Incompetence, Noise, and Fear in Central-Local Relations in China

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In this article, I analyze how the structure of the Chinese state affects the probability that local cadres will comply with the directives of the center. Because the Chinese state consists of a five-level hierarchy of dyadic principal-agent relationships, the existence of even moderate levels of routine incompetence and noise ensures that compliance will be less than perfect due to simple error. Moreover, because the center cannot perfectly differentiate between simple incompetence and willful disobedience, the structure of the state enables cadres to engage in strategic disobedience. I thus conclude that the complexity of the linkages between center and locality are a major factor in the observed persistence of corruption and institutional malfeasance.

Introduction

Chinese governments, both modern and historic, have been dogged by problems of local compliance. Even in the best of times, the leadership in the capital has never truly controlled the localities and local malfeasance has been a consistent theme in Chinese political history. Historically, the center sought to control local malfeasance by recruiting "honest and upright" officials and erecting parallel monitoring and supervisory structures (e.g., the Imperial Censorate, the Chinese Communist Party's Central Disciplinary Inspection Commission). Chronic noncompliance has persisted nevertheless. Since the advent of reform, to take one example, the center has repeatedly sought to control excessive taxation by local governments. Legally, rural taxes cannot exceed 5 percent of farmers' income. By 1990, however, taxes averaged 10 percent of farm income, with some localities reportedly levying taxes up to 20–40 percent of farm income. In all, the "farmers' burden" (*nongmin fudan*)

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imposed by the "three disorders" (*san luan*: arbitrary taxation, arbitrary levying of fines, and unauthorized expropriation) may have totaled between Y25 billion (US$6 billion) and Y100 billion (US$25 billion) per year in the 1990s (Wedeman 2000). Despite sporadic outbreaks of violent tax protests (e.g., Renshou County 1993) and repeated crackdowns by the central government, excessive taxation has remained a persistent problem in many areas for nearly two decades.

In this article I seek to explain persistent local noncompliance and malfeasance. Persistent local malfeasance reflects, obviously, some relatively significant level of dishonesty by local officials and hence willful disobedience. In this article, however, I argue that persistent noncompliance is not simply a function of dishonesty. Although dishonesty plays a role, I contend that the structure of the Chinese state is such that incompetence, random chance, and noise will create a significant "natural rate of noncompliance" absent willful disobedience. Some degree of incompetence is inherent in any bureaucratic hierarchy, with the result that a principal's orders may not be carried out simply because her agents lack the skill and ability to complete their assigned tasks. In other instances, well-intentioned, diligent, and competent agents may fail because "nature" turns against them. Noise—information that has been distorted in the process of collection and transmission—creates additional complications because well-intentioned agents may misunderstand the principal's orders and do the wrong thing. Noise also makes it difficult for the principal to determine if her orders have been correctly carried out and, if not, whether the failure results from incompetence, bad luck, or willful disobedience.

Uncertainty about her agent's reliability and the causes of noncompliance means that the principal may either fail to detect both inadvertent and willful noncompliance or, if she does, to incorrectly attribute willful disobedience to incompetence or accuse her agents of willful disobedience when in fact they failed to carry out her orders due to incompetence or bad luck. Because information about her agents' actions may be contaminated with falsehoods, the principal may also accuse them of disobedience when they have in fact faithfully carried out her orders. False accusations, however, can have a highly detrimental effect on agents' morale and their willingness to faithfully serve a principal with a reputation for arbitrariness. I thus posit that when faced with ambiguity, the principal is apt to be cautious and reticent.

The resulting combination of environmental ambiguity and caution creates conditions in which cadres can take advantage of the center's uncertainty to engage in willful disobedience. If cadres believe that any violation of orders will be immediately and inevitably detected and punished, then they would presumably never disobey, so long as the punishment they expect to suffer is greater than the anticipated benefit of disobedience. Because it is quite possible for the center to adopt a policy of automatic and harsh punishment (in game theory terms, a "boil in oil" punishment strategy), so long as cadres are convinced that there is a high probability of getting caught, they will be deterred from violating their roles as agents. Incompetence, random chance, and noise, however, create a situation in which automatic punishments may prove dysfunctional or impossible.

Cadres can, I argue, play on the center's assumptions about incompetence, random chance, and noise in ways that force us to consider detection and punishment as probabilistic, particularly for cadres operating at the bottom of the administrative hierarchy and hence at the greatest administrative distance from the center. That is, if they willfully disobey orders, there will be some not insignificant chance that the center will: (a) not detect their violation, (b) will assume that the violation was due to either incompetence or random chance, or (c) will not take any action because it is not sure that the violation was a result of willful disobedience. Moreover, even if the center does detect a violation, concludes it was due to willful disobedience, and orders disciplinary action, the multilayered structure of the Chinese state creates conditions in which those orders may not be carried out, for essentially the same reasons that the center's original orders were not: incompetence, random chance, and noise—plus, of course, possible willful disobedience.

In making this argument, I do not assume that Chinese cadres are bunglers or that the Chinese state is dogged by bad luck. Instead, I assert that the complex, multilevel structure of the Chinese state apparatus means that even low levels of incompetence, bad luck, and noise will result in a high natural rate of noncompliance. The presence of a high rate of natural noncompliance, in turn, encourages high rates of willful disobedience. Persistence noncompliance problems such as the *san luan* thus have their roots in the structure of the Chinese state and are likely to continue so long as the state remains a unitary hierarchy. The structure of the Chinese state also helps explain the regime's heavy reliance on periodic crackdowns and campaigns. Because routine monitoring and "police patrolling" are likely to prove insufficient in controlling local malfeasance, the center is forced to resort to periodic "terror campaigns," often launched after local protests set off "fire alarms," whose overt function is to root out malefactors, but whose primary function is to instill fear among cadres and to deter malfeasance.

Structure

As typically employed, principal-agent models apply to situations where a principal employs an agent to perform some task, or set of tasks, on her behalf. In certain cases, the principal may employ a number of agents, either because the magnitude of the task is such that a team effort is required or because the principal relies on the agents to monitor each other and hence ensure that all exert a maximal effort. The model assumes conflicts between the goals of the principal and her agent such that unless the principal effectively monitors the behavior of the agent, or designs contracts that align the interests of the agent with her, the agent will not perform the tasks assigned to him but will instead either shirk (do no work) or usurp the authority entrusted in him by the principal to advance his interests rather than those of the principal (see Brehm and Gates 1997).

Although it is clearly possible to borrow elements of principal-agent theory and apply them to the study of central-local relations in China, it is first necessary to examine the structure of principal-agent linkages within the Chinese state (see Granick 1990; Shirk 1993; and Harding 1981). The Chinese state

consists of five distinct territorial-administrative levels. At the top, directly below the center are the provincial-level units.[1] Beneath the provinces, the second level consists of municipalities and prefectures. The third level consists of counties, below which the fourth level consists of townships and villages. At the bottom of the administrative hierarchy is the hamlet. Technically, the township, village, and hamlet fall outside the formal state structure, and cadres employed at this level are not considered state officials. In practice, authority relationships between grassroots cadres and local governments at the township level are such that for my purposes these low-level cadres can be considered agents of the state, albeit ones whose links to the formal state are somewhat more tenuous than state cadres employed at other levels.

Because the current one-level down *nomenklatura* system defines a principal-agent interface at each of these levels, the Chinese state consists of a five-level hierarchy of dyadic principal-agent relationships. Thus, the province is the agent of the center, the municipality/prefecture is the agent of the province, the county is the agent of the municipality/prefecture, the township/village is the agent of the county, and the hamlet is the agent of the township/village. It is perhaps, however, more accurate to think of the province, prefecture, county, and township as agents-cum-principals because they serve concurrently in both capacities, acting as agents of their superiors and principals vis-à-vis their subordinates.

The relationship between levels is heavily influenced by the system of cadre contracts wherein superior levels set performance goals for their subordinates and withhold a percentage of their salaries as a form of performance bond (Li and O'Brien 1997; Whiting 2000; and Manion 1991). If cadres fulfill the targets spelled out in their contracts, they receive their salaries in full. If they overfulfill the targets, they may be granted bonuses. Those that fail to meet their targets are docked. As predicted by the idea of moral hazard, cadres thus strive to fulfill the targets set for them by their immediate superiors, particularly those that are "hard" (i.e., relatively easily measured and hence frequently those that can be quantified) but are less diligent in fulfilling "soft" targets and are relatively indifferent to the demands of their superior's superiors or other bureaucratic actors within the administrative hierarchy. Thus, for example, township and village cadres are apt to be hyper-responsive to orders issued by the county, but indifferent to orders from the province or the center, if these latter orders conflict with those received from the county, because the county controls their remuneration (via the cadre responsibility system) and career mobility (via the *nomenklatura* system).[2]

The multilayered structure of the Chinese state is important when we consider compliance relationships because in many cases a policy decision made at the center must filter down through the various layers before implementation by the grassroots level. At each nexus in the center-to-hamlet chain, principal-agent problems, including adverse selection, moral hazard, and monitoring, are replicated. Thus, when we think about the problem of local compliance with center orders, we need to think not about a dyadic principal-agent relationship wherein the center (the principal) gives a directive to the locality (the agent), but rather a chain of command wherein the center directs

the province to undertake some action, the province then directs the municipality to undertake the action, it in turn issues orders to the county, which issues orders to the township, which then issues orders to the hamlet level cadres who implement the action directed by the center. At any stage in this chain orders may be misunderstood, passed on incorrectly, improperly implemented, ignored, or even disobeyed.

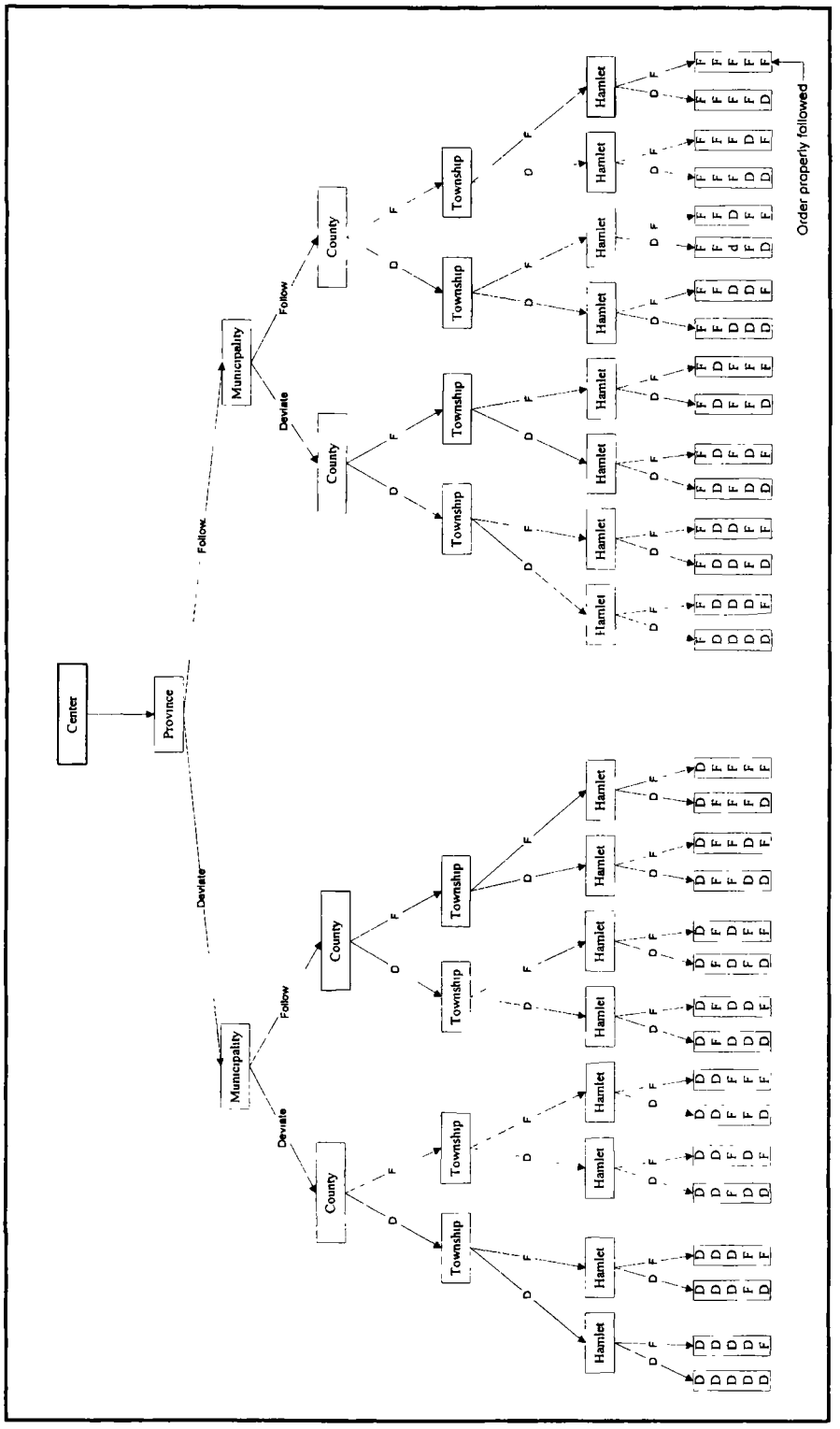
In simplified terms, we can model the effects of this multilayered hierarchy of principal-agent/principal-cum-agent-agent relations using an approach based on the children's game of Broken Telephone.[3] We assume that as an order moves through each interlayer nexus two things can happen: the order may be faithfully transmitted to the next layer down, in which case we can say that the order was "followed," or it may be incorrectly transmitted, in which case we can say a "deviation" occurred. This assumption yields a stylized picture of the system as shown in Figure 1. As can be easily seen, the fact that an order must transit down through a multiplicity of layers means that there are numerous opportunities for deviations to occur. As a result, among the thirty-two possible outcomes, only one (labeled FFFFF) results in strict compliance with the center's order. In all other cases, deviations occur and the center's orders are not faithfully or properly transmitted down the administrative hierarchy.

The deviations diagramed in Figure 1 may occur for a variety of reasons including incompetence, random chance, or willful disobedience. In the following section, I shall analyze the significance of incompetence. Although random chance plays an important role, because I shall assume that it is governed by exogenous probabilities, I do not think it necessary to consider it in detail. I will, however, factor it into the model at the end of the section on incompetence.

Incompetence

One of the fundamental assumptions of a principal-agent model is that when a principal engages an agent, the principal cannot be sure that her agent is fully qualified to perform the tasks the principal wishes performed on her behalf. Although the principal may reduce her uncertainty about the reliability of the agent by acquiring information on the agent (requiring certification from some outside organization, checking references, administering an examination, etc.) in most circumstances there is simply no way to ensure that the agent is fully competent. Most often, particularly when the principal must employ a significant number of agents and must select them from a relatively finite pool of applicants, the principal is apt to find that her agents perform competently some of the time and incompetently some of the time. That is, they have the skills necessary to perform their assigned duties successfully some of the time, but simply fail to perform them correctly some of the time. In the latter case, the failure to correctly perform the task need not be a result of willful disobedience on the part of the agent but rather a result of the agent's incompetence, by which I refer to cases in which an agent attempts to perform an assigned task but fails in his attempt. Thus, for example, if a county magistrate orders a cadre to implement a birth control program but that effort fails because the

Figure 1


Center
Province
Follow
Deviate
Municipality
County
Township
Hamlet
D
F
Order properly followed

cadre lacks the necessary skill, knowledge, experience, and resources to implement a successful program, I ascribe the failure to incompetence rather than willful disobedience because the cadre made a good faith effort to fulfill orders. (I would, on the other hand, ascribe the failure to successfully implement the program to willful disobedience if the cadre had ignored the magistrate's orders and made no effort to set up a birth control program, or made only a pro forma effort rather than diligently tried to fulfill his superior's orders).

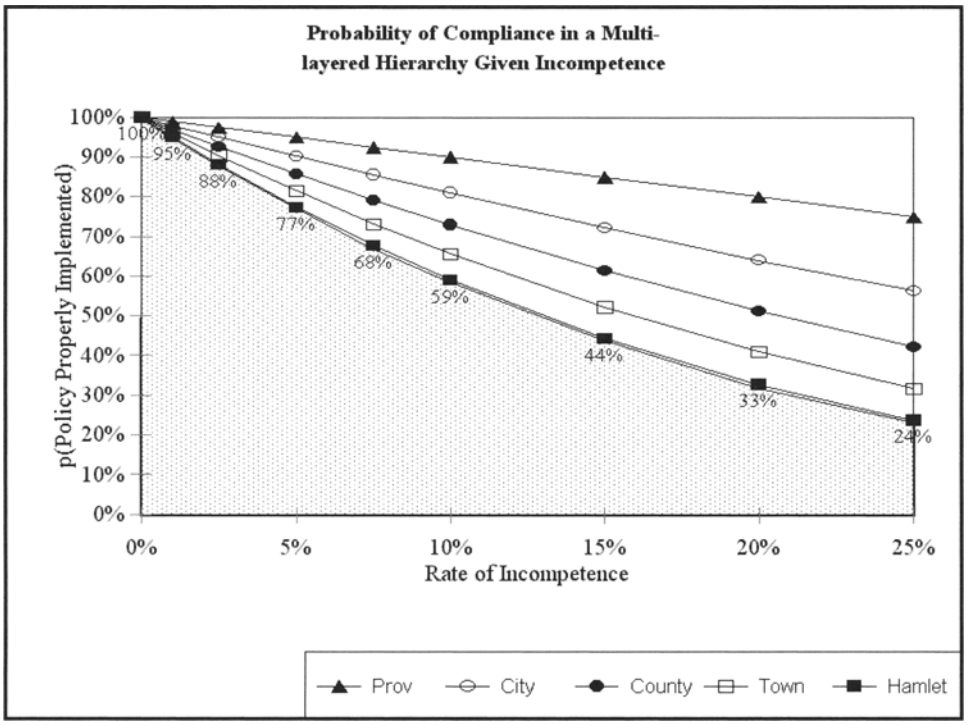
Incompetence exists at all levels of the administrative hierarchy. Because incompetence at one level will affect the behavior of all subordinate levels, it acts as a form of chained probability. To estimate the aggregate probability that an order issued by the center will be properly transmitted through the various levels of the administrative hierarchy and satisfactorily implemented at the hamlet level, we thus multiply out the competence rates of each level. Thus, if we assume a uniform competence rate of X, and have an administrative hierarchy composed of N principal-agent dyads, then the overall probability that an order will be competently executed will be X^N. Based on such a calculation, we can use comparative statics to illustrate the effect of declining rates of competence.

As shown in Figure 2, even at relatively high rates of competence, the probability that the center's orders will be competently executed falls considerably as one descends the administrative hierarchy. Thus, for instance, if we assume a uniform competency rate of 97.5 percent (i.e., we assume individual levels carry out orders correctly 97.5 percent of the time and screw up only 2.5 percent of the time), the probability that an order issued by the center will be correctly implemented (the FFFFF outcome in Figure 1) falls from 97.5 percent at the provincial level, to 95.1 percent at the municipal level, 92.7 at the county level, 90.4 percent at the township level, and finally to 88.1 percent at the hamlet level. If we assume a 95 percent competency rate, the probability of correct implementation at the hamlet level falls to 77 percent. At a uniform average competency rate of 87 percent, the probability of correct implementation at the hamlet level falls to less than 50 percent.

Keep in mind that the reason the overall probability declines is not because I have assumed that hamlet-level cadres are bunglers, or are much less competent than their superiors at the provincial level. On the contrary, in this exercise I have assumed that hamlet-level cadres are as competent as their superiors. The probability of correct implementation thus falls not because of rank incompetence at the local level, but the multilayered structure of the administrative hierarchy creates multiple opportunities for incompetence to effect the outcome. And only a single mistake is needed to result in an outcome other than perfect compliance. Thus, for example, if the province incorrectly transmits an order to the municipality, even if the municipality then faithfully transmits that order to the county and the county, in turn, passes the order down to the township, and the township, finally, passes the order along to the hamlet, which then implements the province's order "correctly," the result will still be at variance with the center's order and hence I consider that the order was improperly carried out.[1]

What the preceding exercise suggests is that the perfect compliance outcome (FFFFF), wherein all levels faithfully and correctly follow orders, is apt

Figure 2



to obtain only part of the time—*even in the absence of willful disobedience.* That is, if we assume that cadres do their best to follow orders and do not consciously disobey their superiors, even if they get it right 95 percent of the time, the odds are that the center's orders will be properly carried out less than 80 percent of the time. In the remaining 20 percent of the cases, unintentional mistakes prevent proper implementation.

The preceding model can be permutated in any number of ways. For example, rather than assume a uniform rate of competence, we could more realistically assume a declining rate of competence. In this case, we would assume that provincial-level cadres are generally more competent than municipal-level cadres, that municipal-level cadres are more competent than county-level cadres, etc. This modification will create a model wherein errors are more likely at lower levels. Regardless of how we set up the parameters, however, the implications remain essentially the same: *so long as cadres are less than 100 percent competent, there is an inevitable probability that the center's orders will not be carried out properly.* Noncompliance, defined simply as a failure to comply, thus may occur "naturally."

This being true, whenever the center sees that its orders have not been carried out as it wished, then it must decide whether or not the failure to implement them properly was a function of: (a) incompetence or willful disobedience and (b) who was responsible for the failure. As might be imagined, working

through the complex set of possibilities described in Figure 1, seeking to isolate who screwed up and why, is likely to represent a formidable investigative exercise for the center. Whether it starts from the top down or works from the bottom up, the center must determine who followed whose orders and who deviated from the orders as originally drafted.

In doing so, it must also deal with the fact that even if all levels faithfully carried out their orders, there is still a chance that the failure was not due to incompetence, but rather random chance, plain dumb bad luck. Thus, for instance, if the center orders the construction of a system of dykes to prevent flooding and cadres at all levels faithfully follow through with the construction of a properly engineered flood control system, but the following year record breaking rainfall triggers catastrophic flooding with crests that exceed anything that local engineers anticipated, and the dykes collapse, then I ascribe the failure to achieve the center's goal of reducing the danger of floods to bad luck, not incompetence. Because there will almost always be a chance that things will go wrong despite everyone's best efforts, we thus need to include random chance as a variable. To do so, we simply multiply the probability of getting the FFFFF outcome (which we can designate the "competent compliance" outcome) by the odds that nature will prevent correct implementation to obtain the overall probability of "correct implementation." What this latter value might be we can only guess. But if we assume that it is greater than zero, then by assumption the probability of correct implementation will be:

p(correct implementation) = p(competent implementation) * (1-random chance of failure)

So long as p(competent implementation) is less than one, which it will be so long as some degree of incompetence is present in the system, and the chance of a random failure is greater than zero, p(correct implementation) will always be less than one. It then follows that the probability that incorrect implementation will be a result of factors other than willful disobedience will always be greater than zero.

Before moving on to consider the effect of informational noise on the principal's beliefs about incompetence, it bears pointing out that in a system where agents have strong incentives to obey their immediate superiors, but are either indifferent or insulated from their superiors two levels above, we might well assume that if an agent-cum-principal located at some intermediate level within the hierarchy makes a mistake, then his agents are likely to fall in behind the mistake. Thus, for instance, if a provincial government sets grain procurement rates above those set by the center, then lower level governments are likely to set their procurement rates in accordance with the erroneous provincial rate. They thus end up "obeying" the province, but "disobeying" the center. In fact, from a purely statistical point of view, the most likely non-compliant outcomes resulting from pure incompetence are those where one actor makes a mistake and her subordinates then follow that actor's orders. The odds against serial incompetence are in fact quite low.[2] Yet, even though the odds of most of the outcomes delineated in Figure 1 may be individually quite small, the fact remains that even at high levels of competence, the odds of obtaining perfect

compliance quickly fall to considerably less than one. Simple incompetence combined with a relatively complex multilayered administrative hierarchy and random chance, therefore, in and of itself creates considerable room for inadvertent noncompliance. As a result, the center must always assume that some of its orders will not be followed. Whenever noncompliance occurs, the question confronting the center thus becomes whether it is due to incompetence or willful disobedience.

Noise

Although we may posit that some level of incompetence is present in all organizational settings, neither the principal nor the outside analyst can accurately estimate the rate of incompetence. Even if they have a good idea of what the overall rate is, incompetence is an individualized factor and each of the principal's agents will have their own unique rate of incompetence. Some may be highly competent. Others may be bunglers. The problem facing the principal is thus to sort out the competent from the incompetent and to develop some a priori sense of each of her agent's level of competence. Such an a priori sense of the rate of incompetence will help the principal assess incoming data on policy implementation by giving her a general sense of how often routine errors can be expected. If the number of errors is lower than expected, then the principal has the option of assuming that they are simply mistakes and need not invest the time and effort into investigating why mistakes were made. If, on the other hand, the number of errors begins to exceed what is normally expected, this will act as a signal to the principal that intensified monitoring is necessary to determine if willful disobedience is to blame. The ability of the principal to guess what this threshold value is, however, depends on the quality of information she receives about the competency of her agents and their efforts relative to her orders.

Noise thus enters the mix twice: prior to an order being issued, and once an order has been issued and the center wishes to know if it has been properly or improperly carried out. In the first instance, noise becomes a factor because the principal cannot be sure how competent her agents are, either as a group or individually, but instead has to estimate the average rate. The reliability of that estimate depends, however, on the accuracy of information that the principal collects. If we assume that her information is never perfectly accurate then the estimate will in turn be only some sort of approximation of the actual rate. Based on this assumption, we can replicate our earlier exercise in comparative statics and thereby generate a graph similar to Figure 2, wherein even at relatively low rates of noise the multilayer structure of the Chinese administrative hierarchy yields relatively high aggregate rates of noise, *even in the absence of willful distortion.* Thus, if we assume a 95 percent accuracy rate (i.e., a 5 percent noise rate), then information originating at the hamlet level is likely to be less than 80 percent accurate by the time it reaches the center. Once again, we can vary our assumptions and substitute in a declining rate of accuracy, assuming that the information originating from the province is considerably cleaner than information originating from the municipality, etc. As was true in the case

of incompetence, varying our assumptions in this manner does not negate the net result because aggregate levels of noise will increase as the number of levels in the hierarchy increase.

Because incompetence and noise both introduce uncertainty for the center, they are interactive. Specifically, noise increases the center's uncertainty about: (a) what outcome has been obtained and (b) what is the likelihood that the outcome was due to simple incompetence. Thus, if we take the 95 percent information reliability example earlier, there is only a 77 percent chance that the information reaching the center from the grassroots level is clean. As a result, the center can be only 77 percent confident in that information. If the information indicates that the center's orders have been followed (of which there is only a 77 percent chance, assuming a uniform 95 percent competency rate), then there is good chance (23%) that the information has been distorted by noise as it passes upward through the administrative hierarchy from the grassroots level and that the center's orders have actually not been faithfully implemented. Similarly, if the center receives information indicating that its orders have not been followed, there is good chance that they were properly implemented, but that the information indicating that they have not been followed is incorrect.

Noise, therefore, creates what is known in statistics as Type I and Type II errors. In this context, a Type I error is one in which the center incorrectly assumes that her information is incorrect when it is in fact correct. Thus, having received information indicating compliance, the center rejects that information as false and assumes that local cadres have violated orders, even though they have in fact followed them and correctly implemented the center's orders. Assuming that the center then punishes these cadres, it will prosecute the innocent. A Type II error is one in which the center believes the information it receives is true, even though it is in fact false. Thus, having received information indicating compliance, the center believes it to be correct when in actuality its orders have not been properly followed. In this case the center, by default, leaves potential violations unpunished and unintentionally protects the guilty.

Although it seems obvious that the latter situation, the Type II error, is directly relevant to the question of compliance and monitoring, the Type I error is also relevant. Falsely assuming that its orders have been followed when they have not means, of course, that incompetence, and possibly willful disobedience, will go undetected and unpunished. This then opens up space for cadres to get away with either incompetence or willful disobedience, including willful disobedience disguised as incompetence. Type I errors, on the other hand, create a situation in which cadres face the possibility of punishment regardless of whether they obey or not. If they thus come to fear arbitrary punishment even when they follow orders, then they ought to find it preferable to disobey if disobedience yields some sort of gain. Moreover, if the center is sensitive to the need to avoid making Type I errors, it is likely to be cautious when confronted with information indicating noncompliance because it does not want to falsely accuse and punish reliable cadres.

The level of fear of making a Type I error required to restrain the center cannot be predicted with any sort of certainty because it will depend on how the center wishes to posture. If the center is concerned about cadres' morale

and loyalty, then it is likely to exercise restraint and only believe that its orders have not been carried out properly in cases where noncompliance can be verified through multiple sources and upon investigation. If, however, the center wishes to intimidate cadres, it may choose to punish all potential transgressions in order to inculcate fear among its agents and hence deter willful disobedience—a strategy known in Chinese as "killing the chickens to scare the monkey."

It is also difficult to project how the center will filter the information it receives. It is possible, for example, that because it knows that the information it receives is never entirely accurate, the center will develop some sense of the range of values across which it expects that incoming information is reasonably accurate, but beyond which it will act on the assumption that it is not likely to be accurate. For instance, having developed a sense that its subordinates are 95 percent competent, and that the level of noise encountered in transmitting information from one level of the hierarchy to another is 5 percent, the center may then assume that if the information it receives is at more than two-thirds variance from its normal expectation, it is likely to be false. Thus, if it receives information that its orders are being implemented correctly less than 25 percent of the time, the center may assume that the reason cannot be ordinary incompetence. Similarly, if it receives information indicating 100 percent correct implementation, then the center may assume that its information cannot be correct. Noise, and the resulting Type I and Type II error problems thus creates a "zone of ambiguity" around the assumed rate of incompetence wherein the center cannot be entirely sure whether her orders are being properly and competently implemented.

Noise also enters the calculus from yet another direction. Just as information about the behavior of the grassroots is subject to contamination as it filters upward to the center, information about the center and its orders is subject to contamination as it filters downward through the administrative hierarchy. Orders may become garbled as they are relayed from one level to another. The clarity of signals from the center is therefore apt to deteriorate at progressively lower levels of the hierarchy. Thus, cadres remote from the center may themselves be unclear about what it is that the center wants and what sort of response is expected of them. This implies that cadres might believe they are following orders when they have in fact misunderstood or misperceived their orders. They might, therefore, believe that they are on the "compliance path" (FFFFF), when they are actually on one of the other "noncompliance paths."

This being the case, cadres then face the possibility that even if they "follow" orders, ex post facto, they may discover that the orders they followed were wrong and that they have inadvertently disobeyed the center. Assuming they are then caught and called to task, these "honest" cadres must convince the center that their errors were unintentional. Dishonest cadres, of course, are likely to make the same argument when they are caught. Thus, whenever disobedience is detected, the center needs to be able to distinguish between honest mistakes resulting from the contamination of its orders in transmission and dishonest mistakes resulting from willful disobedience, which cad-

res have tried to cover up by pleading honest misunderstanding, incompetence, or bad luck.

The numbers used in this and the preceding section are meant not as a model of incompetence and noise in the Chinese state, but rather as a way of establishing that in a system such as that found in China: (a) incompetence is a potentially significant source of noncompliance and (b) noise makes it difficult for the center to accurately assess whether noncompliance is the result of incompetence or some other factor, including random chance. The latter throws a proverbial monkey wrench into all calculations because it creates the possibility that even if all its agents follow orders the outcome may still be contrary to the wishes of the center. As a result, the problem for the center is to sort out whether a noncompliance outcome is due to (a) incompetence, (b) dumb bad luck (random chance), (c) misperception, or (d) willful disobedience. Given noise, there will always be some uncertainty and the center will always be faced with the possibility of making Type I and Type II errors.

Strategic Disobedience

What the preceding sections ultimately establish is that the chances that cadres who consciously fail to comply with orders will be caught and punished are always probabilistic. Given noise, there is always a chance that the center will not detect noncompliance. Given incompetence and random chance, there is always a chance that the center will assume that the failure was due to poor implementation or simple bad luck. In and of themselves, these are simply structural realities common to any complex hierarchy. But for cadres operating within a complex hierarchy, these structurally induced ambiguities create opportunities to engage in willful disobedience because they imply that willful disobedience may go unpunished.

Once we have established that detection and punishment are probabilistic, it then follows that a cadre or group of cadres contemplating willful disobedience will base their decision on the expected value of compliance versus noncompliance. That is, they will compare the payoff from compliance to the payoff from noncompliance, times the probability of being caught and punished, and the costs associated with the resulting punishment. In the case of noncompliance, the cadre faces a variety of possible outcomes:

a. His superiors will not detect the violation
b. They will detect it, but ascribe the failure to incompetence
c. They will not ascribe it to incompetence, but to random chance
d. They will ascribe it to disobedience, but the orders to punish the cadre will not be properly implemented
e. The cadre will be caught and punished

If a cadre decides to follow the order, there is also a possibility that noise may lead his superiors to mistakenly assume that he has not followed orders and falsely accuse the cadre of disobedience and order him punished. Even if the cadre is falsely accused and convicted, however, there is a possibility that

orders to punish him will not be carried out properly, in which case he will escape punishment.

I have translated the preceding into a simple illustrative model by treating it as a type of lottery wherein the cadre faces a choice between two alternative sets of outcomes. Because the final outcome is determined by chance, the cadre cannot determine which outcome among the alternative sets will ultimately obtain. The cadre can, however, decide which lottery to play and can evaluate which lottery is likely to yield the better payoff by comparing the expected values of the two lotteries. This is done by estimating the probability of each possible outcome multiplying that probability by the payoff associated with the outcome and then summing the results for all possible outcomes contained in each lottery. The preferable lottery is the one that yields the highest summed expected value.

To generate a model, I use probabilities similar to those obtained earlier using 95 percent competency rates and 95 percent information reliability rates, both of which suggest that the "natural rate" of compliance will be 77 percent in a five level principal-agent hierarchy and that information will have a 77 percent reliability factor in such a system. For simplicity, I have rounded off these figures to 75 percent. I have further assumed that the center believes that random chance will result in "non-compliant" outcomes 5 percent of the time and that there is a 5 percent chance that noise will lead to false accusations of wrong doing. Based on the cadre responsibility system, I have further assumed that if the cadre complies with the center he will receive all of his salary but will lose 15 percent of it if he is judged to have failed in his duties. Finally, I have assumed that disobedience allows the cadre to obtain an illicit payoff equal to his salary. Hence, the payoff for compliance equals 1, noncompliance equals 2, and punishment equals 0.85.

As shown in Figure 3, the expected value of not complying is higher than that of complying:

$$\text{Expected value}_{\text{notcomply}} = 1.55^{3}$$
$$\text{Expected value}_{\text{comply}} = 0.99^{4}$$

This implies that in this scenario cadres should opt to disobey orders, even though there is a 40 percent chance that they will be caught and punished. By increasing the size of the punishment inflicted on disobedient cadres, the gap between these expected values can be reduced. However, because cadres are vulnerable to punishment whether they obey or disobey, raising the severity of the punishment not only decreases the expected value of disobedience, it also decreases the expected value of obedience. As a result, the gap cannot be closed unless the center adopts relatively harsh punishments.[5]

The preceding model suggests that ultimately cadres are encouraged to disobey because there are multiple opportunities for them to get away with disobedience. The reasons for this are as follows. If the cadre believed that he was very likely to be caught and very likely to be punished, then the expected value of the noncompliance path would be dominated by the value of punishment. In

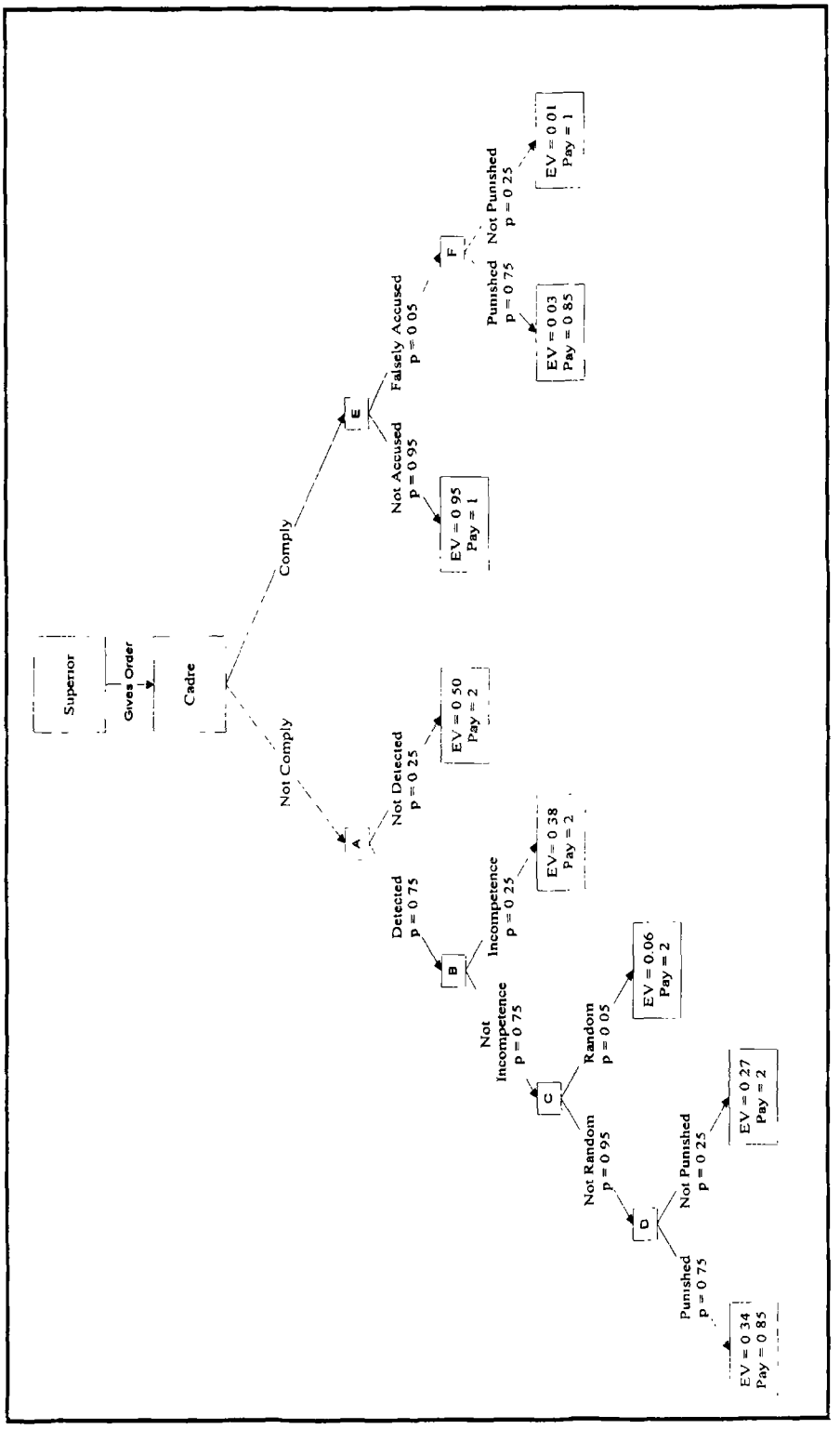
the lotteries I have delineated herein, however, the expected value of the noncompliance lottery is dominated by the alternative branches wherein the cadre disobeys, obtains the benefit from disobedience, and then is not punished because his superior either fails to detect his disobedience, ascribes it to causes other than willful disobedience, or orders to punish the disobedient cadre are not carried out. Thus, even though the chances of being caught and punished are great, there is still a good chance that a disobedient cadre will be able to reap the benefits of disobedience without suffering the costs of disobedience.

If cadres are aware that the center's perceptions of incompetence and its susceptibility to noise create opportunities for profitable disobedience, it follows that they will have incentives to increase these opportunities by trying to convince the center that they are less competent and by contaminating information flowing upward. Thus, even when cadres do not consciously disobey orders, they have incentives to shirk, dissemble, underrepresent their capabilities, etc. Because the center's certainty about outcomes is also subject to its beliefs about the rate at which random chance leads to failures, cadres will have incentives to blame failures on dumb bad luck or circumstances beyond their control. To increase the amount of noise, cadres will have incentives to avoid detailed reporting and to provide vague and imprecise data on local conditions whenever possible. Outright lying is also an option.

Not only will cadres at the grassroots have incentives to misrepresent their abilities, to stress the importance of bad luck, and to provide poor quality information, their superiors further up the hierarchy will have incentives to aid and abet these efforts. After all, if the center determines that local cadres have disobeyed its orders, supervisors at the next level up are vulnerable to charges of negligence or even complicity. Thus, once cadres at the local level begin to engage in strategic distortion, those at higher levels will have incentives to cover up the extent to which information filtering up from the local level has been contaminated and distorted. They will also have incentives to exaggerate the extent of local incompetence in order to decrease their vulnerability to punishment. In rather short order, my analysis suggests, everyone finds that keeping the center in the dark can be beneficial.

However, misleading the center also has a downside. As the quality of the information it receives deteriorates and its assumptions about the average rate of incompetence increase, not only do the odds of Type II errors increase, so do the chances that the center will make Type I errors. Once the center loses confidence in its ability to detect disobedience and to distinguish between willful disobedience and simple incompetence, the center is more likely to assume that information indicating obedience is not true. This, in turn, means that it is more likely to make false accusations against cadres. As the chances of being falsely accused of disobedience increase, the gap between the expected value of the compliance and noncompliance lotteries will increase. As the gap between these values increases, cadres are more likely to disobey because there is a good chance that, at worse, they will obtain the same payoff regardless of whether they obey or disobey, and they have a good chance of obtaining a better payoff if they disobey. Fear of false accusations, thus, reinforces the incentives to disobey.

Figure 3


Superior
Gives Order
Cadre
Comply
Not Comply
E
Not Accused
p = 0 95
EV = 0 95
Pay = 1
Falsely Accused
p = 0 05
F
Punished
p = 0 75
EV = 0 03
Pay = 0 85
Not Punished
p = 0 25
EV = 0 01
Pay = 1
A
Not Detected
p = 0 25
EV = 0 50
Pay = 2
Detected
p = 0 75
B
Incompetence
p = 0 25
EV = 0 38
Pay = 2
Not
Incompetence
p = 0 75
C
Random
p = 0 05
EV = 0 06
Pay = 2
Not Random
p = 0 95
D
Not Punished
p = 0 25
EV = 0 27
Pay = 2
Punished
p = 0 75
EV = 0 34
Pay = 0 85

The result of all of these different pressures is a self-reinforcing cycle of disobedience and dissembling. When offered the possibility of some illicit gain if they disobey orders and operating within a system where being caught and punished is probablistic, and in which there are multiple opportunities to avoid being punished for disobeying orders, cadres at both the grassroots and above will have incentives to exaggerate as much as possible their own lack of competence and the extent to which failures are due to conditions beyond their control while also contaminating the information they provide to their superiors. As this occurs, the center's ability to accurately monitor and assess local conditions will deteriorate, thus opening up additional opportunities for profitable disobedience. And as the number of opportunities for profitable disobedience increases, cadres will have new incentives to dissemble.

The problem of excessive rural taxation illustrates the interplay between structurally induced ambiguity and willful disobedience. Decollectivization in the early 1980s necessitated the creation of a new system of local taxation. Prior to decollectivization, local governments and public services had been funded by siphoning off a share of gross collective income. When the collectives were dismantled in the early 1980s, this system was replaced by a new system whereby local governments were funded by a combination of taxes, surtaxes, and fees. Over time, the system evolved into a regulatory nightmare as different state agencies authorized or mandated the collection of hundreds of different taxes and fees.[1] Various agencies also issued thousands of documents authorizing local agencies to raise money for specific development projects. Dozens of agencies were thus legally authorized to demand a share of farmers' income but because they frequently fell under different administrative hierarchies it was inherently difficult for local officials to ensure that the combined take did not exceed 5 percent of farmers' income. Compliance with regulations governing the collection of taxes and fees was thus likely to result in noncompliance with regulations governing farmers' total tax liability. Local officials thus faced a choice as to which set of regulations they would comply with. Because they were more likely to be rewarded for collecting more revenues—monies that could help finance local development and thereby win them favor with their superiors—the incentive structure tended to favor violating the 5 percent limit.

The existence of a complex web of taxes and fees also meant that it was easy for local officials to evade culpability and cover up violations of the 5 percent limit. To begin with, it was easy to claim innocence because the taxes and fees were legal and local cadres were simply "doing their jobs." Cadres could also plead ignorance, claiming that violations occurred because they were unaware of taxes and fees being collected by other agencies. Or they could blame accounting errors and lack of professional ability, a claim that was rather believable because many grassroots cadres have a rudimentary education and little if any professional training. Alternatively, cadres could claim that farmers complaining of excessive taxation were actually seeking to evade taxes, were hiding part of their income, or did not understand what fees counted against the 5 percent limit. In many cases, farmers lacked knowledge about the tax and fee systems and in some areas reportedly did not know about the 5 percent limit

and hence did not know that they were being subjected to excessive taxation. Detecting violations and determining whether they resulted from willful disobedience or inadvertent noncompliance was thus a fairly formidable task, under the best of conditions.

It was even more difficult if cadres fed their superiors bad information, as was allegedly quite common. Local cadres in some areas, for example, prevented farmers from lodging complaints with higher authorities or used threats to intimidate them. In other areas, they claimed the farmers were trying to evade taxes by underreporting their income. In many instances, they siphoned off part of what was collected into covert slush funds (*xiao jinku*) and underreported the amount of taxes collected. Abuses at the grassroots level were reportedly frequently covered up by higher levels who either received a cut of the illegal take or who did not want to risk having other irregularities uncovered if outside investigators were bought in. Things were further complicated by the fact that China continues to have a cash-based economy where accountability depends on a system of paper receipts, receipts that could be lost, forged, or altered.[2]

The rural tax system, in short, was so complex and the quality of information flowing from the localities so poor that not only was it quite likely that the center's regulations would not be properly carried out but it was also easy for self-serving cadres and local agencies to use the tax system to improperly extract money from China's farmers. Moreover, even once the center became aware of the problem, trying to rectify abuses, assign culpability, and prevent new abuses was a formidable task, in large part because the center had to operate through the same bureaucratic systems that helped spawn the problem of excessive taxation in the first place. This is not to imply that dishonesty, avarice, and greed did not lead cadres to exploit the rural tax system for their own profit. Rather it is to say that the system was such that it not only reduced the risks associated with abuse by making it difficult for the center to detect violations, the system itself tended to push tax levels above those mandated by the center.

Counter Strategies

The existence of a structurally induced cycle of disobedience and dissembling confronts the center with a dilemma. So long as the five-level unitary structure remains in place, the center is apt to achieve only marginal gains in compliance by increasing monitoring and imposing harsh punishments. Efforts to increase monitoring will be subject to the same problems of incompetence and noise described earlier. Harsh punishments may raise the expected cost of noncompliance, but they will also intensify cadres' fears of unwarranted punishment. Certainly, increased monitoring may reduce the chances of false accusations of malfeasance but, unless the center can eliminate the chance of a false positive, cadres may still be deterred from obeying out of fear that even if they obey they may still be charged with wrongdoing. Attempts to tighten controls over agents and sub-agents are likely to prove inefficient and costly.

The alternative of loosening up controls and renegotiating the principal-agent relationship in ways that afford the agent greater autonomy in return for promises to faithfully implement a more narrowly defined set of "crucial" central demands is also unlikely to prove effective. Simply building in more slack, more room for shrinking does not change the underlying reality that the principal still needs to determine if her agent and sub-agents have fulfilled their part of the bargain. Even if the center was to go to the extreme of devising a system analogous to tax farming wherein local cadres would have virtual autonomy so long as they performed a set of essential functions (e.g., maintaining order and ensuring the payment of the locality's tax quota), it would still face considerable difficulty in determining if its grassroots agents were in fact fulfilling these functions. Short of erecting a new structure (e.g., federalist), attempts to tighten central control using intensified policing seem doomed to frustration.

The dilemma for the center is, however, that it cannot simply throw up its hands and accept high levels of disobedience and dissembling because ultimately control will break down under such conditions. Paradoxically, analysis suggests that one possible solution is an approach that alternates between relatively inefficient routine monitoring and enforcement and bursts of short-term intensive investigation and enforcement (see McCubbins and Schwartz 1984; Kleiman 1993; Lui 1986; Manion 1999). Periodic crackdowns or campaigns allow the center to bypass the normal hierarchy and cut through the structural barriers to effective routine monitoring and enforcement at the local level. Moreover, a campaign-style approach allows the center to alternate between three levels of punishment and to consciously vary the chances of making Type I errors. During its early stages, a period of clemency is announced during which malefactors who confess receive reduced punishments and can further reduce their punishment by turning in others and turning state's evidence (Manion 1998). After the clemency period, a period of intensified scrutiny begins, often accompanied by the dispatch of inspection teams to oversee and coordinate local efforts. An emphasis on quick results replaces routine investigatory procedure and process. During this second phase, offenders who are caught receive harsher penalties and are less likely to receive leniency.

A campaign-based approach to enforcement results in a system in which punishments vary between routine punishments, reduced punishments during the clemency period, and increased punishments during the final crackdown phase. The system of monitoring also varies between one based on routine, indirect policing, a period in which malefactors are encouraged to confess and to turn in others, and finally a period of intensive and, more important, direct policing.

Bypassing the normal hierarchy during the latter phase of a campaign allows the center not only to increase the odds that it will detect non-compliance, but also to reduce the chances that noise will result in either false negatives or false positives. Bypassing the normal hierarchy thus reduces the number of nodes through which information must pass and the chances of either inadvertent or purposeful distortion. Because it obtains cleaner information, the center is thus able to catch a larger percentage of malefactors than it can under normal circumstances, and avoid falsely accusing innocent cadres. At the same

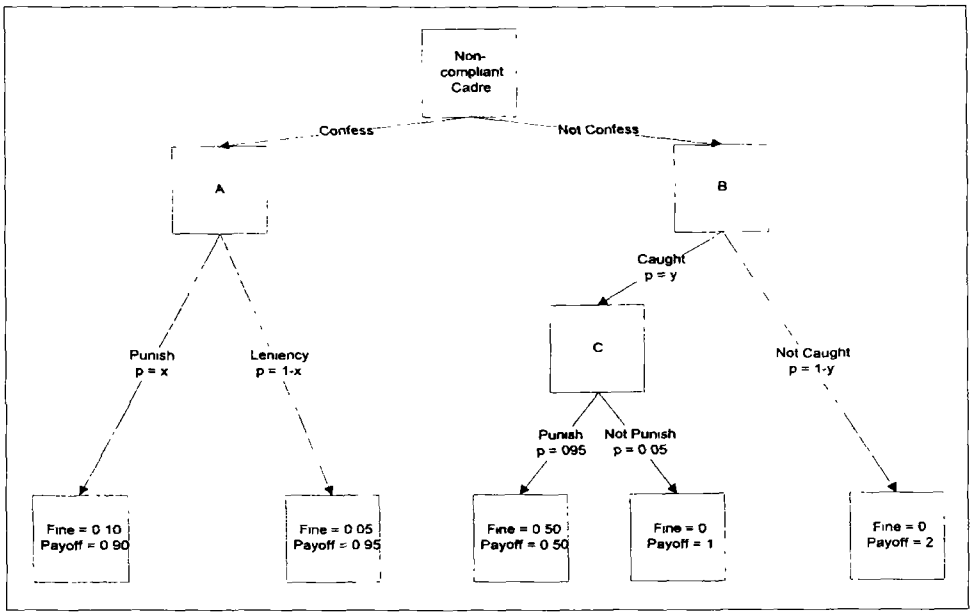
time, by bypassing the normal hierarchy, the center reduces the chances that mandated punishments will not be carried out. The campaign, in short, allows the center to increase the quality of its information and the certainty that malefactors will be caught and punished. When combined with reduced punishments and greater leniency during the clemency phase, a campaign in fact creates an incentive structure that discourages disobedience by reducing the expected value of noncompliance below that of compliance.

The efficacy of campaign-style enforcement can be illustrated as follows. When the campaign begins, a cadre who has thus far escaped punishment faces a choice between confessing and not confessing (see Figure 4). If he confesses, there is a chance that he will receive leniency, in which case let us assume he receives only a minor fine (equal to 5 percent of his income). There is, however, also a chance that he will not receive leniency. Even then, because he has confessed and perhaps informed on other malefactors, let us assume that he receives a reduced fine (equal to 10 percent of his income). If the cadre decides not to confess during the clemency period, intensified monitoring and the possibility that others may inform on him raises the odds he will be caught. Intensified monitoring also means that investigators will be less likely to dismiss a case because they falsely assume that the infraction was inadvertent and the result of either incompetence or bad luck. Thus, let us assume that if caught, the cadres will be punished with near certainty, and that the malefactors caught under the crackdown phase will receive harsher punishments than those who either confessed during the leniency phase or were caught during routine policing (for purposes of modeling, I set the fine at half of the cadre's salary).[3]

For purposes of analysis, I concatenate the "campaign game" with the "compliance game" laid out earlier (see Figure 3) and use comparative statics to evaluate how the threat of a campaign will affect a cadre's choice between complying and not complying. Although the probability of being punished and the severity of the fine undoubtedly affects cadres' choices, the key consideration is their expectations about being caught. Analysis suggests that if the probability of being caught is greater than 65 percent (i.e., 60% more likely than the probability of being caught under routine circumstances), compliance becomes preferable to disobedience. Further analysis also suggests that only when the probability of being caught during the crackdown phase exceeds 70 percent does the expected value of confessing (even given a high probability of leniency) exceed the expected value of both complying and not confessing.

In evaluating the implications of this finding, we must keep in mind that the situation under analysis is one in which a cadre contemplating disobedience at time t bases his decision on the odds of being caught at time $t+n$, without knowing what the odds of being caught will be, how lenient or harsh the center will be, or how much time will elapse before the center initiates a campaign. In fact, the cadre cannot be entirely sure that the center will ever crack down. The efficacy of anticipatory fear, therefore, is subject to degradation as cadres' discount rates on the future increase. That is, if cadres come to believe that they are not likely to be caught at some point in the future, or value the benefits of disobedience in the present or the possibility of suffering costs in the future,

Figure 4



then the efficacy of campaigns as a deterrent will be less than implied by the preceding analysis.

It would be wrong, however, to minimize the utility of campaigns as a deterrent. In reality, the nature of a campaign itself—the intense and direct scrutiny by outside investigators whose bureaucratic interests are such that they have incentives to maximize the number of arrests and convictions—and its stress on confession and informing, places a malefactor in a situation in which a cadre might well assume that in the event of a campaign he faces a considerable chance of being caught during the crackdown phase. Herein, fear of being turned in by others seeking to curry favor with investigators plays an important role because a cadre must not only consider his own perception about the future but also the perceptions of others and their risk propensities. Fear of betrayal, therefore, becomes a potential source of deterrence because a cadre contemplating disobedience cannot estimate with real accuracy the odds of being caught in the event of a future crackdown. If a cadre believes that betrayal is likely, it then follows that because the expected value of confessing is greater than not confessing, and that the expected value of confessing is less than complying in the first place, the cadre ought to opt to comply in time t rather than risk a lesser payoff in time $t+n$.

It would appear, therefore, that campaigns are a solution—albeit a far from perfect solution—to the structurally based incentives for willful disobedience. The uncertainty and fear associated with campaigns serves to overcome—or at least mitigate—the monitoring and enforcement problems inherent in the complex, multilayered structure of the Chinese state. The problem is, however, that if the center fails to convince its agents that it can unleash effective cam-

paigns, the efficacy of fear will decline. If cadres are not fearful, the incentives for confession are unlikely to induce a rush to confess. Conspiracies of silence, therefore, are likely to stymie campaign-based enforcement, leaving the center once again trapped by the constraints inherent in the multilayered principal-agent structure of the Chinese state itself.

Conclusion

To summarize, the multilayered structure of the Chinese state and the hierarchy of dyadic principal-agent relationships on which it rests creates conditions where there will be a high "natural" rate of noncompliance. Even if the average rate of competency is 95 percent for all cadres at all levels, because incompetence at any one of the five levels through which an order must pass to reach the local level can result in a non-compliant outcome, there is ultimately only a 77 percent chance that an order will be properly implemented, even in the absence of willful disobedience. Noise and random chance further decrease the chances of proper implementation.

A significant natural rate of noncompliance creates, in turn, opportunities and incentives for "unnatural" noncompliance—that is willful disobedience. Because the center cannot estimate the natural rate of noncompliance with complete accuracy and faces difficulty in distinguishing between inadvertent and willful disobedience, cadres can, in effect, take cover behind the natural rate of noncompliance to engage in profitable and willful disobedience. Moreover, once they begin to willfully disobey, cadres will have incentives to try to increase the center's belief that noncompliance is the result of the natural incompetence of individual cadres and random chance. Thus, they have incentives to dissemble and shirk. Because noise also reduces the center's ability to accurately assess what is going on at the local level and hence its certainty about the natural rate of noncompliance, disobedient cadres have incentives to contaminate and degrade the information they send upward through the administrative hierarchy.

The Chinese leadership has, of course, sought to compensate for the sorts of problems described earlier by constructing parallel systems and using them to monitor each other. Thus, whereas the Chinese administrative hierarchy has been described throughout this article primarily in terms of its territorial structure, or what is known in Chinese as its "horizontal" structure (*kuai kuai*), in reality the system consists of both horizontal and "vertical" systems (*tiao tiao*), with the former referring to territorially based units such as the province, the county, etc., and the latter referring to the hierarchy of local bureaus of central ministries and centrally based functional systems (*xitong*). The horizontal units themselves consist of parallel party and state hierarchies that frequently share dual responsibility for administration and oversight.

In theory, the presence of multiple systems ought to enhance the center's ability to filter out noise, effectively monitor cadres' behavior, obtain a more accurate assessment of the natural rate of noncompliance, and distinguish between inadvertent noncompliance and willful disobedience. In reality, each of these parallel systems is subject to the same problems described in the case of

the territorial administrative system: incompetence, random chance, and noise. As a result, there is no reason to assume that any of these parallel systems will be any more reliable than the others. Moreover, it is not clear whether the agents of these various systems operate in a competitive manner, seeking to curry favor with their superiors by reporting the misdeeds of their counterparts, or whether they collude with each other in covering up each other's misdeeds. The *tiao-tiao kuai-kuai* system may, therefore, be at best a very inefficient and unreliable solution to the inherent structural problems described herein. The theoretical consequences of the *tiao-tiao kuai-kuai* system, however, require greater specification before we can fully understand how parallel monitoring effects the center's assumptions about the natural rate of noncompliance, and hence the amount of space that exists for cadres to resort to profitable disobedience.

The theoretical propositions generated by my model nevertheless provide considerable leverage in explaining why the center has had such great difficulty in dealing with problems such as the *san luan*, abuse of power, and corruption. As most analysts recognize, the core compliance problem in central-local relations is not outright defiance, but rather a persistent lack of reliable compliance, even when the center makes a concerted effort to bring its local agents to heel. Moreover, it is conventional wisdom that compliance problems increase as administrative distance increases. This is perhaps not surprising given the fact that the center has direct control over senior appointments at the provincial level and that the provinces are fiscally dependent on the center, that provincial compliance tends be characterized by "strategic compliance" wherein the key determinant of whether the provinces toe the line or not is whether the center is paying close attention or has turned a blind eye to what is going on at the provincial level (Huang 1996; Wedeman 1999). Below the province, however, the center's reach is limited by the one-level down *nomenklatura* system. Thus, has only indirect control over lower levels because it does not control appointments below the provincial level and must instead depend on its provincial agents to enforce its writ. The province's direct control, however, only extends down one more level, with the result that it must, in turn, rely on its agents to enforce its writ—and that of the center as well—on those still further down the chain of command.

The limited reach of the center is, however, only one factor in explaining chronic noncompliance at the local level. The complex, multilayered pyramid of dyadic principal-agent relationships that links the center to the localities introduces so much ambiguity that ultimately local cadres must choose between compliance and disobedience based on a series of assumptions not only about (a) what the center wants, (b) the odds that disobedience will not be detected or punished, (c) how harshly malefactors will be punished, (d) the possibility that compliance will be rewarded with unjust punishment, or (e) that "successful" disobedience today will be punished at some unknown point in the future, etc. Given a changing political environment, cadres also face the possibility that compliance may become a liability later. In this light, the prevalence of "local counter strategies" (*zhongyang you zhengce difang you duice*) and "localism" (*difang zhuyi*) seems less a direct function of local recalci-

trance *per se*, than a "natural" byproduct of the highly uncertain conditions in which local decisionmakers operate. As the final actors in a long chain, local cadres operate in an environment in which they are at best tenuous agents of the center who face a highly uncertain incentive structure of rewards and punishments if they elect, on the one hand, to obey orders or, on the other, to disobey orders.

In such a situation, strict compliance is highly unlikely. Instead, local cadres are likely to act in ways that stress local interests over outside interests. But they are nevertheless also likely to pay lip service to serving the center because the most certain way of bringing down punishment is to signal disobedience. So long as disobedience remains hidden behind a façade of loyalty and ambiguity, the structure itself serves as a protective barrier. In other words, local cadres are unlikely to automatically comply, but are also unlikely to openly defy. As such, they cease to operate as "agents" in the classical sense of the word and achieve a degree of independence and autonomy, with the result that relations between the localities and superior levels are apt to be governed by negotiation and compromise rather than command and control. This shift is, however, not a function of a fundamental transformation of the role of the localities, but rather a function of a hierarchical structure that renders effective central control tenuous even under the best of circumstances.

Notes

1. Herein I include provinces, the three cities directly under the central government (Beijing, Tianjin, and Shanghai), and the five autonomous regions (Nei Menggu, Guangxi, Xizang, Ningxia, and Xinjiang).
2. What is particularly intriguing about this facet of the Chinese system, and thus perhaps requires a more detailed and comprehensive analysis, is that it implies that even if an agent knows that the orders he has received from his immediate superior are wrong, he will nevertheless follow them because the chances of getting punished for not complying with his immediate superior are likely to be greater than the odds that he will be protected by others higher up in the administrative hierarchy. This facet also has interesting implications for the differences in the incentives created by the one-level down *nomenklatura* system and the previous two-level down system because in the two-level down system, the agent ought to have incentives to disobey his immediate superior and to report his superior's errors to higher levels.
3. In Broken Telephone, a group of children relay a message through a chain in whispers and then compare the message received by the last child to what the first child said. Because the message is apt to be repeatedly misunderstood, errors are likely to grow into hilarious distortions by the time they reach the end of the chain.
4. Correctly in the sense that the hamlet complies with the demands of the province, but incorrectly in that its response is at variance with the demands of the center.
5. The odds of the "total incompetence" outcome, labeled DDDDD in Figure 1, for instance, are in fact only 6 in 100,000, given a uniform 95 percent competency rate.
6. EV_{nc} = (0.50*2) + (0.75*0.25*2) + (0.75*0.75*0.05*2) + (0.75*0.75*0.95*0.25*2) + (0.75*0.75*0.95*0.75*0.85)
7. EV_{c} = (0.95*1) + (0.05*0.75*0.85) + (0.05*0.25*1)
8. In this particular case, the expected value of obedience only begins to exceed the expected value of disobedience when the principal not only withholds all of the cadre's pay but also imposes an additional fine equal to two-thirds of his pay. The principal could also sack the cadre in which case his loss of future income would be greater than the loss of his current salary plus the fine.

9. During the 1993 crackdown on excessive taxation, the State Council abolished over 350 different taxes and fees authorized by central ministries while provincial and local governments annulled hundreds more.
10. At one time it was possible to buy "official" government receipts, complete with the appropriate "chops" from illegal venders. It was also not uncommon to sell a good or service at a discount if the buyer did not want a receipt, in which case the seller never reported the sale.
11. Because the primary purpose of my analysis is to examine the impact of structure on policy implementation, I have not including draconian, "boil in oil," punishments such as those that are associated with criminal wrong doing (e.g., the death penalty, life imprisonment, etc., for corruption). Extreme punishments clearly alter the calculus and hence warrant separate analysis.

References

Brehm, John and Scott Gates. 1997. *Working, Shirking, and Sabotage: Bureaucratic Response to a Democratic Public.* Ann Arbor, MI: University of Michigan Press.

Granick, David. 1990. *Chinese State Enterprises: A Regional Property Rights Analysis.* Chicago: University of Chicago Press.

Harding, Harry. 1981. *Organizing China, the Problem of Bureaucracy 1949-1976.* Stanford, CA: Stanford University Press.

Huang Yasheng. 1996. *Inflation and Investment Controls in China: The Political Economy of Central-Local Relations During the Reform Era.* New York: Cambridge University Press.

Kleiman, Mark R. 1993. "Enforcement Swamping: A Positive Feedback Mechanism in Rates of Illicit Activity." *Mathematical Computer Modeling* 17, no. 2: 65-75.

Li Lianjiang and Kevin J. O'Brien. 1999. "Selective Policy Implementation in Rural China." *Comparative Politics* 31, no. 2 (January):

Lui, Francis T. 1986. "A Dynamic Model of Corruption Deterrence." *Journal of Public Economics* 31, no. 2 (November): 215-226.

Manion, Melanie. 1991."Policy Implementation in the People's Republic of China: Authoritative Decisions versus Individual Interest." *Journal of Asian Studies* 50, no. 2. (May): 253-279.

Manion, Melanie. 1998. "Why Use Campaigns to Control Corruption?" Paper presented at the Workshop on Cadre Monitoring and Reward: Personnel Management and Policy Implementation in the PRC, University of California.

Manion, Melanie. 1999. "Corruption by Design: Corruption Control Through Enforcement Swamping." Paper presented at the American Political Science Association annual meeting (Atlanta).

McCubbins, Mathew D. and Thomas Schwartz. 1984. "Congressional Oversight Overlooked: Police Patrols versus Fire Alarms." *American Political Science Review* 28, no. 1 (February): 165-179.

Shirk, Susan L. 1993. *The Political Logic of Economic Reform in China.* Berkeley: University of California Press.

Wedeman, Andrew. 1999. "Agency and Fiscal Dependence in Central-Provincial Relations in China." *Journal of Contemporary China* 8, no. 20, (July): 103-122.

Wedeman, Andrew. 2000. "Budgets, Extra-Budgets, and Small Treasuries: Illegal Monies and Local Autonomy in China." *Journal of Contemporary China* 9, no. 25 (November).

Whiting, Susan. 2000. *Power and Wealth in Rural China: The Political Economy of Institutional Change.* New York: Cambridge University Press.