	0.00	0.00	0.00	0.00
4	AFA Dir. Log	3.00	6.00	6.00	100.00	1.00	1.00	33.33	18.18	50.00	0.00	0.00	0.00	0.00
5	AFA Pub. Rel. Dir.	3.00	6.00	6.00	100.00	1.00	1.00	33.33	18.18	50.00	0.00	0.00	0.00	0.00
6	AFA Eng Teacher 1	1.00	0.00	0.00		0.00	0.00	1.00	100.00	3.03	0.00	0.00	0.00	0.00
7	AFA Eng Teacher 2	1.00	0.00	0.00		0.00	0.00	1.00	100.00	3.03	0.00	0.00	0.00	0.00
8	S. Medical Advisor	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
9	A. Medical Advisor	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
10	CFS Dir. Of Flight	13.00	2.00	156.00	1.28		12.00	92.31	54.55	85.71	77.00	0.99	77.00	98.72
11	CFS CFI 1	2.00	2.00	2.00	100.00	1.00	1.00	50.00	42.42	87.50	0.00	0.00	0.00	0.00
12	CFS CFI 2	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
13	CFS CFI 3	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
14	CFS CFI 4	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
15	CFS CFI 5	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
16	CFS CFI 6	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
17	CFS CFI 7	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
18	CFS CFI 8	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
19	CFS CFI 9	1.00	0.00	0.00		0.00	0.00	1.00	100.00	39.39	100.00	0.00	0.00	
20	WH Comptroller	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Stock Sales	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Aviation Consultant	1.00	0.00	0.00		0.00	0.00	1.00	100.00	18.18	100.00	0.00	0.00	
23	Airline Flight Director	1.00	0.00	0.00		0.00	0.00	1.00	100.00	18.18	100.00	0.00	0.00	
24	Student Recruiter	2.00	2.00	2.00	100.00	1.00	1.00	50.00	24.24	80.00	0.00	0.00	0.00	0.00
25	Cent. M. of Ed	2.00	0.00	2.00	0.00		2.00	100.00	21.21	87.50	1.00	1.00	1.00	100.00
26	Prov. M. of Ed	2.00	0.00	2.00	0.00		2.00	100.00	15.15	83.33	1.00	1.00	1.00	100.00
27	Test Student	3.00	2.00	6.00	33.33		2.00	66.67	54.55	85.71	2.00	0.67	2.00	66.67
28	XU Pres. & Chair	4.00	2.00	12.00	16.67		3.00	75.00	24.24	72.73	5.00	0.83	5.00	83.33
29	XU Eng. Teacher	1.00	0.00	0.00		0.00	0.00	1.00	100.00	12.12	100.00	0.00	0.00	
30	YU Investor	1.00	0.00	0.00		0.00	0.00	1.00	100.00	6.06	100.00	0.00	0.00	
31	YU Pres	2.00	0.00	2.00	0.00		2.00	100.00	12.12	100.00	1.00	1.00	1.00	100.00
32	YU VP & Party Sec	3.00	0.00	6.00	0.00		3.00	100.00	12.12	100.00	3.00	1.00	3.00	100.00
33	YU Dean T	1.00	0.00	0.00		0.00	0.00	1.00	100.00	9.09	100.00	0.00	0.00	
34	YU Dean Z	1.00	0.00	0.00		0.00	0.00	1.00	100.00	9.09	100.00	0.00	0.00	

Table 31 AKH T3 Ego Net American Flight Academy

AKH T3 (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\AKH T3)														
Input dataset:														
Density Measures														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Size	Ties	Pairs	Densit	AvgDis	Diamet	nWeakC	pWeakC	2StepR	ReachE	Broker	nBroke	EgoBet	nEgoBe
1	AFA Dean Int'l Stdys	9.00	12.00	72.00	16.67		4.00	44.44	84.85	66.67	30.00	0.83	28.17	78.24
2	AFA Pres/Dean	6.00	8.00	30.00	26.67		3.00	50.00	75.76	73.53	11.00	0.73	11.00	73.33
3	AFA VP	3.00	6.00	6.00	100.00	1.00	1.00	33.33	18.18	50.00	0.00	0.00	0.00	0.00
4	AFA Dir. Log	3.00	6.00	6.00	100.00	1.00	1.00	33.33	18.18	50.00	0.00	0.00	0.00	0.00
5	AFA Pub. Rel. Dir.	3.00	6.00	6.00	100.00	1.00	1.00	33.33	18.18	50.00	0.00	0.00	0.00	0.00
6	AFA Eng Teacher 1	2.00	0.00	2.00	0.00		2.00	100.00	21.21	100.00	1.00	1.00	1.00	100.00
7	AFA Eng Teacher 2	1.00	0.00	0.00			1.00	100.00	6.06		100.00	0.00	0.00	0.00
8	S. Medical Advisor	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
9	A. Medical Advisor	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
10	CFS Dir. Of Flight	14.00	6.00	182.00	3.30		11.00	78.57	72.73	80.00	88.00	0.97	87.00	95.60
11	CFS CFI 1	2.00	2.00	2.00	100.00	1.00	1.00	50.00	42.42	82.35	0.00	0.00	0.00	0.00
12	CFS CFI 2	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
13	CFS CFI 3	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
14	CFS CFI 4	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
15	CFS CFI 5	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
16	CFS CFI 6	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
17	CFS CFI 7	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
18	CFS CFI 8	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
19	CFS CFI 9	1.00	0.00	0.00			1.00	100.00	42.42		100.00	0.00	0.00	0.00
20	WH Comptroller	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Stock Sales	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Aviation Consultant	3.00	4.00	6.00	66.67	1.33	2.00	33.33	39.39	68.42	1.00	0.33	0.50	16.67
23	Airline Flight Director	1.00	0.00	0.00			1.00	100.00	27.27		100.00	0.00	0.00	0.00
24	Student Recruiter	3.00	4.00	6.00	66.67	1.33	2.00	33.33	39.39	68.42	1.00	0.33	0.50	16.67
25	Cent. M. of Ed	2.00	0.00	2.00	0.00		2.00	100.00	30.30	90.91	1.00	1.00	1.00	100.00
26	Prov. M. of Ed	2.00	0.00	2.00	0.00		2.00	100.00	18.18	85.71	1.00	1.00	1.00	100.00
27	Test Student	3.00	4.00	6.00	66.67	1.33	2.00	33.33	60.61	80.00	1.00	0.33	0.50	16.67
28	XU Pres. & Chair	5.00	4.00	20.00	20.00		3.00	60.00	33.33	61.11	8.00	0.80	7.50	75.00
29	XU Eng. Teacher	1.00	0.00	0.00			1.00	100.00	15.15		100.00	0.00	0.00	0.00
30	YU Investor	1.00	0.00	0.00			1.00	100.00	15.15		100.00	0.00	0.00	0.00
31	YU Pres	5.00	4.00	20.00	20.00		3.00	60.00	39.39	68.42	8.00	0.80	7.50	75.00
32	YU VP & Party Sec	3.00	0.00	6.00	0.00		3.00	100.00	21.21	100.00	3.00	1.00	3.00	100.00
33	YU Dean T	1.00	0.00	0.00			1.00	100.00	9.09	100.00	0.00	0.00	0.00	0.00
34	YU Dean Z	1.00	0.00	0.00			1.00	100.00	9.09	100.00	0.00	0.00	0.00	0.00

Table 32 AKH Ego Net American Flight Academy

Calculations
1. Size. Size of ego network.
2. Ties. Number of directed ties.
3. Pairs. Number of ordered pairs.
4. Density. Ties divided by Pairs.
5. AvgDist. Average geodesic distance.
6. Diameter. Longest distance in egonet.
7. nWeakComp. Number of weak components.
8. pWeakComp. NWeakComp divided by Size.
9. 2StepReach. # of nodes within 2 links of ego.
10. ReachEffic. 2StepReach divided Size.
11. Broker. # of pairs not directly connected.
12. Normalized Broker. Broker divided by number of pairs.
13. Ego Betweenness. Betweenness of ego in own network.
14. Normalized Ego Betweenness. Betweenness of ego in own network.
Ego network measures saved as dataset EgoNet (C:\Users\Patricia\Documents\SD Card Files\Doctoral Dissertation\UCINET Files\EgoNet)

Running time: 00:00:01
Output generated: 14 Jun 13 08:30:11
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Table 33 AKS Dyadic Redundancy

Dyadic Redundancy	KS Pres		
	T1	T2	T3
KS UL Specialist	0.33	0.33	0.50
UL/WM Ind Agent	0.00	0.00	0.00
UL Lead Eng	0.00	0.00	0.25
BS Partner	0.00	0.00	0.33
BS HK Partner	0.00	0.00	0.33

Table 34 AKH Dyadic Redundancy

Dyadic Redundancy	AFA Dean of Int'l Studies		
	T1	T2	T3
AFA Pres/Dean	0.00	0.00	0.17
AFA VP	0.00	0.00	0.00
AFA Dir. Log	0.00	0.00	0.00
AFA Pub. Rel. Dir.	0.00	0.00	0.00
CFS Dir. Of Flight	0.00	0.00	0.14
XU Pres. & Chair	0.00	0.25	0.40
YU Pres	0.00	0.00	0.40

APPENDIX F: RESEARCH CERTIFICATIONS

CITI Collaborative Institutional Training Initiative

Human Research Curriculum Completion Report Printed on 9/8/2012

Learner: Patricia Weeks (username: pweeksla)

Institution: University of South Florida

Contact Information 5664 40th Terrace 332

Kenneth City, Florida 33709 USA

Department: Government & International Relations

Phone: 727-488-8310

Email: pweeks@mail.usf.edu

Social / Behavioral Investigators and Key Personnel:

Stage 1. Basic Course Passed on 09/08/12 (Ref # 3887823)

Required Modules	Date Completed	
Introduction	12/26/09	no quiz
History and Ethical Principles - SBR	09/07/12	4/5 (80%)
Defining Research with Human Subjects - SBR	09/07/12	5/5 (100%)
The Regulations and The Social and Behavioral Sciences - SBR	09/07/12	5/5 (100%)
Assessing Risk in Social and Behavioral Sciences - SBR	09/07/12	5/5 (100%)
Informed Consent - SBR	09/07/12	5/5 (100%)
Privacy and Confidentiality - SBR	09/07/12	5/5 (100%)
Research with Prisoners - SBR	09/08/12	4/4 (100%)
Research with Children - SBR	09/08/12	4/4 (100%)
Research in Public Elementary and Secondary Schools - SBR	09/08/12	4/4 (100%)
International Research - SBR	09/08/12	3/3 (100%)
Internet Research - SBR	09/08/12	5/5 (100%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

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CITI Collaborative Institutional Training Initiative (CITI)

Social and Behavioral Responsible Conduct of Research Curriculum Completion Report Printed on 9/8/2012

Learner: Patricia Weeks (username: pweeksla)

Institution: University of South Florida

Contact Information 5664 40th Terrace 332

Kenneth City, Florida 33709 USA

Department: Government & International Relations

Phone: 727-488-8310

Email: pweeks@mail.usf.edu

Social and Behavioral Responsible Conduct of Research: This course is for investigators, staff and students with an interest or focus in **Social and Behavioral** research. This course contains text, embedded case studies AND quizzes.

Stage 1. Basic Course Passed on 09/08/12 (Ref # 3887824)

Required Modules	Date Completed	
Introduction to the Responsible Conduct of Research	09/08/12	no quiz
Research Misconduct 2-1495	09/08/12	5/5 (100%)
Data Acquisition, Management, Sharing and Ownership 2-1523	09/08/12	5/5 (100%)
Publication Practices and Responsible Authorship 2-1518	09/08/12	5/5 (100%)
Peer Review 2-1521	09/08/12	5/5 (100%)
Responsible Mentoring 01-1625	09/08/12	6/6 (100%)
Using Animal Subjects in Research 13301	09/08/12	6/8 (75%)
Conflicts of Interest and Commitment 2-1462	09/08/12	6/6 (100%)
Collaborative Research 2-1484	09/08/12	5/5 (100%)
Human Subjects 13566	09/08/12	5/5 (100%)
The CITI RCR Course Completion Page	09/08/12	no quiz

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

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ABOUT THE AUTHOR

Patricia Weeks was born in New York City and raised in Connecticut. Her research interests cover Chinese culture and history, social network analysis, economic development and organizational politics. Patricia has traveled extensively throughout China and has lived and worked in the country since 1998 when her first trip lead her to the city of Wuhan located in the geographical center of China just as Deng Xiaoping's "opening up" began to reach the inland provinces. The rapid changes taking place across China's coastal cities had finally spread to the hinterland where cultural traditions run deep and Chinese peasants learned quickly how to straddled both worlds. Fascinated by the way that Chinese were embracing their new place in the global community, Patricia pursued research into the role that culture plays in economic development. Currently, Dr. Weeks teaches courses on Global Leadership, Modern Chinese History, and Chinese Culture at the University of South Florida, St. Petersburg.