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A solidaristic theory of social order

Kanazawa, Satoshi, Ph.D.

The University of Arizona, 1994

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A SOLIDARISTIC THEORY OF SOCIAL ORDER

by

Satoshi Kanazawa

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A Dissertation Submitted to the Faculty of the

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For the Degree of

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In the Graduate College

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1994

THE UNIVERSITY OF ARIZONA
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ABSTRACT

Several theoretical perspectives have emerged in the social sciences to explain variations in social order. In the normative perspective, order is a function of value consensus and the successful internalization of these values. Order in the Hobbesian perspective is a consequence of coercive state social control. However, the former cannot account for high levels of order in heterogeneous societies lacking value consensus, while the latter cannot explain order in large and complex societies where effective monitoring and sanctioning by the state is impossible. More recently, social scientists have shown that stable cooperation among the members of a group is possible on the basis of mechanisms derived from the theory of repeated games. While promising, these theories have not specified how these group-level cooperative institutions can be reproduced at the societal level to produce global order. Nor have they identified the mechanism by which members' compliance with (possibly conflicting) group norms can aggregate to global order.

An alternative, *solidaristic* theory holds that global order is a largely unintended by-product of the control activities of constituent social groups seeking members' compliance to group norms. It explains global order as a function of the solidarities of groups and the costliness of their members' activities to the state and other groups. Further, the theory specifies the aggregation mechanism by which the meso-level solidarities of various groups produce global order. The theory also implies that the state originally emerges as a means to reduce negative externalities on some groups by the activities of others.

I design three separate laboratory experiments to test the solidaristic theory of global order. The first experiment tests the theory's group solidarity submodel. The second and third experiments test a theory of the state which directly underlies the state submodel of the solidaristic theory. The second experiment tests how the state's behavior

toward groups varies as a function of their threat to the state. The third experiment tests the state's behavior as a function of the groups' negative externalities on each other and their power over the state. I present the results from the third experiment.

CHAPTER 1

THE PROBLEM OF ORDER

Why do national societies attain different levels of social order?

The problem of order is one of the most important and persistent problems in all of social sciences (Elster 1989, p. 1), and many social theorists have addressed it either explicitly or implicitly. Writings of both Durkheim and Weber, for example, stress the simultaneous working of two factors for successful production and maintenance of social order. These are: 1) the external social control; and 2) the internalization of norms.

Durkheim (1951 [1897], pp. 246-254) equates social order (or "social integration" in his language) with the extent to which people's passions and desires are held in check by external social control. However, he goes on to write:

In normal conditions the collective order is regarded as just by the great majority of persons. Therefore, when we say that an authority is necessary to impose this order on individuals, we certainly do not mean that violence is the only means of establishing it. Since this regulation is meant to restrain individual passions, it must come from a power which dominates individuals; but this power must also be obeyed through respect, not fear. (Durkheim 1951, p. 252)

Weber also refers to both the internalization of norms and external sanctions in his discussion of "legitimate order."

Only then will the content of a social relationship be called an order if the conduct is, approximately or on the average, oriented toward determinable "maxims." Only then will an order be called "valid" if the orientation toward these maxims occurs, among other reasons, also because it is in some appreciable way regarded by the actor as in some way obligatory or exemplary for him. Naturally, in concrete cases, the orientation of action to an order involves a wide variety of motives. But the circumstance that, along with the other sources of conformity, the order is also held by at least part of the actors to define a model or to be binding, naturally increases the probability that action will in fact conform to it, often to a very considerable degree. An order which is adhered to from motives of pure expediency is generally much less stable than one upheld on a purely customary basis through the fact that the corresponding behavior has become habitual. . . . But even this type of order is in turn much less stable than an order which

enjoys the prestige of being considered binding, or as it may be expressed, of "legitimacy." (Weber 1968 [1922], p. 31)

Weber thus identifies two ways to "guarantee" social order: 1) "The guarantee may be purely subjective. . . determined by the belief in the absolute validity of the order as the expression of ultimate values of an ethical, esthetic or of any other type" (Weber 1968, p. 33); or 2) social order may be "externally guaranteed by the probability that physical or psychological coercion will be applied by a *staff* of people in order to bring about compliance or avenge violation." (p. 34)

While both Durkheim and Weber emphasize the internalization of values and norms and external social control as determinants of social order, more contemporary explanations concentrate on one or the other of the two factors.

On the one hand, *normative* theories maintain that social order is possible to the extent that normative and value consensus exists among the people and that they internalize these values and norms through successful prosocial socialization (Parsons 1937).

Human society achieves its unity primarily through the possession by its members of certain ultimate values and ends in common. Although these values and ends are subjective, they influence behavior, and their integration enables the society to operate as a system. Derived neither from inherited nor from external nature, they have evolved as a part of culture by communication and moral pressure. (Davis and Moore 1945, p. 244)

These theories explain social order as a function of individuals' acceptance of norms as legitimate. Once accepted and internalized in the course of socialization, these norms will function as the individuals' own behavioral guidelines independent of the threat of sanction for noncompliance. Both the symbolic interactionist theories of public order (Goffman 1963) and the social disorganization theory of deviance (Shaw and McKay 1969) largely derive from this general perspective.

In contrast, *Hobbesian* (Hobbes 1968 [1651]) theories argue that social order is the result of effective state social control (Baumol 1952). In this approach, individuals

conform to norms, and thus the society achieves social order, not because they respect the norms and accept them as legitimate, but because they seek to avoid punishment which can result from their noncompliance. Social order is thus possible to the extent that the state is able to enforce its norms and punish offenders successfully. In this view, people behave in predictable prosocial manners because they would be punished by the state if they did not. Garrett Hardin's (1968) original solution for the collective action problem ("mutual coercion, mutually agreed upon") embraces this Hobbesian logic and rejects the typical normative answer ("conscience"). Ophuls (1973, p. 229) endorses Hardin's conclusion when he posits that "even if we avoid the tragedy of the commons, it will only be by recourse to the tragic necessity of Leviathan."

However, neither of these contemporary approaches can successfully account for variations in social order and norm compliance in different societies. On the one hand, the normative approach cannot account for situational variations in the same individuals' behavior. Japan, for instance, exhibits an exceptional level of social order among advanced industrial nations (Hechter and Kanazawa 1993; Chapter 3 below). However, Japanese experimental subjects do not exhibit as much conformity when there is no mechanism of social control as they do when their norm violation is subject to punishment (Yamagishi 1988). Since internalized values tend to be stable in the absence of radical resocialization, the normative approach would predict stable prosocial behavior across situations. At the same time, how do some law-abiding citizens turn into a looting crowd during an electrical outage, or in a spontaneous riot as in south central Los Angeles in 1992, when the effective means of personal accountability breaks down? Further, if social order is possible only with value and normative consensus, how can we account for relatively high levels of social order in heterogeneous societies like the United States,

where a high degree of consensus on the basic values and norms is absent?¹

On the other hand, the Hobbesian approach's exclusive emphasis on the application of negative sanctions is not likely to be the answer either. If social order is mostly a function of state social control, then it should vary with the extent of state social control. However, the most orderly societies of the world are advanced democracies where citizens enjoy civil liberties and a high degree of privacy and freedom from state intervention in private affairs, and not authoritarian states, where the state closely monitors and controls its citizens' behavior (Orbell and Rutherford 1973). If social order is a function of social control, why can't the most authoritarian state achieve the highest degree of social order? At the same time, the Hobbesian approach also fails to explain even a modest level of social order in any complex society. Most large and complex societies of the world enjoy relatively high levels of social order despite the fact that the central state, and its agencies such as the police, cannot possibly monitor every citizen's behavior all the time and punish every single violation of norms. Relatively high levels of social order exist in many complex societies while a lot of nonconformity goes unpunished.

ENDOGENOUS MODELS OF SOCIAL ORDER

More recently, new *endogenous* models of order and cooperation have emerged in several social science disciplines. These models purport to show how social order can emerge spontaneously among individuals in the absence of any specialized, third-party enforcement mechanisms, and usually draw on two general perspectives for their explanations: game theory and evolutionary biology.

¹"In what sense do the Western cowboy and the Eastern dairy farmer, the upper-upper of Yankee City and the lower-lower of Chicago, the Negro and the White in the South, the Irish Catholic, the Swedish Lutheran and the Polish Jew share a common value-system? Are we to take the total value systems current in these groups and reduce them to a lowest common denominator and call this rather thin product the common value-element of American Society?" (Aberle 1950, p. 496)

Game-theoretic explanations

Social scientists have shown (in laboratory experiments and field studies) that stable cooperation among the members of a group is possible on the basis of mechanisms derived from *the theory of repeated games* (Taylor 1976; 1982; Axelrod 1984; Hechter, Opp, and Wippler 1990; Ellickson 1986; 1991; Heckathorn 1989; 1990; Macy 1989; 1991; Orbell and Dawes 1991; 1993; Calvert Forthcoming). These theorists have demonstrated how members of small groups can overcome the second-order free-rider problem to devise effective institutions to enforce their group norms.

While these models have been successful in explaining mutual cooperation in two-person prisoner's dilemma supergames (Taylor 1976; Axelrod 1984), their stringent scope conditions severely limit their applicability to large and complex societies. For instance, Calvert's (Forthcoming) recent attempt to explain the emergence of cooperative institutions as equilibria in underlying games only holds under the following limited circumstances: complete information (on payoffs and strategy sets); perfect information (on one's own interactions); perfect recall (of one's own past interactions); identifiability of other players; the ability to communicate with any number of players simultaneously; and the ability to reply to a message from another player immediately and without cost.

Similarly, Taylor's (1982) mechanism for the production of social order without the state involves the notion of *community*, which has three core characteristics (pp. 25-33): 1) "The set of persons who compose a community have beliefs and values in common."; 2) "Relations between members should be *direct* and they should be *many-sided*."; and 3) generalized reciprocity. None of these characteristics is likely to hold in large and complex societies, as Taylor himself admits (p. 91). Ellickson (1986; 1991) shows that neighboring cattle ranchers in Shasta County, California, often resolve their

disputes among themselves by resorting to informal norms rather than formal laws or the state enforcement mechanisms. Likewise, Ostrom's (1990) secondary analysis of numerous case studies indicates that appropriators of common pool resources projects (such as irrigation systems or groundwater basins) are often able to devise effective institutions endogenously to manage their resources without any external intervention. However, Ellickson's conclusion applies only to members of "close-knit" groups (1991, p. 167), and Ostrom's only to members of a group with "clearly defined boundaries" for membership (1990, pp. 91-92), who share a common interest in the production of a single collective good (the successful management of the common pool resources). The implications of their conclusions for social order in large and complex national societies, composed of multitude of social groups pursuing different, and sometimes conflicting, goals, are not at all clear.

Kollock (1993a; 1993b) explicitly recognizes, as I do, that the game-theoretic assumption of perfect information is often unrealistic in natural settings where actors often misunderstand, misperceive, or are simply unable to observe others' behavior. However, in his computer simulations (1993a) and laboratory experiment (1993b), he shows that mutual cooperation is still possible in the face of imperfect (or sometimes highly distorted) information about others' cooperative behavior *if* the actors do not employ strictly contingent strategies such as TIT FOR TAT. In a separate experiment, Kollock (1992) shows that actors are often able to develop committed exchange relations based on trust and still benefit from mutual cooperation even when external enforcement of the terms of contract is absent. In a series of experiments, Ostrom, Walker, and Gardner (1992) show that actors in common pool resources games often honor their *ex ante* commitments to mutually agreed-upon strategies even when there are no sanctions against defections, or sometimes agree to institute their own sanctioning systems endogenously to punish

defectors. Hence, their major conclusion: self-governance is possible (p. 413-414). However, once again, the conclusions from these studies are not directly applicable to social order in national societies. Kollock's (1992; 1993a; 1993b) mechanisms for the emergence of cooperation are based solely on dyadic exchange relations, and Ostrom et al.'s (1992) mechanism for self-governance requires face-to-face communication among the actors.

It is apparent that many of these scope conditions will not hold in large and complex societies. The scale, complexity, and stratification of national societies greatly reduce the extent of common knowledge and restrict potential communication.² While they may be useful for explaining small-scale *local* orders where such stringent scope conditions are approximated, current game-theoretic models cannot account for *global* orders in national societies (Hechter, Friedman, and Kanazawa 1992; Hechter and Kanazawa 1993; see Definitions 1 and 3 in Chapter 2 below).

Evolutionary explanations

Some of the game-theoretic explanations of social order discussed above also incorporate an evolutionary approach, which assumes that "whatever is successful is likely to appear more often in the future." (Axelrod 1984, p. 169) Thus Axelrod (1984, chapter 3) shows how a group of individuals who employ the contingent strategy of TIT FOR TAT can thrive and dominate even a larger group of players who always defect. In contrast, Kollock (1993a, pp. 781-782) shows that strategies based on "generalized" accounting systems, such as TIT FOR TWO TATS or TAT + 1 (a strategy of cooperating at a slightly higher level than one's opponent) can successfully invade TIT FOR TAT, and that TAT + 1 exhibits a high level of evolutionary stability. Orbell and Dawes' (1991; 1993)

²In 1991, there were more than 13,000 distinct occupations in the United States listed in the Dictionary of Occupational Titles (U. S. Department of Labor 1991, p. 1).

"cognitive miser" theory shows cooperators have an evolutionary advantage over defectors due to their higher willingness to play. Cooperators are likely to benefit from their mutual cooperation while defectors are likely not to play (and thus receive zero payoffs). Further, Orbell and Dawes' explanation does not depend on such stringent scope conditions as: 1) "translucency" (the ability of players to discriminate among potential cooperators and defectors) (Gauthier 1986; Frank 1988); 2) iteration or "reciprocal altruism" (Taylor 1976; Axelrod 1984); 3) monitoring; 4) side payments; and most importantly 5) small population size. The success of their model does depend on the scope conditions of small transaction costs (Orbell and Dawes 1991, p. 527 note 4) and a specific type of payoff structure ($T > R > 0 > P > S$) (p. 517), however.

These evolutionary models have several important limitations as explanations of global order in national societies. First, those models that rely on direct or indirect *reciprocity* (Taylor 1976; Axelrod 1984; Alexander 1985; 1987) are less applicable to large societies. Boyd and Richerson's (1988) formal analysis of n-person prisoner's dilemma games concludes that, as n gets larger, the conditions under which reciprocity can evolve become extremely restrictive (p. 352). Their analysis of Alexander's (1985; 1987) chain of indirect reciprocity also reaches a similar conclusion that indirect reciprocity is unlikely to be important unless interacting groups are fairly small (Boyd and Richerson 1989, p. 213).

Second, however successful these models might be as explanations of the *evolution* or spread of cooperation, they cannot explain its original emergence; the evolutionary models take at least some incidence of cooperation as exogenous. Orbell and Dawes' (1991) "cognitive miser" theory, though it requires few other assumptions, nevertheless requires that other mechanisms provide a suitable "initial kick" (p. 515); if there are no other cooperators in the population, a single cooperator will lose absolutely and comparatively from every play he or she consummates and thus cooperation can never

evolve (p. 525).

Boyd and Richerson's (1985) dual inheritance theory of the human evolutionary process combines *genetic* and *cultural* evolutionary models. The genetic evolutionary model explains altruistic cooperation on the basis of group selection. If individuals' inclusive fitness depends on their group's fitness, and the group's fitness depends on the number of cooperators (and the provision of public goods) in the group, then group selection favors cooperative genes. However, theoretical analysis of group selection models suggests that altruistic cooperation in large groups of genetically unrelated individuals is unlikely to evolve (Boyd and Richerson 1985, p. 231). Furthermore, any strictly genetic evolutionary models of social order, which assume that individual tendencies toward cooperation are affected by heritable genetic differences (Boyd and Richerson 1988, p. 338), cannot explain fluctuations in the levels of order within a single generation. While cultural evolutionary models, which assume that the probability that a strategy is transmitted culturally is proportional to its average payoff (Boyd and Richerson 1988, p. 339), can explain the evolution of altruistic cooperation in a large group of genetically unrelated individuals, the explanation strictly hinges on the operation of *conformist* (or frequency-dependent) transmission of cultural traits, where individuals adopt the most common behavioral strategy among their models (or "cultural parents") (Boyd and Richerson 1985, p. 232). At the very least, conformist transmission assumes perfect information on the actual strategies of other group members on previous interactions, a scope condition which is unrealistic in large and complex societies.

While they may be successful in explaining cooperative equilibria in two-person prisoner's dilemma supergames and local orders in small groups, the game-theoretic and evolutionary models are unable to explain global order in large and complex national societies. The failure of these endogenous models to account for global order, combined

with the inadequacies of earlier normative and Hobbesian approaches, leaves a theoretical vacuum in the study of order.³ An alternative *solidaristic* theory of global order purports to help fill this vacuum. The theory derives from rational choice first principles, and argues that social order is a largely unintended by-product of the control activities of constituent social groups when they pursue members' compliance to their own *group* (not societal) norms. In their attempt to achieve group goals and produce collective goods for the group members' consumption, the constituent social groups unintentionally provide a most important collective good for the state: social order. And the state essentially free rides on the social control activities of these constituent groups and enjoys the benefit of stable social order (Hechter, Friedman, and Kanazawa 1992).

In contrast to the normative approach, which assumes that global order is produced within the individual at the *micro* level through successful socialization, and to the Hobbesian approach, which argues that global order is generated by the state social control at the *macro* level, the solidaristic theory argues that it is instead produced and maintained within and by the social groups at the *meso* level. In contrast to the recent game-theoretic and evolutionary models, the solidaristic theory can account for global order in large and complex national societies of genetically unrelated individuals.

THE PLAN FOR THE REST OF THE DISSERTATION

In Chapter 2, I will present the solidaristic theory of global order in its entirety. I will first spell out the scope conditions under which the theory is assumed to hold, primitive terms which the theory leaves undefined, definitions for the key concepts, and assumptions from which the theory is derived. I will then present the verbal argument for the theory, which consists of two submodels: group solidarity and the state. I will also discuss two

³Recent work by Elster (1989) and Wrong (1994) provide some thoughtful insight into the *question* of the problem of order. But they offer no theory of their own and thus provide no *solutions* to the problem.

theories which underlie the state submodel: theories of the state and group resource allocation.

The next three chapters present preliminary empirical evidence for the theory. Chapter 3 presents comparative data from Japan and the United States that support the group solidarity submodel. The evidence shows that a host of institutional arrangements that foster dependence and visibility of Japanese citizens within their groups are linked to an exceptionally high level of global order in contemporary Japan. The chapter also presents evidence that these institutional arrangements can function independent of the Japanese cultural context. Chapter 4 presents evidence on the state's differential reaction to various groups in the United States which collectively supports the theory of the state which underlies a portion of the state submodel.

Chapter 5 takes up one theoretically important issue and discusses whether the state is necessary for the production and maintenance of global order. I will argue against the current consensus in the theoretical and empirical literatures that the state is not necessary for social order, and present evidence from the recent events in Somalia to bolster the contention. The chapter also serves the purpose of providing preliminary evidence for the second theory underlying the state submodel: the theory of group resource allocation.

Chapter 6 will present the design of the first three of the four laboratory experiments necessary to provide a complete test of the theory. It will also present the empirical results from one of these experiments: Experiment 3 to test a portion of the theory of the state. Chapter 7 will offer some concluding remarks.

CHAPTER 2

THE SOLIDARISTIC THEORY OF SOCIAL ORDER

Despite the fact that the Hobbesian problem of order is one of the most important and persistent problems in all of social sciences, there is no satisfactory theory that can account for differential levels of social order at the societal level. In this chapter, I will present a new theory of social order that purports to fill this theoretical vacuum. I will first present various components of the theory: scope conditions (Toulmin 1953; Walker and Cohen 1985), primitive terms (Meeker 1981; Cohen 1989), definitions, and assumptions. I will then present a verbal argument for the theory, as well as its component theories.

SCOPE CONDITIONS

I assume the solidaristic theory of social order to hold under the following conditions.

1. There are three hierarchical levels of aggregation: The macro-level "society"; the meso-level "groups"; and the micro-level "individuals."¹

¹Paradoxically, this scope condition makes the theory *more* general rather than less. As long as there are these three hierarchical and increasingly inclusive levels of organization, the theory in principle applies beyond the conventional meanings of the terms "society," "groups," and "individuals" to larger or smaller social organizations. (This is why these terms are in quotation marks in the scope condition.) For instance, the theory can explain normative behavior within a smaller social organization in society such as a high school. In this case, the entire high school will be the "society," homeroom classes or friendship cliques within the school will be the "groups," and the individual students will be the "individuals," and the same theoretical mechanism can explain the normative behavior at the "societal" level with the characteristics of the "groups." However, one important caveat in this case is that all important norms at the "societal" level (in the high school) be perfectly legal in the larger society, the real society in the conventional sense, so that one may safely ignore the effects of social control mechanisms outside of the "society" (the high school). On the other hand, the theory can also apply to a larger social organization such as the United Nations. In this case, the "society" will be the United Nations, the "groups" will be some military, geopolitical, or economic alliances of like-minded nations (all of which are members of the U.N.), and the "individuals" will be the member nations. The general theoretical argument is that, regardless of the actual entities (see Assumption 9 below), social control activities are *always* more efficient at smaller (meso) than larger (macro) organization, and the normative behavior at the larger organization is a function of social control activities and goals of the smaller entities.

All groups and individuals are part of society with no exception. For individuals, both multiple memberships in groups² and nonbelongingness (not belonging to any group) are possible.

2. There is a central state whose political jurisdiction is coterminous with society.

PRIMITIVE TERMS

The theory involves the following primitive terms which I will not define explicitly; I will instead assume that social scientists share their meanings widely.

1. individual
2. society³

²Such multiple group affiliations can involve both what Simmel (1955) calls "concentric" groups and "juxtaposed" groups. However, unlike Simmel, I specifically exclude nation-states and other smaller geopolitical entities (such as provinces and cities) from the category of "groups," because citizens of nation-states and other geopolitical entities normally do not join them "for the primary purpose of producing joint goods for the exclusive consumption of members." (See Definition 2 below.) Furthermore, in the case of concentric groups, the larger group must provide collective goods of its own to its members that the smaller group cannot provide to *its* members. If such collective goods were not available, then the smaller group, acting as a single decision unit, would not join the larger group (Definition 2 and Assumption 9 below).

³Elster (1989, p. 248) provides one interesting definition of society in the following passage.

There are no societies, only individuals who interact with each other. Yet the structure of interaction allows us to identify clusters of individuals who interact more strongly with each other than with people in other clusters. These clusters are hierarchically arranged. Imagine a series of concentric circles or, more generally, of nested closed curves, covering a given territory. For the area enclosed by any given curve, we can calculate -- at least in principle -- a *coefficient of cohesion*, defined as the number of transactions between individuals in the area divided by the total number of transactions in which these individuals are involved. As we move up in the hierarchy, from smaller to larger areas, the coefficient will increase, decrease, increase again and so on . . . The term "society" refers to any area which has a local maximum of cohesiveness, so that any slightly smaller or slightly larger area has a lower coefficient.

While Elster's definition of society is novel and has intuitive appeal, the solidaristic theory does not depend on this, or any other, particular definition of society, as long as Scope Condition 2 above holds.

DEFINITIONS

1. *Global order* is the extent to which citizens comply with the important norms of the society where *important norms* are written laws (and other mores) that the state attempts to enforce.

2. A *group* is a relatively durable collection of individuals with discernible criteria for membership, formed for the primary purpose of producing joint goods for the exclusive consumption of members (Marwell and Oliver 1993, p. 18) (see Assumption 4 below).

3. *Group solidarity* is the average proportion of private resources that individuals contribute toward collective ends (Hechter 1987), or the extent to which individuals comply with the group's collective normative obligations.

Since control over one's behavior is a private resource (Coleman 1990), these two definitions are equivalent. Contributing 30% of one's private resources toward collective ends (the first definition) is equivalent to complying 30% of the time with the group norm that mandates member's contribution of private resources toward collective ends (the second definition). Group solidarity varies from 0 to 1.0. *Local order* is synonymous with group solidarity.

4. The *productiveness* of a group (or its G status) is the extent to which its collective obligations or norms conduce (or do not threaten) global order.

The productiveness (or the G status) ranges from $G=-1.0$ to $G=+1.0$. If the group

is maximally counterproductive ($G=-1.0$), then *all* of its collective obligations threaten global order; if the group is maximally productive ($G=+1.0$), then *none* of its collective obligations does.⁴

I define the productiveness of a group in terms of norms or obligations, *not* the actual behavior of its members. Whether or not group members obey the norms and fulfill the obligations is taken into account by the group solidarity (Definition 3). (See Figure 1.1 or the formula below.) So even if a group is counterproductive with $G < 0$, it still does not reduce the societal level of global order much if its solidarity is so low that few of its members actually obey the group's counterproductive norms.

5. *Negative externalities* (of A on B) is the extent to which A's behavior negatively affects B's situation without B's explicit agreement (Buchanan 1971, p. 7).

6. *Power* of (of A over B) is the extent to which A can get B to behave in A's interest (Weber 1946, p. 180; Dahl 1957, pp. 202-203).

Following Emerson (1962), the power of A over B is equal to the dependence of B on A: $P_{AB} = D_{BA}$.

7. The *State* is the third-party enforcer and arbitrator at the societal level.

This definition of the state is consistent with Dahl and Lindblom's (1953, p. 42)

⁴The definition of group productiveness is purposefully asymmetrical. As I will argue in Chapter 4, it does not matter whether a group's collective normative obligations actively promote global order (the Boy Scouts, the Episcopalian Church) or simply do not threaten it but otherwise are quite marginal and deviant (Hare Krishnas, prostitutes). Both are equally productive from the perspective of the solidaristic theory; in fact, as I argue in Chapter 4, the latter type of groups are relatively more important for the production and maintenance of global order than the former type.

definition of *government*: "Governments [are]. . . organizations that have a sufficient monopoly of control to enforce an orderly settlement of disputes with other organizations in the area. . . . Whoever controls government usually has the "last word" on a question; whoever controls government can enforce decisions on other organizations in the area." Thus "every government is the locus of ultimate power in its society; i.e., it can coerce all the other groups into obeying its decisions, whereas they cannot similarly coerce it. Therefore its social function must at least include acting as the final guarantor behind every use of coercion in the settlement of disputes." (Downs 1957, p. 23)

8. A *norm* is a situationally specific behavioral prescription or proscription, which is collectively shared and enforced through the use or the threat of sanctions.

A norm tells an individual what to do or what not to do in a given situation. Unlike values or preferences, which are internal to the individual, norms are *supra*individual and shared by other members of a group or a society. As such, norms must be enforced by sanctions (Hechter 1992b, p. 215) because rational egoists will not obey norms in the absence of effective sanctions (see Assumption 2 below). Norms always prescribe behavior that is contrary to most individuals' preferences or proscribe behavior that is consistent with them (Freud 1961 [1930]). Thus, in the absence of negative sanctions, it is always in the individuals interest not to obey norms.

ASSUMPTIONS

The theory derives from the following assumptions.

Assumptions about individuals

1. Individuals are purposive actors with predetermined and transitive utility

functions.

2. Individuals are rational egoists within the structural and informational constraints.

3. Individuals have limited private resources.

These three assumptions form the core of the microscopic rational actor model, which forms the basis of the macroscopic rational choice theory (Friedman and Hechter 1988).

4. Individuals desire some goods that they cannot produce alone.

This is why individuals form and join groups in order to produce and consume joint goods that they cannot produce alone. Thus the primary function of a group is to produce joint goods for the exclusive consumption by the members (see Definition 2 above).

Assumptions about groups

5. The group possesses the capacity to monitor and sanction its individual members.

This means that the group has at least partially solved the second-order free rider problem through some mechanism like "hypocritical cooperation" (Heckathorn 1989) or "quasi-voluntary compliance" (Ostrom 1990, pp. 94-100). Since individuals are rational

egoists (Assumption 2), who will not voluntarily contribute toward the production of joint goods (Olson 1965, p. 2), and yet the group's primary *raison d'être* is the production and then exclusive consumption of these goods by the members (Definition 2; Assumption 4), groups that have no collective capacity to detect and punish noncompliant members will soon cease to exist. Thus this assumption holds, and the second-order free rider problem has been solved, for all *existing* and *surviving* groups. This assumption is mute on the mechanism through which the group solves the second-order free rider problem. It merely states that it has, and thus is compatible with Heckathorn's (1989) or Ostrom's (1990, pp. 94-100) or any other theoretical solution.

Assumptions about the state

6. The primary goals of the central state are: 1) to remain the ultimate and sole exerciser of political power at the societal level; and 2) to minimize negative externalities among groups efficiently with the minimum expenditure of the state's resources.

The state needs to accomplish 1) in order to stay true to the definition of the state (see Definition 7 above), and it needs to accomplish 2) in order to accomplish 1). The state cannot remain the ultimate and sole exerciser of political power, or "the final guarantor" in Downs' (1957, p. 23) words, at the societal level when other groups in society become stronger and more resourceful than the state as a result of the state's overexpenditure. The state needs to minimize its expenditure to remain the most powerful and resourceful actor in the society.

7. The state possesses the capacity to sanction individuals.

However, in large and complex national societies, the state's ability to detect individuals' noncompliance to norms is always less than that of smaller constituent social groups to which individuals belong.

8. The state has limited resources.

Because its resources are limited, the state enforces societal norms selectively. In other words, there are "important norms" that the state enforces and there are "unimportant norms" that it does not enforce (even when these are written laws). Global order is a function of the congruence between the society's important norms and individuals' behavior (Definition 1).

Additional assumptions

9. Corporate actors (such as the state or the group) behave the same way as do individual actors.

I borrow this (somewhat controversial) assumption from other general theoretical perspectives. In the exchange-theoretic perspective, for instance, "an actor can be either a person or a group." (Emerson 1962, p. 32) In this perspective, either a natural person or a collectivity can be an actor as long as it confronts its environment as a single unit, and other actors in the environment treat it as a single unit (Emerson 1981, p. 46; Cook 1991, p. 32). The game-theoretic perspective makes the same assumption about a player (Shubik 1982, p. 18; Kahan and Rapoport 1984, pp. 19-20).

Strictly speaking, this assumption is not necessary to derive the solidaristic theory of global order; it is only necessary to justify the use of human subjects in experimental

tests of the theories of the state and group resource allocation (see Chapters 6 and 7). If Assumption 9 was part of an assumption set from which the theory is logically deduced, I do not need to justify its empirical plausibility because one does not evaluate a theory for the empirical plausibility of its assumptions, only for the empirical prediction of its hypotheses (Jasso 1988; Stinchcombe 1991). In fact, the more empirically unrealistic the assumptions are, the better the theory is, *ceteris paribus* (Friedman 1953, p. 14). However, since Assumption 9 is necessary, not to derive the theory, but to test it experimentally, I do need to justify its logical and empirical plausibility.⁵

I believe that there are several ways to defend the assumption of behavioral equivalence between natural and corporate persons. The first is to admit that natural and corporate persons do not *always* behave the same way; they do only some of the time. This justification follows Emerson's (1972, p. 61n) strategy and reduces the assumption to an empirical question. Then my experimental test of the theories of the state and group resource allocation (in fact, of any theory in which the actors are supraindividual) is valid *only to the extent* that natural and corporate persons behave similarly.

The second way to justify Assumption 9 is to argue that all supraindividual decisions are nevertheless made by natural persons. This is clear in the cases of pure dictatorships and authoritarian groups. All the "state" or "group" decisions are no more than the decisions of the dictators or the authoritarian group leaders. Even in democracies and democratic groups, one can invoke the notion of principal-agent relations and argue that all the state and group decisions are still made by a single individual, who takes into account the preferences of other individuals in the collectivity and acts as their agent. Some

⁵Some (like Stinchcombe 1991, p. 372) argue that it is useful to *conceive of* corporate actors (such as the state and groups) as a single person when certain conditions are met. It may be so. However, the assertion that it is useful to conceive of corporate persons as natural persons for *analytical* purposes is different from the assertion that corporate persons and natural persons behave similarly in the *empirical* world and the use of natural persons to test the theory of corporate persons is therefore justified. It is the latter, bolder claim about the empirical world that I am making with Assumption 9.

experimental political scientists studying international relations use this justification (Beer, Healy, Sinclair, and Bourne 1987).

The third way to defend this assumption is to assume that all individual members of a collectivity agree on all of its collective goals. Since all individuals are assumed to be equally rational (Assumption 2), the individual members of the collectivity, who find themselves in a given environment, also agree on the means to attain the goals they agree on. Then all collective decisions made by the collectivity is the same as what any one of the individual members would have decided individually. Downs (1957, pp. 24-27) uses this assumption of complete agreement on collective goals in his definition of a political party and to defend his treatment of a political party (and thus a government under control of a single political party) as an individual.

My own view is very close to Downs'. Despite their idiosyncratic individual values, all members of a group share a common value in the production and consumption of collective goods (Definition 2). Since a group's *raison d'être* is the production and exclusive consumption of collective goods, all collective decisions a group must make also pertains to this singular purpose; these are the collective goals that members agree on in Downs' (1957, pp. 24-27) formulation. Within the informational and structural constraints that the group finds itself, all members of the group also agree on the means to produce and consume their collective goods most efficiently. Any one member of the group, facing the same constraints, thus makes the same decisions on behalf of the collectivity as any other. In fact, any individual, given a set of informational and structural constraints *and* a set of goals, makes the same decisions. This is just another way to restate Assumption 2. Given identical preferences, opportunity costs, and institutional constraints, all individuals behave in the identical way (Friedman and Hechter 1988).

THE (VERBAL) ARGUMENT

Global order (Definition 1) is properly a societal- (macro-) level phenomenon, a characteristic of a society such as a nation state, not of individuals or smaller groups within a society. However, some mechanisms operative at lower levels of aggregation can generate and then maintain global order. In a sense, the state can delegate the task of generating and maintaining global order to its constituent groups.

The central state can produce global order if it can monitor the behavior of every single citizen at all times in order to induce compliance to the important norms. Within any modern state, however, monitoring and sanctioning all of its citizens effectively becomes increasingly difficult; no central institution of a modern complex nation state can accomplish such a task. That means that smaller constituent social groups such as families, schools, and work organizations bear the responsibility of monitoring and sanctioning their respective members in order to induce their compliance to important norms.

When the social control at the group (meso) level is efficient, the result at the societal (macro) level is essentially the same as though the society acted as a single group. If many or all of the constituent groups are effective as agents of social control and their respective members have higher probabilities of compliance to *group* norms as a result, then the society as a whole will comprise citizens who have higher probabilities of compliance, *regardless of the actual content of the norms with which they are complying*. Their higher probabilities of compliance are not due to their membership in the nation state but to their membership in its smaller constituent groups, which function as the actual agents of social control. The extent to which individuals comply with the collective normative obligations of their group is its level of *group solidarity* (Hechter 1987; Definition 3). It therefore follows from this logic that *macro-level global order is a function of meso-level group solidarities* (or local orders). *Ceteris paribus*, global order is

higher in societies where its constituent groups have higher levels of solidarity than in those where the average levels of group solidarity is lower.

Not all social groups are the same, however. The nature of collective normative obligations that social groups impose and extract from their members varies widely. Some groups are productive with respect to global order while others are similarly counterproductive (Definition 4). Higher solidarities among counterproductive groups produce individual behavior which threaten global order, and thus reduce rather than enhance the overall level of global order (Definition 1). Only higher solidarities among productive groups promote global order. *Global order therefore must also be a function of group productiveness. Ceteris paribus*, it is higher in societies with more productive, and fewer counterproductive, groups.

Figure 1.1 presents the entire theoretical model, which consists of the group solidarity and state submodels. Global order is a multiplicative function of two meso-level group properties of solidarity and productiveness.

THE GROUP SOLIDARITY SUBMODEL

Following Hechter (1987; 1989), group solidarity is a multiplicative function of two factors: 1) the extensiveness of normative obligations for its members; and 2) the effectiveness of social control within the group. Each of these factors varies from zero to one. The extensiveness of normative obligations is zero if the group does not attempt to control any part of the members' behavioral repertoire, and it is one if the group attempts to control all aspects of the members' behavior. Similarly, the effectiveness of social control is zero if none of the members comply with the group's normative obligations at any time, and it is one if all of them do all the time. Since the two multiplicative factors that contribute to the level of group solidarity vary from zero to one, the level of group

solidarity itself also varies from zero to one. It is zero either if the group attempts to control no part of the members' behavior or if, regardless of what the group attempts to do, no members comply with its normative obligations.

As the top half of Figure 1.1 (the Group Solidarity Submodel) indicates, these two multiplicative factors are further dependent on two causally prior antecedents: 1) the dependence of group members on joint goods; and 2) the visibility of members and their behavior within the group (Hechter 1987; 1989). The *dependence* of members increases group solidarity by increasing both the extensiveness of normative obligations and the effectiveness of social control. It increases the extensiveness of normative obligations because it sets the upper limit to the scope of such obligations. The more dependent the members are on the joint goods, the more obligations the group can safely impose on its members without risking the members' exit *en masse* from the group. The dependence of members also increases the effectiveness of social control because any social group has at least one internally producible means of sanctions at its disposal: the threat of expulsion from the group and exclusion from consumption of its joint goods. The more dependent the members are on their group and its joint goods, the more weight the threat of this sanction carries and the less likely the members are to risk it by noncompliance to group obligations.

The *visibility* of the members and their behavior to other members of the group affects group solidarity through the effectiveness of social control. The visibility of group members to one another in their performance of social roles increases the scope, and decreases the cost, of both monitoring and sanctioning essential for effective social control (see Figure 1.1). The emergence and maintenance of cooperative social relations often depends on the existence of common knowledge about the actors' payoffs, strategy sets, and intentions in given social situations (Scharpf 1990; Hechter 1992a). If the actors

possess such common knowledge, it is easier for them to take each other into account in planning their own actions and, hence, less third-party enforcement is necessary for cooperative outcomes. Visibility is one means of increasing the stock of such common knowledge, and it promotes cooperative behavior (Sell and Wilson 1991).

THE STATE SUBMODEL

As if in tacit recognition of the contributions that the productive constituent social groups make toward global order, the state tolerates the existence and activities of most such groups (Hechter, Friedman, and Kanazawa 1992). Higher solidarities among the productive groups contribute toward global order because the successful production of joint goods, which results from higher solidarity, consumes a large part of individual resources. Members of highly solidary groups must contribute large quantities of individual resources (such as time and energy) toward the production of collective goods and thus have correspondingly less of such resources left to expend toward other ends that might threaten global order. These individuals have higher "involvement in conventional activities," to use Hirschi's (1969) language.

Further, it turns out that the normative legitimacy or deviancy of constituent social groups is independent of their productiveness. Both normatively legitimate and deviant social groups can be productive and thus, if solidary, can contribute toward global order. If anything, normatively deviant social groups are disproportionately *more* important for the production of global order than normatively legitimate groups (Hechter, Friedman, and Kanazawa 1992). This is because members of deviant social groups are less likely to be constrained by multiple memberships than members of legitimate social groups. If a deviant social group were suddenly to disband, its members become no longer subject to any meso-level social group control activities, which are essential for global order, whereas

if a legitimate group were similarly to disband, its members are still subject to the monitoring and sanctioning of *other* social groups to which they still belong. To use Heckathorn's (1990) language, both normatively legitimate and deviant social groups can exercise "compliant control" that enhances the state's goal of producing and maintaining global order.

What then determines the productiveness of constituent social groups? There are two principal ways in which a group can be counterproductive and threaten global order. First, activities of a group can consume the state's resources and weaken the state. Because one of the state's primary function is to minimize negative externalities of counterproductive groups (Assumption 6), more counterproductive groups flourish under weakened states and threaten global order. Thus any activities of a group that weaken the state necessarily threaten global order and make the group counterproductive. There are two ways by which a group's activities can weaken the state.

A group can *directly* weaken the state by threatening and challenging it. Because the other primary function of the state is to remain the ultimate exerciser of political power in the society (Assumption 6), the state must counter and neutralize all such challenges. This necessitates the expenditure of the state's limited resources (Assumption 8) and weakens the state. A group can also *indirectly* weaken the state by imposing negative externalities on powerful (productive and counterproductive) groups. These powerful victim groups can force the state to expend its resource to protect them against the adverse effects of the members' activities. Once again, this expenditure drains the state's limited resources and weakens the state.

Second, a group can threaten global order and be counterproductive by imposing negative externalities on powerless *productive* groups and reducing their solidarities. Negative externalities on powerless productive groups force the victim groups to expend

their own limited collective resources for protection against such externalities (because they are unable to force the state's to protect them on their behalf). This expenditure necessarily diverts the group's resources from *internal* monitoring and sanctioning essential for the production of group solidarity to *external* monitoring and sanctioning of outsiders, in order to protect the group from their negative externalities. This diversion of collective resources will decrease local orders among the productive victim groups, and, since global order is a positive function of local orders among productive groups (see THE AGGREGATION MECHANISM below), it also decreases the overall level of global order.

However, the same negative externalities on powerless groups make a group productive (rather than counterproductive) *if* the victim groups are counterproductive. By forcing powerless counterproductive groups to divert their limited collective resources from internal to external monitoring and sanctioning, the same act of imposing negative externalities similarly reduces the local orders of the counterproductive victim groups, and thereby *increases* (rather than decreases) global order since the latter is a negative function of local orders among counterproductive groups.

The state submodel of the solidaristic theory of global order thus posits three separate causal effects on the productiveness of a group: 1) a negative effect of the threat it poses for the state; 2) a two-way interaction effect between negative externalities on other groups and their power over the state; and 3) a three-way interaction effect between negative externalities on other groups, their power over the state, and their productiveness (see Figure 2.1). However, unlike the group solidarity submodel, the state submodel is not empirically testable directly because its dependent variable, group productiveness, is an analytical concept which is empirically unobservable. However, the state submodel logically derives from two other theories that *are* empirically testable. The first two causal effects derive from a theory of the state, and the last from a theory of group resource

allocation.

A Theory of the State

The theory of the state (Figure 2.2) explains the state's attempt to contain or intervene in the activities of members of group *i* (any group in society) in terms of two separate causal mechanisms. First, the extent to which group *i* poses threat or challenge to the state has a positive effect on the state's attempt at containment. Second, the extent of group *i*'s negative externalities on group *j* (the victim group) and group *j*'s power over the state has a positive multiplicative effect on the state's attempt at containment.

This theory of the state clearly underlies the relevant portion of the state submodel of the solidaristic theory of global order. The same factors that promote the state's attempt to intervene in the activities of a group in Figure 2.2 decreases the group's productiveness in the state submodel in Figure 2.1. It is precisely the state's expenditure of its resources to contain the group that weakens the state and therefore makes the group less productive with respect to global order. Empirical evidence for the theory of the state therefore provides support for the relevant causal mechanisms in the state submodel.

The state tolerates the activities of all constituent social groups *unless* they threaten and challenge the state's status as the ultimate power broker and/or they impose negative externalities on powerful groups (Hechter, Friedman, and Kanazawa 1992).⁶ When solidary, activities of counterproductive groups reduce rather than enhance global order because they weaken the state and diminish its resources. *Ceteris paribus*, global order is

⁶While generally skeptical of the role of the state in the production of social order, Ellickson (1991) actually agrees with Hechter, Friedman, and Kanazawa (1992) on the nature of intergroup conflict and the need for a state when he states "a norm of 'honor among thieves' may well be welfare maximizing for thieves, but welfare diminishing for society at large. . . . In a healthy political system, a state would therefore tend to punish actors who have hurt the larger society by honoring a group's parochial norms" (pp. 249-250). In the language of the solidaristic theory, "honoring the parochial norm of honor among thieves" increases the solidarity of a counterproductive groups (thieves), and thus decreases global order.

higher when the state is stronger and more resourceful.

The strength and resourcefulness of the state is positively correlated with global order because the strength of the state is a *fungible good*, which is partly public and partly private. A strong and resourceful state can provide many different *public* goods for the citizens' benefit which a weaker state cannot provide. The most important of these public goods is the state's ability to arbitrate in cases of conflict among groups and to curb the activities of counterproductive groups. The state functions as a referee in the society, and protects the interests of some groups against others which impose negative externalities on them (Assumption 6). Constituent groups under a strong state can depend on it and its resources to protect them against such negative externalities imposed on them by other groups, and can therefore expend correspondingly more of their group resources toward the production of joint goods (via investment in the group control capacities, for example). Thus, *ceteris paribus*, groups under a stronger state are expected to have higher levels of group solidarity than their counterparts under a weaker state, and such higher levels of group solidarity in turn lead to a higher level of global order. To the extent that the strength of the state is a fungible public good, everyone benefits from a strong state, which can function as a reliable referee.⁷

However, the strength of the state is also a *private* good, which the state can use to reward the constituent groups differentially. Therefore, while a strong state might benefit

⁷Some might object to this somewhat benign conception of the state by pointing out the systematic bias in the state behavior which seems always to benefit the powerful at the cost to the powerless. This is true to a certain extent, as the next paragraph indicates. However, if the powerful benefit from the biased allocation of the state's resources, why do they simultaneously tend to be the politically most conservative who prefer a weaker state? Political conservatives usually favor a smaller and weaker central state ("In the 1976 campaign for the Republican Presidential nomination, Reagan repeatedly said: 'I've always thought that the best thing government can do is nothing.'" [Will 1983, p. 20]) and endorse policies toward this end such as tax reduction, which reduces the state's resources. From the solidaristic theory's perspective, conservatives favor a weak state because they recognize the fungible *public* nature of the state's strength. Because the state's strength is a fungible public good which to some extent benefits everyone, a stronger state diminishes the elite's comparative advantage in society relative to everyone else. (See Chapter 5, "Negative Externalities and Resource Inequality.")

everyone, it does not benefit everyone *equally*. It responds selectively to its constituent groups' demands because its resources are always limited (Assumption 8). This is why the state only responds to a plea from powerful victim groups for protection from negative externalities imposed by another group. If the victim groups do not possess sufficient power to persuade the state to protect them, the state will not and cannot (without unlimited resources) provide such protection.

The victim groups' ability to persuade the state, or their "power" over the state, is in turn a function of the state's dependence on them (Definition 6; Emerson 1962). The state responds to pleas for protection and expends its scarce resources for such purposes only to the extent that it is somehow dependent on these groups. The principal way in which the state is dependent on groups is their contribution to the state's resources, chiefly in the form of taxes. This is why the state, under any political system, is always biased in favor of more resourceful groups in society, because these groups usually contribute more to the state's fund, and thus the state is more dependent on these groups than on less resourceful groups. There is thus a curious bilateral relationship between the state and the resourceful groups in society. While the former is more dependent on the latter than on other groups, the latter are less dependent on the former (relative to other groups) for protection against negative externalities because they have more collective resources to expend for such purposes (see footnote 7 above).

A Theory of Group Resource Allocation.

The last causal mechanism in the state submodel, the three-way interaction effect between the extent of group i's negative externalities on group j, group j's power over the state, and group j's productiveness, derives from a separate theory of group resource allocation. The negative conditional effect of group j's productiveness on group i's own

productiveness (in the state submodel) is true by definition. Because group productiveness is an unobservable analytical concept, this relationship cannot be tested empirically.

The theory of group resource allocation (Figure 2.3) explains group j's expenditure of its own collective resources for protection against negative externalities from group i in terms of two factors: the extent of group i's negative externalities on group j; and the amount of external (mostly state) resources available to group j for protection. Thus the theory predicts (somewhat trivially) that group j expends more of its own resources for protection to the extent that group i imposes more negative externalities and that external resources are not available for the purpose. Since the theory of group resource allocation logically implies the three-way interaction effect in the state submodel, empirical evidence for the former necessarily supports the latter.

Despite the fact that this prediction is straightforward and logically simple, this part of the solidaristic theory of global order has so far received the most critical reaction. Various critics have questioned the implicit assumption underlying this theory that the group's collective resources are constant. They point to the old social psychological theorem (Sherif and Sherif 1956) that outgroup threat increases ingroup cohesion, and argue that negative externalities from group i might actually *increase* (rather than decrease, as the theory holds) group j's solidarity and thus their collective resources. Many casual observations (such as the support for McCarthyism in response to increased communist threat from the Soviet Union during the Cold War and the heightened solidarity among New York cab drivers in the face of increased number of armed robberies against them) are seemingly consistent with this criticism.

If a group's collective resources are indeed variable and increase with the external threat, then increased expenditure on external monitoring and sanctioning in the face of negative externalities does not necessarily mean decreased expenditure on internal

monitoring and sanctioning to produce group solidarity, and the whole logic behind the theory collapses. As the theory of group resource allocation is the newest part of the solidaristic theory, it requires further theoretical development and elaboration. However, while no systematic evidence has so far been collected to evaluate the theory of group resource allocation, some recent events in Somalia (discussed below in Chapter 5 in connection with the necessity of the state in the production of global order) are largely consistent with the theory.

THE AGGREGATION MECHANISM

It is important for any rational choice theory of macrosocial outcomes to specify the mechanism through which rational individual action translates into an aggregate phenomenon (Friedman and Hechter 1988; Coleman 1990, chapter 1). In particular, the solidaristic theory of global order must specify how individual action and group properties of solidarity and productiveness aggregate to the macrosocial outcome of global order. The aggregation mechanism for this theory involves a series of assumptions and logical arguments, not empirical propositions.

Individuals always have limited private resources (Assumption 3). Therefore, if they invest a certain proportion, p , of their resources in an activity A_1 , then there are $(1-p)$ resources left to invest in an alternative activity A_2 . The production of group solidarity requires individual members to invest some of their private resources toward collective ends (Definition 3). It therefore follows that, *ceteris paribus*, members of solidary groups have less private resources left under their individual control than members of less solidary groups.

Social groups vary not only in their levels of solidarity but also in their productiveness: Some are productive groups (designated as G^+ 's) while others are

counterproductive ones (designated as G⁻'s). Global order (Definition 1) is higher when more of the society's G⁺'s and less of its G⁻'s are solidary. This is because when G⁺'s are solidary, their members' compliant behavior does not threaten global order.

Conversely, global order is lower when more of the society's G⁻'s and less of its G⁺'s are solidary. When G⁻'s are solidary, their members' compliant behavior threatens global order. Global order is therefore a function of two group properties at the meso level: solidarity and productiveness (G status).

THE ELEMENTARY MATHEMATICS OF GLOBAL ORDER

One can obtain the level of global order in society with the formula:

$$\text{GLOBAL ORDER} = \frac{1}{\text{MEAN AFFILIATION}} * \sum_{i=1}^n (\text{SOLIDARITY}_i * \text{PRODUCTIVENESS}_i) * \text{WT}_i$$

where GROUP SOLIDARITY and PRODUCTIVENESS are the two meso-level properties explicitly defined above (Definitions 2 and 4, respectively), and n is the total number of groups in the society. SOLIDARITY varies from 0 to 1.0 and PRODUCTIVENESS varies from -1.0 to 1.0. GLOBAL ORDER therefore varies from -1.0 to 1.0. WT is the weight for each group and is the relative proportion of the society's population which belongs to the group. The formula includes the group's relative size as the weight so that a larger social group, regardless of its levels of SOLIDARITY and PRODUCTIVENESS, will have a correspondingly larger impact on the overall level of global order than a smaller group.

MEAN AFFILIATION refers to the mean number of group affiliations (memberships) that members of the society have. It will be high if more individuals in society belong to more groups, and it will be low if multiple memberships are limited. The reciprocal of this factor figures into the formula as an adjustment for two reasons, one mathematical, the other theoretical.

First, without this adjustment, there will be no natural upper or lower limit to the computed level of global order. But if one divides the weighted sum of the product of the two factors for all social groups by the mean number of group affiliations in the society, then the level of global order will have more readily interpretable bounds of -1.0 and 1.0.

Second, and more important, without this adjustment, a society in which people maintain a high degree of multiple group affiliations will have, *ceteris paribus*, a higher level of global order than a society in which people's group affiliations are more limited. However, global order should be an indicator of how normative people's behavior is, and not even partly of how many groups people belong to on average. Since the contribution of each constituent group is already weighted by its relative size, there is no theoretical reason to argue that global order ought to be high when the individuals "spread themselves thinly," so to speak, in terms of group membership.⁸

CONCLUSION

In this chapter, I presented the solidaristic theory of global order in its entirety. The theory argues that global order at the societal level is a function of local orders within groups and their productiveness. The theory thus consists of two submodels: group solidarity and the state. In the next three chapters, I will discuss these two submodels more in detail and present some preliminary empirical evidence in support of the theory. Chapter 3 will discuss the group solidarity submodel, and present comparative evidence to show how the submodel can explain relatively high levels of global order in contemporary Japan. Chapter 4 will discuss the state submodel, in particular, the theory of the state

⁸Simmel (1955, pp. 140-143) discusses individual consequences of such multiple group affiliations; some of these consequences are positive ("personal integration"), others are negative ("schizophrenia"). However, these psychological effects are largely irrelevant to the theory unless they affect a large number of people in society in such a way that Assumptions 1 and 2 become invalid for them.

which underlies a portion of the submodel. Chapter 4 will also present empirical evidence on various groups in the United States in support of the theory of the state. Finally, Chapter 5 will concentrate on one important implication of the solidaristic theory of global order: the necessity of the central state in producing and maintaining global order. I will challenge the current consensus in the theoretical and empirical literatures that the state intervention is not necessary for social order and present some supportive evidence from Somalia after the collapse of the state. This chapter also presents what little evidence that I have gathered so far for the theory of group resource allocation.

FIGURE 2.1
THE SOLIDARISTIC THEORY OF GLOBAL ORDER

FIGURE 2.2
A THEORY OF THE STATE

FIGURE 2.3

A THEORY OF GROUP RESOURCE ALLOCATION

CHAPTER 3

THE GROUP SOLIDARITY SUBMODEL: GROUP SOLIDARITY AND GLOBAL ORDER IN JAPAN¹

The group solidarity submodel of the solidaristic theory of global order explains how a group attains a particular level of *local order*, which is an important determinant of global order. The submodel, which builds on Hechter's (1987; 1989) theory of group solidarity, explains local order in terms of visibility and dependence of group members. The more dependent members are on their group's joint good, and the more visible members are to each other, the higher the level of group solidarity. In this chapter, I will present some comparative evidence from Japan and the United States to support this claim.

Contemporary Japan is an ideal place to examine mechanisms behind the production of global and local orders from the rational choice perspective. In the first place, despite its rapid modernization and industrialization, Japan seems to exhibit a very high level of global order compared to western industrial nations (see below for evidence). Just as social scientists concerned with the problem of order in the first part of the 19th century wondered why England, that nation of shopkeepers, was so much more orderly than France, home to the Reign of Terror and a seemingly interminable series of political cataclysms, those who are concerned with the same problem in the 1990s must ask why Japan is today's exemplar of order. In the second place, Japan scholars have mostly relied on aspects of Japanese culture to explain high global order in Japan. Thus "Japan is an ideal site for the test of a theory that views group cohesion [and global order] as the result of rational actors responding to the situations confronting them" (Brinton 1983, p. 59).

¹ An earlier version of this chapter was published as Hechter and Kanazawa (1993)

JAPANESE GLOBAL ORDER IN COMPARATIVE PERSPECTIVE

Since global order is the extent of citizens' compliance to important norms that the state enforces (Definition 1), crime rates can serve as rough indicators for it. Table 3.1 shows the reported rates of selected felonies in major industrial societies (the United States, Great Britain, France, West Germany) and Japan. The table also includes rapidly industrializing South Korea and China. Japan has by far the lowest rates for all of these felonies among the advanced industrial societies, and this pattern was consistent over the nine-year period. The Japanese rates for these crimes are generally (though not always) lower than those for South Korea and China. Table 3.2 compares Japan with the other nations on the level of civil strife and violence, as another indicator of global order. Once again, the Japanese level of order during the early 1960's is generally higher than both the western industrial nations and South Korea.²

In the past, social scientists tended to rely on *normative* theories to explain the relatively high level of global order in Japan, as well as other characteristic features of Japanese society. Thus, Nakane (1970, p. ix) considers a single "basic value orientation

²"Stifling though their society is, it surpasses Western societies in many ways: in fostering a sense of duty to other members of the society, in creating wealth and educating its children well, in running the only big cities in the world where a woman can still feel safe walking alone at night" (*The Economist* 1990, p. 10). However, I do not wish to create a mistaken impression that Japan is a completely orderly society devoid of social conflict. On the contrary, Japanese society exhibits the same kinds of social conflict that western nations do (Krauss, Rohlen, and Steinhoff 1984), but many of these conflicts are hidden. Despite the myth of racial homogeneity, Japan does contain more than 600,000 Korean immigrants and their descendants (Lee 1981, p. 133), whom the Japanese government does not allow to become citizens even after several generations. There are also 300,000 former outcasts (*Burakumin*) (Beauchamp 1989, 239). Both of these hidden minority groups, as well as other smaller minorities, present a constant source of political and social conflict in Japan (Lee and De Vos 1981; De Vos and Wagatsuma 1966). Furthermore, there are about 10,000 homeless day laborers in Tokyo in the ghetto neighborhood of Sanya, and an additional 40,000 in Osaka in the Kumagasaki area, the site of recent violent riots in the fall of 1990 (de Bary 1988). Japan also has active factions of Marxist revolutionaries (Steinhoff 1984) as well as ultraconservative rightist groups, which have established mutual symbiotic relationships with the police (van Wolferen 1989). More recently, Japan faces the problem of accepting and accommodating refugees from its southeastern neighbors, a problem western societies have dealt with for years (Saito 1990; Mizuno 1990). Japan therefore is not immune to the kinds of problems that other advanced states face; it does have its "underside" (Hane 1982). My point here is simply that Japan's level of social conflict and problems is low *relative* to other societies with similar levels of economic development, and its *relative* level of global order is consequently high compared to them.

inherent in society" -- the vertical structural principle which "has become one of the characteristics of Japanese culture (Nakane 1970, p. 146)" -- as the *leitmotif* of her analysis of Japanese society. Doi (1973) argues that the profound feelings of dependence, which normal infants in every society harbor toward their mothers, are somehow prolonged into and diffused throughout the life cycle of the Japanese.³ These feelings, supposedly common among Japanese, are held to shape attitudes, among other things. Reischauer (1977, p. 141) concurs with Doi in maintaining that "both *on* [the unlimited debt of gratitude or obligation of the recipient to the bestower of some benevolence or favor] in premodern times and *amae* today underlie the Japanese emphasis on the group over the individual as well as the acceptance of constituted authority and a stress on particularistic rather than universal relationships." Shirai (1975, pp. 174-176) invokes such dispositional factors as "the psychology of group orientation," "distrust of union leaders," and "respect for institutional prerogatives," common to all Japanese workers, to account for the lack of open confrontation between leaders and members of labor unions.

In a frankly normative analysis, Smith (1983, p. 37) argues that "the Confucian past casts a very long shadow over contemporary Japanese society." For Smith, the causes of distinctive Japanese behavior lie in "how the Japanese think about man and society and the relationship between the two" (Smith 1983, p. 5). According to him,

It is clear that in Japan the use of law as a guarantor of rights and duties is little resorted to directly. We must therefore ask if there is another mechanism that serves in its stead to reinforce and maintain social order. There is, and it is to be found in the highly flexible and difficult to systematize domain of reciprocal obligations and human feelings called *giri-ninjo* (Smith 1983, p. 45).

³It is confusing that Doi's use of the word *amae* has been translated in English as *dependence*, because dependence also plays an important role in both Hechter's (1987) theory of group solidarity and my solidaristic theory of global order. Whereas *amae* refers purely to internal states, dependence in our theories is partly determined by available alternatives in the environment. The dependence in our theories would be translated into Japanese as *izon*.

Whereas some may think that serious social scientists no longer hold such simple cultural explanations, a recent review of four models of Japanese society concludes that

of the four models, the consensus model, also known by such aliases as 'harmony model' (Krauss, Rohlen and Steinhoff 1984) and 'group model' (Befu 1980a, 1980b; Mouer and Sugimoto 1986, p. 54-63) is by far the best-known and the most popular . . . One may regard the group model as a 'cultural' model in the sense that the model is predicated upon the exercise and observance of cultural values and norms and that it is best described with the aid of culturally specific or 'emic' concepts . . . Why this model is so popular and no other model is anywhere nearly as widely accepted in Japan or abroad is a question deep in the sociology of knowledge. This model is at best a highly partial and inaccurate representation of the reality . . . Yet the model's popularity has not dwindled one iota. Instead it is continually invoked in one guise or another to 'explain' Japanese behaviour. (Befu 1990, pp. 213-215)

Table 3.1 seems to undermine the validity of these cultural models of Japanese order. The positive impact of industrialization and urbanization on crime rates has been well documented in the criminological literature (Clinard and Meier 1992, pp. 61-84; Shelley 1981), and this relationship has been observed throughout the world (Johnson 1983; Buendia 1990). If Confucianism and other cultural values produce order, as Smith and others argue, then one would expect much less crime in South Korea and China than in Japan because the latter, though equally Confucian and culturally homogenous as the former, has the mitigating influence of advanced industrialization and accompanied urbanization. However, Table 3.1 shows that the crime rates in South Korea and China are at least comparable to, and oftentimes higher than, those in Japan. The longitudinal crime statistics presented in Table 3.1 seem to indicate that factors other than Confucianism and value consensus are at work to produce the high level of global order in Japan.

I do not doubt that Japan has distinctive cultural values. I do, however, question whether these distinctive values are causes of its relatively high level of global order. Instead, I argue that the sources of Japanese global order reside in distinct institutions that developed in Japan independent of its Asian neighbors. These institutions produce global

order among rational egoists by fostering the dependence on a variety of groups (thereby reducing the amount of control necessary to produce solidarity), and visibility among fellow group members (thereby increasing the efficiency of control). Higher local orders produced by these institutions aggregate to high global order. The solidaristic theory, therefore, is totally at odds with claims that social order in Japan cannot be understood on the basis of rational choice theory (Rohlen 1989).

All the groups that are discussed below consume a great proportion of their members' time in Japan and elsewhere. Whereas none of these group-level institutions is sufficient to maintain high levels of global order by itself, in combination their relatively small contributions to group solidarity yield a degree of global order that is unparalleled in any large contemporary society.

MECHANISMS OF DEPENDENCE

Throughout their lives, the Japanese are more dependent on their groups than their counterparts in comparably developed societies. This pattern of dependence begins early in the life-cycle and continues throughout it. The relatively high level of dependence characteristic of Japanese society is revealed in studies of Japanese schools and firms.

Dependence on Schools

A major characteristic of the Japanese educational system is its lack of alternatives, which is directly responsible for students' high dependence on schools throughout their educational career. In junior high schools, they are dependent on teachers who determine the high schools to which they may apply (Rohlen 1983, p. 126). The high school one attends strongly influences one's ultimate career trajectory. Once in high school, students remain dependent because public academic high schools do not accept transfers; very few

students leave their high schools (Kyoiku Joho Kenkyukai 1988, pp. 2519.52-2519.53), a mere 0.4% for public academic high schools in 1980 (Rohlen 1983, p. 32). Thus students must graduate from the schools they enter, or undergo the entire process of "examination hell" once again and enter as first-year students. Transfers are not permitted between colleges and universities, either.

Japan has a very condensed and rigid human capital development system (Brinton 1988) in which people's educational investment is confined to a limited period early in their lives. More than one-quarter of the Japanese are in school at age 21, but the proportion precipitously drops to one percent or less in the 25-29 age group (see Table 3.3). (Corresponding figures for the U.S. are from 30% to 10%, and the decrease is much more gradual.) It is almost impossible for Japanese people to go back to or remain in school after age 25. Whatever human capital they have acquired up to that point is what they have to live with for the rest of their lives.

There is a conspicuous lack of any form of adult education, which is usually available in other societies. South Korea, for instance, provides an established system of nonformal education both at the primary and secondary school levels (Kim 1985; Choo 1990). France, though known for its centralized and standardized educational system, offers alternative adult education in the form of *formation continue* (Ardagh 1987, p. 461; Hanley, Kerr, Waite 1979, p. 264). The availability of alternative education in these societies reduces the dependence of young students on schools. If students do not manage to obtain a diploma with their classmates, they can always go back to school and get it later. The Japanese do not have this option.

Even high school students in Japan who will not go on to higher education are dependent on schools for their jobs after graduation. Workers and jobs in Japan are matched, not in the labor market as in the Western capitalist society, but by high schools'

semiformal employment contracts (Rosenbaum and Kariya 1989). Employers simply tell a high school how many new recruits they want, and the school "nominates" its students to them. Employers normally hire on the basis of these nominations. This system of semiformal employment contract is so complete that "students cannot apply to 'contract' employers without a school's nomination" (Rosenbaum and Kariya 1989, p. 1337). Whereas fewer than 10% of U.S. high school students use their schools' job placement services to find jobs, the comparable figure is more than 75% in Japan (Rosenbaum and Kariya 1989, p. 1341). Thus whether they plan to go on to higher education or get a job after graduation, Japanese high school students are dependent on their schools and teachers to a far greater extent than students elsewhere.

Dependence on Firms

Whereas firms normally are not considered to be obligatory groups that provide immanent goods (Hechter and Kanazawa 1993, p. 460), one of the distinctive achievements of Japanese-style management is its emphasis on face-to-face interaction in the context of formal organization (Hechter 1987, chapter 7). Once they enter the labor market, the Japanese are dependent on their firms until their retirement and even after. As Tables 3.4 and 3.5 show, the Japanese workers are far less satisfied than American or British workers (Kono 1984, p. 332). Yet despite this high level of dissatisfaction, Japanese workers are less likely than their American and British counterparts to leave their jobs (Table 3.6).⁴ If Japanese workers are less satisfied with their jobs yet more likely to

⁴Lifetime employment is a distinctive characteristic of the Japanese labor market (Abegglen 1958), and it makes Japanese workers dependent on their companies until or even after their retirement. Since lifetime employment in Japan is an informal social practice and not a formal contractual agreement (Nakane 1970, p. 82; Cole 1979, p. 61), however, it is very difficult to measure precisely what proportion of the Japanese workforce is covered by it. Because of this measurement difficulty, past observers used either the size of one's firm (only large firms can afford to offer lifetime employment to their employees) or the actual length of tenure (one has de facto lifetime employment if one stays with the same employer throughout one's career) to gauge the extent of lifetime employment in Japan. Estimates with these indirect measures vary from 28% (Galenson 1976, p. 615) to 35% (Cole 1979, p. 65) to roughly half (Dore 1973, p. 305-

stay in them, one must conclude that in the absence of any legal barriers to job mobility they are somehow more dependent on their jobs than workers elsewhere.

Tables 3.7 and 3.8 document various costs of job changes in Japan. Table 3.7 indicates that the Japanese labor market does not reward job changes as much as the U.S. economy does; upward *economic* mobility subsequent to job changes is more common in the U.S. than in Japan. Table 3.8 shows one type of social cost of job mobility. Among American job changers, those who leave small firms are more likely to get a job in a large firm than to move into another small firm, and those who leave large firms are more likely to get a job in another large firm than to move into a smaller firm. The opposite is true of

305; but see also Cole 1979, p. 60-61) to 56% (Glazer 1976, p. 865) of all male employees in Japan. It is universally agreed that lifetime employment applies only to male workers in Japan.

More important to both the life of the Japanese and my discussion here is the fact that lifetime employment, regardless of its actual extent, is the cultural norm. "It is the pattern of public employment and of employment in the large firms, and it is the *ideal to which smaller firms aspire*" (Glazer 1976, p. 865; emphasis added). "Sanctioned by what is seen as tradition, morally correct, and emblematic of Japanese culture, lifetime employment is the goal towards which both firms and individuals have to direct their efforts--or their apologies" (Clark 1979, p. 175). "Popular ideology, as well as that of the government, has supported the idea that participation in such a system [lifetime employment] is a privilege and that interfirm mobility is 'a response to defective human relations' (Office of the Prime Minister 1973, 27). Despite recent changes in the economy, firms with internal labor markets continue to be the employment *ideal* for the best and brightest of high school and university graduates" (Brinton 1988, p. 317; emphasis added). These observers seem to concur that lifetime employment, staying with a single employer throughout their work career, is the norm whether or not the workers actually have the privilege. Further, because lifetime employment is seen as the norm, negative sanctions and discrimination befall those who deviate from it (Riccomini and Rosenzweig 1985). "Men who move in from another company at a comparatively advanced stage in their working life tend to be considered difficult to mould or suspect in their loyalties" (Nakane 1970, p. 17). "The worker hired in midcareer [from other companies] has been looked on with suspicion, has had to begin at a lower wage and work himself up to the level of his age-mates who began in the firm" (Glazer 1976, p. 868). "Fellow employees are reluctant to accept as social equals those individuals hired with prior job experience. Employers commonly pay lower wages and give lower yearly wage increments to such employees" (Cole 1979, p. 62). Therefore, "whatever the market circumstances, there is little likelihood of the employee finding better employment if he once leaves his job" (Nakane 1970, p. 19). Whether they can reasonably expect lifetime employment in the public sector or large firms, workers in Japan (especially men) are dependent on their companies because they are expected to stay with their initial employer and there are penalties for job changers.

While casual observers have noted a recent increase in labor mobility and corresponding decline in the lifetime employment system (Bohnaker 1990), statistical evidence shows that this impression is largely untrue. If anything, the trend is in the opposite direction. In their review of recent labor statistics, Dore, Bounine-Cabalé, and Topiola (1989, p. 55-56) note that "far from disappearing, the 'three sacred treasures' of the Japanese system -- lifetime employment, seniority-constrained wage and promotion systems and a basically enterprise-based union system -- retain their centrality. Moreover, practices conforming to the system appear to have been spreading from the big firms to lesser ones. . . . Whatever the mechanisms, one can cite a number of statistical indicators which show a steady entrenchment of the [lifetime employment] system and its spread down the size hierarchy."

Japanese job changers; those who leave small firms are more likely to end up in another small firm than to move into a large firm, and those who leave larger firms are more likely, compared to their American counterparts, to get a job in smaller firms. Firm sizes are of particular significance in Japan because they are more important for the career prospects of Japanese workers than the core/periphery distinction of their firm (Brinton 1989).

This high extent of worker dependence on jobs is unique to Japan. Owing to Japan's domination and subsequent colonization of Korea from 1894 to 1945, the Korean economy shares many similarities with the Japanese. Yet Korean managers did not adopt Japan's guaranteed lifetime employment system because the practice did not develop in Japan until after 1945 (Bae and Form 1986, p. 122). Thus today there is more labor mobility in South Korea than in Japan (Macdonald 1988, p. 79; Woronoff 1983b, p. 234; but see Bae and Form 1986, p. 129, for counterevidence). At the same time, seniority as a basis for pay, which increases workers' dependence by making job changes costly, is less important in South Korea than it is in Japan (Bae and Form 1986). The magnitude of the seniority effect is more than twice as large for the Japanese workers of both sexes as for the American workers (Kalleberg and Lincoln 1988).

All told, various institutional arrangements in Japanese schools and firms make students and employees more dependent than elsewhere. The higher dependence increases the normative obligations that Japanese schools and firms can afford to impose. This suggests that global order in Japan is high in part because its citizens are more dependent on key social groups than people in other societies. However, the extensiveness of normative obligations alone does not produce group solidarity and social order; what also matters is the probability that members will actually comply with the norms. In the next section, I argue that the relatively high visibility within Japanese groups increases

normative compliance.

MECHANISMS OF VISIBILITY

The lives of the Japanese are under almost constant supervision by other members of their groups, making individuals visible and, therefore, accountable for their behavior. In a society where people's life courses are highly predictable (Brinton 1988; Fallows 1989), where everybody attends compulsory education through the ninth grade and over 90 percent of the population graduate from high school (Kyoiku Joho Kenkyukai 1988; Ministry of Education 1989), where all men work mostly for the same company for much of their lives, and where most women, although they may have part-time jobs, nevertheless stay home much of the time to take care of their children, these few groups account for a high proportion of people's waking hours. If I can show that visibility is higher in Japanese families, schools, and firms than in comparable groups in Western societies, then I can make the case that visibility is higher in Japan as a whole.

Visibility in Schools

The "inescapable embrace" (van Wolferen 1989) of constant supervision begins early in life. Control in Japanese high schools is effective because "academic discipline is subordinate to supervisory responsibilities" (Rohlen 1983, p. 152) and "the daily life of the students within the school is organized in order to *maximize their visibility* and accountability." (Rohlen 1983, p. 178; emphasis added) Students are required to wear often distinct school uniforms, unique school insignia, and, in some cases, name tags.⁵

⁵How can the daily life of students be organized in order to provide maximum visibility? The students stay in the same homeroom class almost all day, and the teachers travel between classes. They remain in their assigned seats all day so that anyone missing from a class can easily be identified (Rohlen 1983, p. 178-79). "Homerooms of the same grade level are grouped together on the same floor. Not only is the location of any student at any time easily determined, but if there is a disturbance, the homeroom and grade of the perpetrators is quickly discernible. Schools are like egg cartons, with each compartment a classroom. Japanese high school students have a clearly designated compartment for the whole day, one

There are no study halls in Japanese schools, no free periods, no use of class time for independent projects or library work. During class periods students do not go to the bathroom or sign out of the school or engage in individual tasks or do administrative errands (Rohlen 1983, p. 158). They are in class under teacher supervision for 34 hours a week. Because of their longer week and longer school year, by the time they graduate from high school, Japanese students will have been in school and under strict supervision for no less than four more years than their American or British counterparts (Rohlen 1983, p. 160; Lynn 1988, p. 128).

Japanese teachers plan events such as school trips with the ease of supervision as their prime concern. Some urban schools even change their trip destination from traditional places like Tokyo or Kyoto to a remote ski resort because "an isolated, snow-covered dormitory offers no opportunity for a surreptitious night on the town" (Rohlen 1983, p. 165). Teachers' authority extends far beyond school hours or what Westerners consider acceptable. They can veto the students' part-time and vacation jobs and particular employers. Locker and body searches are a common practice in some delinquency-prone schools, and nobody complains (Rohlen 1983, p. 203-206). Japanese teenagers spend much of their free time either commuting in public transportation (an average of an hour and half per day) or at home with parents doing a large amount of homework or preparing for numerous tests and college entrance exams.⁶ They spend less than half an hour in social relations with peers outside of school (Rohlen 1983, p. 275).

that corresponds with social location in two basic reference groups: homeroom and grade. American high school homerooms, by contrast, are of little consequence. An American student's locker is typically his or her most permanent physical location, and student groups are continually forming and disbanding from one class period to the next, both within and outside classrooms. Whole grades are rarely together physically even at assemblies in American schools." (Rohlen 1983, p. 150-151)

⁶This portrait of the Japanese student as constantly cramming for tests and entrance exams is truer of middle-class and/or male students, for whom educational attainment is more important. However, it is still the case that middle-class male *American* students are not spending comparable amounts of time at home studying. Therefore, Japanese students are comparatively more visible than their American counterparts.

This contrasts markedly with the behavior of American teenagers. A study of the teenagers in Indiana in 1977 revealed that 47% of the boys and 56% of the girls were out of the house between dinner and bedtime at least five nights a week during the school year (Bahr 1980). Another study of a large sample of high school seniors in the U.S. found 53% of them out on three or more nights a week for fun and recreation (Bachman, Johnston, and O'Malley 1980).⁷ Rohlen (1983, p. 294-301) attributes the relatively low rates of juvenile delinquency in Japan to its high degree of parental and teacher supervision.

Visibility in Offices

When the Japanese leave school and enter the workforce, their bosses and coworkers simply replace their teachers in watching over them. Japanese firms consider privacy and independence of their employees as a barrier to discipline and production of a common company culture (van Wolferen 1989, p. 159-163; Alletzhauser 1990, chapter 19). Japanese office workers are given very little privacy and independence at work.⁸ In some cases, even senior executives share a large office with one another (Rohlen 1989, p. 16); other types of workers tend to have little privacy.⁹ In general, Japanese workers are

⁷Without their own cars (the driving age in Japan is 18), with little money to spend (in 1977 the average total weekly expenditure by Japanese high school students was less than \$5), and with few unsupervised places to go, even those who seek privacy and independence are not likely to find it (Rohlen 1983, p. 276).

⁸"In broad open spaces, with few partitions to provide the slightest privacy or even the possibility of concentration, there are masses of desks arranged seemingly every which way. Each cluster may represent a group or section with the respective supervisor at a desk on the end or a slight distance away. The desks of the employees will be facing one another and right next to each other so that they can consult -- and also chat, it being rather hard to tell which is occurring." (Woronoff 1983a, pp. 24-25) "In the Japanese system, everybody works in one huge, unpartitioned office, where everything that is said or done is seen or heard by everyone else. Working without privacy -- even family photos on desks are frowned upon -- and under constant supervision, the process of conformity that began in childhood is honed." (Wolf 1983, p. 109)

⁹Schoolteachers, for instance, share one large teachers' room, "where forty or so desks are cramped together. These desks are home base for all but the physical education teachers. . . . Teachers do not have their own classrooms. . . . Rather, each has a desk cheek by jowl with the desks of other instructors serving the same grade. Privacy and independence at work are evidently of little concern. Teachers who

highly visible and under constant supervision at work just as they once were at school.

A national survey conducted in the United States (Harris 1978) indicates that about half (47%) of all U.S. office workers occupy what are called "conventional offices" with solid walls and doors and additional 36% work in "open plan" offices with their own work stations (or work modules) enclosed by partitions. Only 17% of U.S. office workers work in "clerical pool" offices with no partitions, which are ubiquitous in Japan (see also Brill 1984, p. 97). Studies in organizational ecology indicate that those who work in conventional offices rate both their conversational and visual privacy higher than those in the open plan offices, who in turn rate their privacy higher than workers in the clerical pool offices (Harris 1978; Marans and Spreckelmeyer 1981; 1986). Japanese office workers (in their typical clerical pool offices) thus have much less privacy than the vast majority (83%) of U.S. office workers who are in the conventional or open plan offices.¹⁰

Visibility in Company Housing

Higher visibility in Japan is not limited to schools and offices where people spend most of their weekdays. In some cases, it extends to their place of residence. Although only five to seven percent of the population live in apartments and houses provided by their employer at any given time (Japan Statistics Bureau 1989, p. 512-513), a much larger proportion experience living in company housing because many firms in Japan either wish to confer confidentially do so in the science labs or in neighborhood coffee shops (Rohlen 1983, p. 149).

¹⁰Yet Western workers in the open plan offices often complain about the lack of privacy. For instance, 73% of workers in open plan offices in Hedge's study (1986, p. 163) complained of "distinct lack of privacy," whereas only 47% of those in conventional offices did. Workers in open plan offices often "resent being. . . always under someone's observation" (Tweedy 1986, p. 126). There are so many complaints and problems associated with the open plan office that the Netherlands has completely abandoned it, and there was a similar move in West Germany (Hedge 1986, p. 140). Many U.S. corporations have had to go back to conventional offices in response to their employees' complaints (Business Week 1978; Rout 1980). Although Western workers dislike the lack of privacy in the open plan office, Wineman (1986, p. 304) notes that the higher visibility of workers in such offices may promote conformity as well as improved productivity.

require or strongly encourage their unmarried recruits to live in their dormitories and apartments for up to ten years or until they are married.¹¹ Company housing is ubiquitous in Japan.¹²

In the first detailed study of a Japanese company dormitory, Rohlen (1974) observed that the dorm director exercised strict control over his charges. Residents had to call the dorm director if they stayed out late or overnight. They needed the company's approval to invite women to their dorm for their semiannual parties; even then, company officials chaperoned the party (Rohlen 1974, p. 217, 220-221). Dorm directors in Japan also freely enter the residents' rooms without permission and pressure them to inform on each other (Kamata 1982; Riccomini and Rosenzweig 1985, p. 67).¹³

When residents of company dormitories get married, typically they move out of the dorms and into one of the company houses or apartments for married workers. There the situation is a little different. Unlike their younger counterparts who live in the dorms,

¹¹In the process of early modernization, Japanese companies established company housing with the explicit intent of controlling their workers (Shibusawa 1958, p. 319-329). In those days, company houses were more like labor camps than places of residence; workers were often not allowed to leave the walled premises even on their days off. "All letters sent or received by the girls [in the dormitory] were opened in the office, and in some instances letters critical of the company were confiscated. . . . To guard against escape and possible immorality the dormitory doors were bolted at night, and in one instance thirty girls were burned to death in a fire at night because they could not get out of the dormitory (Shibusawa 1958, p. 325)."

¹²A study conducted by the government in 1979 shows that 77.4 percent of 2211 private enterprises surveyed have some kind of company housing. The figure is 95.7 percent among the large manufacturing companies employing more than 500 workers (Jinjiin Kanrikyoku 1980, p. 13). Ballon (1969, p. 148) cites statistics from the Japanese Federation of Employers' Association that "in manufacturing, about 40 percent of married employees live in company apartments or houses, and about 50 percent of the unmarried live in company dormitories."

¹³Kamata (1982, p. 130, p. 69) tells a similar story of a Toyota auto factory: "I found a supervisor in my room when I came back from the bath. . . . Why should they have the right to enter my room without my permission? They always find some excuse, but the truth is that to them the dormitory seems like a warehouse where they keep their human merchandise, which they check from time to time. . . . Kudo [Kamata's coworker] told me that his team chief told him to stay away from a certain worker with whom he had started to make friends. Once the fellow brought his girlfriend to the dorm and was deprived of overtime work [and thus an important opportunity to earn more money] for breaking regulations. That's hard to understand. It's unreasonable, to say the least, that our privacy should be controlled by the management." I should note that Rohlen's field work dates from 1969, and Kamata's from 1972.

married men tend to stay away from their houses or apartments because they are so small and cramped. Thus "the company apartment building is essentially the domain of wives and children" (Rohlen 1974, p. 225) and they, instead of their husbands and fathers, now become subject to the company's inescapable embrace of supervision (Rohlen 1974, p. 232-233; Imamura 1987, p. 59-60).¹⁴

Visibility in Neighborhoods

Even those who do not live in company houses cannot avoid the inescapable embrace of supervision, because they are subject to the social control of the neighborhood. Japanese neighborhoods have both formal and informal institutions that commit local residents to social networks and make their presence and behavior highly visible. The backbone of the neighborhood is the *chokai* (neighborhood association), with its own internal organization, power hierarchy, and constitution.¹⁵ Membership in such local neighborhood associations is "both voluntary and universal. . . . No one is forced to join.

¹⁴"They see the fact that their husbands are all members of the same bank as primarily negative in its effects on their own social life. It causes them to be especially careful in approaching each other, they say. Age, rank, and office group affiliation, that ubiquitous trio of social distinctions with Uedagin [Rohlen's target of study], holds sway for better or for worse over company housing as it does over the entire spectrum of Uedagin life. . . . Life in company housing is never totally out of the shadow of the company's authority, its rank hierarchy, and its moral expectations." (Rohlen 1974, p. 225, 227, 232-233)

¹⁵Much of my discussion of Japanese neighborhoods in this section draws heavily on Bestor's (1989) comprehensive case study of a neighborhood in Tokyo. Case studies like this one provide a detailed and first-hand look at the object of investigation but often lack generalizability. Nevertheless, conclusions drawn from Bestor's study that are relevant to my discussion of high visibility in Japan are generalizable to some extent to other neighborhoods in Japan, past and present. First, I can assume that the kind of monitoring and informal control in the neighborhood that I discuss in this section is more characteristic of rural areas than of a metropolis. Since Bestor's fieldwork took place in downtown Tokyo, the largest city in Japan, I can safely surmise that the extent of neighborhood control Bestor discusses in his case study will be stronger in other, less urban parts of the country. Bestor's descriptions of *his* neighborhood in Tokyo probably conservatively portray the actual extent of social control in Japanese neighborhoods in general. Second, as I note below, Bestor compares his own fieldwork in 1979-1981 with Dore's in the early 1950s and concludes that the state of the neighborhood in Tokyo has hardly changed in the past 30 years (Bestor 1989, p. 3). It therefore appears that Bestor's case study is somewhat generalizable both cross-sectionally to other neighborhoods in Japan and longitudinally to the neighborhoods in Tokyo in the past several decades.

. . no households refuse to belong" (Bestor 1989, p. 165). Some of the activities taken up in other countries by the government (such as fire prevention and traffic safety) fall within the purview of "voluntary" neighborhood associations.

The local communication system reflects the strong commitment on the part of the local residents. Whenever the neighborhood association needs to communicate to all of its members, it simply circulates a message board (*kairanban*) among the member households. This system is so efficient that, in one neighborhood, the *chokai* can pass information to, or collect it from, 750 households in a couple of days (Bestor 1989, p. 147). Such efficiency cannot be achieved if only one of the 750 households neglects to pass the message board on to its neighbors.

Crime prevention is one of the chief aims of neighborhood associations, which exercise strong control in order to discourage illegal activity.

Most residents routinely keep an eye on youngsters and admonish misbehavior. And throughout the summer vacation members of the junior high school PTA patrol the neighborhood after dusk -- carrying lanterns similar to those used by *chokai* officials during the winter fire watch -- on the lookout for children who should be home; the PTA patrols pay particular attention to dark, secluded patches of shrubbery, back alleys, and the far corners of the shrine precincts, where adolescents might hope to hang out unnoticed. Neighborly social control exists in less dramatic forms as well, and is more frequently aimed at *inhibiting* people's actions than at squelching them after the fact. Residents depend in many ways on each other's goodwill and on maintaining a good reputation in the eyes of their neighbors. Often, for example, the opinions of neighbors are solicited about a candidate for employment by a prestigious company or for an arranged marriage. Thomas P. Rohlen, in his study of the white-collar world of a Japanese bank, describes how the bank seeks out an applicant's neighbors to ask about an array of personal matters: the nature of family relationship; the character and health of family members; the family's reputation, including its religious and political activities, attitudes, and affiliations; the prospective employee's relations with members of the opposite sex, and even the cleanliness and upkeep of the house itself as a clue to the candidate's upbringing (Rohlen 1974, p. 70-73). Similar questions come up in the investigations that precede formal agreements over an arranged marriage: these inquiries are normally carried out by the go-between and occasionally private detectives hired for the purpose (Vogel 1961). A person's immediate neighbors are of course ideally situated to

provide information on these matters, and most households therefore have a strong interest both in remaining on good terms with neighbors and in *presenting the best possible image* of themselves. This goal necessarily carries with it fears about becoming too intimate and letting private secrets slip out (Bestor 1989, p. 210-211; emphases added).

This is no description of some remote village neighborhood in rural Japan or the state of the neighborhood some thirty years ago; Bestor's fieldwork took place between 1979 and 1981 in the middle of metropolitan Tokyo. In fact, neighborhoods in Tokyo have hardly changed since the early 1950s, when Ronald Dore did his fieldwork research for his classic *City Life in Japan* (1958).¹⁶ Tight neighborhood organization and strict neighborhood social control are still very much part of daily life in urban Japan. In 1978 there were 4067 neighborhood associations just in the city of Tokyo (with a land area of 592 square kilometers, the same size as the city of Chicago) (Bestor 1989, p. 291).

The effect of strong social control exercised by neighbors is compounded by the closeness of the Japanese to their neighbors. A survey of a large representative sample conducted by a government agency (Prime Minister's Office 1987a) shows that half of the overall respondents "very closely associate" with their neighbors (Table 3.9). The proportion is higher in small towns and villages (64.2%) and lower in the ten largest cities (36.7%), but even in the latter more than one-third of the respondents have close relationships with their neighbors.

Roughly comparable data are available in Fischer's (1982) study of personal networks in northern California. The lower panel of Table 3.9 shows the proportion of respondents (N=1050) for whom neighbors were more than 30 percent of the close associates named in their interviews (over twice the proportion of most respondents). One

¹⁶"As I interviewed Miyamoto-cho's [the site of Bestor's field-work] residents the whimsical thought occasionally struck me that they had read Dore's book just before speaking to me. I suspect Dore would not have predicted that the patterns of neighborhood social life he found would remain common throughout Tokyo 30 years later" (Bestor 1989, p. 3).

can argue that these people "very closely associate" with their neighbors in that they are twice as likely to have neighbors in their close personal networks as others.

The pattern of negative correlation between urbanity and close association with neighbors holds in both countries, but the absolute level of neighborhood involvement is much higher in Japan. Even in semi-rural areas (small towns of under 10,000) in northern California, only 40 percent of the respondents closely associate with their neighbors, corresponding roughly to the proportion in large Japanese cities (with more than 100,000). In the regional core (the San Francisco-Oakland metropolitan area) the proportion drops to one-eighth of the respondents. Although the two surveys' questions are not directly comparable, it seems that the level of neighborhood association and involvement is about twice as high in Japan as it is in the United States. More involved with their neighbors yet subject to their strict social control, the Japanese are under their neighbors' and friends' watchful eyes to an extent that is unimaginable in other countries.

Visibility in the Family: Architecture

Certain common elements of Japanese architecture help promote visibility among family members. One major characteristic is that walls in Japanese houses are much thinner than in western houses (Ashihara 1983, p. 4-5; Asahi Shimbun 1974).¹⁷ Whereas

¹⁷"A study some years ago found that the dividing walls of duplexes or row houses in the suburbs of London are on average 70 centimeters thick. It observed that the standard exterior wall of homes in Germany is about 49 centimeters thick, while interior walls are approximately 24 centimeters, meaning that the walls of houses in these areas occupy about 20 percent of the entire floor area (Ashihara 1983: 4-5; see also Asahi Shimbun 1974)." In contrast, the post-and-beam construction that is common in Japanese architecture necessarily limits the thickness of walls to from 10 to 12 centimeters (Ashihara 1983, p. 14). Engel (1964) offers some insight into why walls in the Japanese house are so thin. He argues that three separate forces conspired throughout the Japanese history to keep construction of houses simple and standardized in Japan. First, frequent transfer of the central military government from the 7th to 16th century required an enormous amount of construction to be completed within the shortest time. Second, during the Tokugawa period, the ruling *samurai* class was concerned with the increasing wealth and influence of the merchants and artisans, and prohibited the conspicuous display of their affluence by mandating that their residences be kept simple and frugal. Third, Japanese cities experienced periodic and widespread fires. Throughout history Japanese houses were kept simple and standardized in order to facilitate quick reconstruction of entire blocks or even sections of the city after these frequent (and largely unpreventable) fires, the latest of which occurred as a result of Allied air attacks carried out during World

the thickness of walls does not affect visibility in the strict sense of the term, it does affect the *audibility* of Japanese houses and neighborhoods. And audibility can constrain people's behavior as does visibility; people are less likely to engage in deviance if they know others can hear and monitor them. Sometimes audibility has even a greater impact on cooperative behavior than visibility (Wichman 1970).

Goffman (1963, p. 151) underscores the importance of audibility for privacy when he defines private places as "soundproof regions where only members or invitees gather." He notes that thick walls are one of the very few means to attain complete privacy and to close the region off physically from outside communication. In this regard, Japanese architecture affords very little privacy to its occupants. Whereas the Japanese build high fences and hedges around their houses in their effort to maintain some privacy from their neighbors, "inside the traditional house itself, however, privacy from other members of the family is almost nonexistent" (Shioji 1980, p. 305).

The traditional townscape in Japan also helps promote higher visibility of the people. Typical streets in Asian cities are less than 70 to 80 feet wide (Ashihara 1970; 1983, p. 46-49); this width coincides with the distance at which a human face can be readily recognized. Thus people who live on one side of the streets in Japan can easily recognize the faces of those who live on the other side; recognition is more difficult in western townscapes with their wider streets.

Visibility in the Family: In-Laws

In-laws are agents of control over Japanese women in this traditionally male-dominated society. In the West, in-laws tend to be an annoyance to the husband and the wife equally due to relatively egalitarian marriage and the almost universal prevalence of

War II. It is entirely possible that the characteristically thin Japanese walls are just part of the simple and frugal architecture necessitated by these historical factors.

neolocality. There is still a high prevalence of patrilocality in contemporary Japan (Prime Minister's Office 1976), however, and this greatly facilitates the supervision of Japanese women by their mothers-in-law. When a woman shares her residence with her husband's mother, the older woman is able to -- and often does -- scrutinize her behavior (Lebra 1984, p. 144).¹⁸

But "even in neolocal marriages one is unlikely to be totally free from the role of daughter-in-law or sister-in-law" (Lebra 1984, p. 141); supervision and control by the in-laws persists even when the young couple maintains a separate residence, because the man's family is likely to live close at hand.¹⁹ Failing this, the young women receive frequent phone calls from their mothers-in-law.²⁰

The close supervision of women by their mothers-in-law is no longer found in Korea.²¹ Traditional Korean society is also male-dominant, and Confucianism mandates a

¹⁸ "Some in-laws were fastidious in demanding perfection in performance. A daughter-in-law in charge of cooking had to be alert to the mother-in-law's fussing over her seasoning. The method of cleaning the house or doing the laundry was also under the scrutiny of a compulsive in-law. More important than these instrumental skills was the expressive aspect of performance such as manners, speech style, and facial expression. . . . Even highly educated postwar-generation brides were not totally free from such demands of in-laws. Harumi, who as a university student had long lived freely away from home, suddenly faced [upon her marriage] a fastidious mother-in-law who carped about her manners as well as her cooking. . . . Underlying all these demands was the imperative of compliance with the senior supervisor. Though generally compliant, young women wished to enjoy role release for a few hours a day, once a week, or so; they wished to be alone. But privacy was most scarce (Lebra 1984: 144)."

¹⁹ Of those parents who maintained a separate residence from their children in the government survey mentioned above (n = 1,887), 60 percent either lived on the same property or lived within an hour; only 39 percent of people over 60 surveyed lived more than an hour away from their nearest child (Prime Minister's Office 1976, p. 43). Further, nearly half of the people who did not live with their children nevertheless saw them either every day (23%) or more than once a week (22%); an additional 26% saw them a couple of times a month (Prime Minister's Office 1976, p. 44).

²⁰ More than one-fifth (21.5%) of neolocal women under 40 surveyed in 1986 received a phone call from their mothers-in-law more than five times a month, but only 9 percent of them called their mothers-in-law this often (Yoneda 1988, p. 338).

²¹ Underlying the control and supervisory activities of the older Japanese woman (mostly as a mother-in-law but sometimes as a neighbor) is the normative conception that she is the keeper of social order: "A senior woman naturally identifies herself more with the existing social order in which her life has been invested than does a junior woman, and may try to exercise her influence to maintain that order. . . . A daughter-in-law may be kept in her place under the influence of an elderly neighbor woman, although no informant explicitly admitted to playing such a role herself. A seventy-three-year old widow has a number of her peers gather in her house regularly to chat over "such things as how to handle a daughter-in-law" and

high value on filial piety. In Korea both factors combined in the past to produce a high incidence of patrilocal extended families as in Japan. However, these large extended families are disappearing rapidly in contemporary South Korea in both the urban and rural areas (Hyde 1988, p. 112; Macdonald 1988, p. 77; Sorensen 1988, p. 29). Confucianism and patriarchy thus do not explain the continued preference for extended families in Japan. And Japanese women are more visible to their in-laws than their Korean counterparts. One observer (Hyde 1988, p. 110) argues that the recent sharp increase in crime among South Korean women may be attributable to their new-found low visibility in their families.

While recent studies show that the incidence of extended families in the West is much higher than previously believed (Beck and Beck 1984; 1989), such arrangements in the West are often temporary. Only about eight percent of both white and black couples in the United States live with their parents in any given year (Beck and Beck 1984), as against 19% in Japan (Japan Statistics Bureau 1989, p. 48). Further, the nature of in-law relationships is quite different in the West: The most common complaint among American daughters-in-law unrelated to children is that their mothers-in-law do not take enough interest in them (Fischer 1983, p. 189)! Thus American and Korean daughters-in-law are not subject to the same level of supervision from in-laws as their Japanese counterparts.

Visibility Among Coworkers: The Multiplexity of Japanese Life

If in-laws provide strict supervision over Japanese women, coworkers and business associates do likewise for the men. Japanese men are almost constantly in each other's company. Their lives revolve around a handful of people and a few essential

to criticize one another for being "too lenient" or "too strict" (Lebra 1984: 279-280)." Many of these older women suffered under strict mothers-in-law themselves when they were young brides. Because of the Japanese woman's self-appointed role as the keeper of social order, however, "the whole cycle seems destined to be repeated despite her acknowledged unhappiness as a daughter-in-law and wife" (Lebra 1984: 261).

relationships which extend into almost every sphere of their lives. Japanese men often have multi-stranded social relations (they work, play, eat, relax, and vacation together), rather than the single-stranded ones that are more common in the West (Gluckman 1967). They have fewer opportunities to be alone or to spend time with a different set of friends and acquaintances.²² Since their networks overlap more than those of Westerners, they lives are correspondingly more exposed.

Men's near total affiliation with their company and fellow employees underlies this pattern of social relations, and it is similar for both blue-collar (Cole 1971, p. 140) and white-collar (Rohlen 1970, p. 188) workers, as well as for workers for both small companies (Kondo 1990) and large ones. Japanese plant workers have more close friends among their fellow employees than their American counterparts (Lincoln and Kalleberg 1985, p. 744; 1990, p. 88). A typical worker spends 60 or more hours a week with his office mates (Rohlen 1974, p. 111).²³

Government survey data tend to support the impression garnered by ethnographic evidence (Prime Minister's Office 1987b). Thirty-seven percent of employees surveyed socialize mainly with their coworkers and work associates, as opposed to 32 percent who socialize mainly with other people (see the top panel of Table 3.10). The pattern is more conspicuous among men; 43 percent of male workers socialize mostly with work-related people while only 26 percent do so with non-work-related ones, despite the fact that more

²²One mechanism that quite incidentally promotes monitoring among Japanese co-workers (and students as well) is their heavy reliance on public transportation. Japanese people use public transportation more often than people in the West, who typically own more private cars than the Japanese (European Community 1988). People who share a means of public transportation are highly visible to each other. Not only is their behavior visible to fellow passengers, but their conversation is also audible in most cases. Drivers of private cars and their passengers are not subject to such monitoring.

²³Intentionally conservative estimates of how much time the workers at one bank spend together:
 (1) Average work time in the office: 56 hours a week.
 (2) Office parties and Saturday afternoon recreation: 4 to 6 hours a month.
 (3) Office trips: 60 hours a year (two overnight trips).
 (4) Informal gatherings of friends and small groups in the office: 2 to 4 hours a week (Rohlen 1974: 111).

than 40 percent of those surveyed would prefer to socialize with people outside their work circles (bottom panel of Table 3.10). Only half the men who socialize mainly with coworkers actually want to do so (Atsumi 1979).

In one American study (Fischer 1982), only 19 percent of respondents working full or part-time have networks where more than 40 percent of non-kin associates are coworkers. Yet fully 70 percent of Japanese respondents associate with their coworkers either "very often" or "often" (Prime Minister's Office 1989, p. 9). More directly comparable data reveal that the personal networks of Japanese workers (unlike those of American workers) extend beyond their coworkers and include their bosses (Lincoln and Kalleberg 1990; see Table 3.11).

Japanese men's lives tend to be more visible because their personal networks have more closure than those of Westerners. Network closure occurs when two or more people one knows know each other (Coleman 1988, p. S105-S108; 1990, p. 318-320). One of its effects is to reduce sanctioning costs to participants; another is to promote focused interaction (Goffman 1963, p. 24) -- "the kind of interaction that occurs when persons gather close together and openly cooperate to sustain a single focus of attention, typically by taking turns at talking." Focused interaction is more effective as a means of control than unfocused interaction, which occurs when one gleans information about other people present by glancing at them as they pass in and out of view. People engage in internal attribution all the time; when we observe someone who engages in improper behavior, we infer something (usually negative) about the person above and beyond what the behavior tells us objectively. But only in focused interaction where the participants know each other can such an interpretation carry weight. Reputation cannot arise in an open structure that does not allow closure (Coleman 1988, p. S107).

There is a saying in Japan (*Tabi no haji wa kakisute*) that is variously translated as

"One can feel free to do all sorts of shameful things while on a trip," "A person away from home need feel no shame," "Once over the borders, one may do anything," or "Leave one's sense of shame at home." This saying reveals that travelling is one of the few occasions that allow the Japanese to leave their dense daily social networks and become anonymous and relatively unaccountable for their behavior. Whereas unfocused interaction persists even among complete strangers on a trip to a strange place, there is no focused interaction that makes people personally accountable for their behavior.

DISENTANGLING THE EFFECTS OF CONTEXT:

JAPANESE TRANSPLANTS IN THE UNITED STATES

To this point I have shown that Japan has relatively high levels of global order (measured by such indicators as crime rates and civil violence) compared to other advanced industrial societies, South Korea and China; and -- consistent with my theoretical expectations -- that Japan also has various mechanisms that promote individual dependence and visibility in groups. My general theoretical contention is that higher dependence and visibility within groups promotes social order in any society. However, a critic might argue that these institutional mechanisms function to produce order only in the cultural context of Japan. Perhaps such high levels of dependence and visibility lead to normative compliance only when people already have internalized collectivistic values (see, for example, Lincoln, Hanada, and Olson 1981). Perhaps the institutional mechanisms discussed above are merely the *consequences* rather than the causes of Japanese global order.

Clearly some kind of societal experiment would be necessary to adjudicate between this more sophisticated culturalist explanation and my solidaristic theory. In such an experiment, the crucial institutional mechanisms would have to be lifted from the original

cultural context and imposed on members of another society that is culturally distinct from Japan. Carrying out an experiment of this magnitude would be completely impractical. Fortunately, however, an almost ideal experiment of this type has been taking place in the United States for the past decade. It involves Japanese transplants -- Japanese manufacturing corporations that have opened branch operations in the United States.

Many have written on these Japanese transplants, mostly in the auto industry (Cole and Deskins 1988; Florida and Kenney 1991; Fucini and Fucini 1990; Johnson 1988; Junkerman 1987; Mair, Florida, and Kenney 1988; Nathans 1988). Altogether, these accounts from a variety of sources present a picture that is largely consistent with my contention that dependence and visibility enhance normative compliance even in the relatively individualistic American cultural context. Tables 3.12 and 3.13 show that transplants employing American workers under Japanese management are indeed more successful than their counterparts under American management, both in terms of quantity of production (Table 3.12) and quality (Table 3.13).²⁴ When one conceives of the Japanese transplants as groups with the stated goal of producing goods efficiently, then the productivity of these groups, at least in part, is an indicator of rates of compliance to production rules. Productivity is a measure of solidarity at the plant level.

How do the Japanese transplants achieve higher productivity? Aspects of Japanese management -- including its production rules -- promote dependence and visibility within the factories.

Dependence. In the United States, where few employers are committed to the notion of lifetime employment and there is little stigma attached to job changes, other mechanisms are necessary to insure that workers are dependent on their jobs. Japanese

²⁴Whereas the transplants are somewhat less successful than their parent firms in Japan, this may be due to the fact that American workers are subject to less dependence and visibility than their Japanese counterparts.

transplants in the U.S. did this by taking advantage of a relatively high rate of unemployment in the American labor force. Japanese automakers began production in the United States precisely at the time when many manufacturing jobs in the Northeast and the Midwest were either eliminated due to foreign competition or moved to the Sun Belt. Japanese transplants thus offered employment to those who had few alternatives.²⁵ Managers of the transplants use the workers' dependence to control their behavior (Junkerman 1987, p. 18), sometimes by resorting to a strategy of divide and conquer (Fucini and Fucini 1990, p. 158).

The American workers had no choice but to stay and keep up with the rapid pace of production in these transplants (Fucini and Fucini 1990, p. 148).²⁶ Like many workers in Japan, they are dissatisfied with their jobs but choose to be loyal to their company because their exit costs are high (Tables 3.4-3.5 and 3.7-3.8 above).²⁷ Since the labor supply in services was not nearly so ample as in manufacturing, the managers of Japanese transplants in the tertiary sector (such as auto dealers, banks, and hotels) decided not to export their management practices to the United States (Aaker 1990).

Visibility. Several characteristics of Japanese work organization produce high visibility and efficient monitoring in the transplants. First, the Japanese team system

²⁵As much as they disapproved of the way things were done at the [Mazda] plant [in Flat Rock, Michigan], few of the dissidents had thought of working elsewhere (although some had begun to look for nonfactory jobs.) The reason they wanted to stay at Mazda was financial. No job within their reach could come close to matching the \$35,000 to \$45,000 a year they earned at Flat Rock. According to UAW statistics, the majority of displaced autoworkers take new jobs that pay at least 16 percent less than auto factory work, and nearly one-third of them end up earning more than 25 percent less at their new positions." (Fucini and Fucini 1990, p. 195)

²⁶Workers in Japanese auto factories are actively engaged in their production 57 seconds out of every minute (for nine to ten hours a day, six to seven days a week), whereas the average pace at the Big Three factories is 45 seconds per minute (Fucini and Fucini 1990, p. 148).

²⁷The managers of the transplants use the workers' dependence on their jobs effectively to control their behavior. At the Nissan Smyrna plant, "those who failed to show the proper *esprit de corps* are routinely told, "If you don't like it, here's the door. There are 80,000 people out there who want your job (Junkerman 1987: 18)." In fact, this was an understatement: 130,000 people applied for the initial 2,000 positions at this plant.

encourages workers to monitor each other. Because the work team, not the individual worker, is responsible for the task, workers have incentives to monitor and control other members of their team. "The result of Mazda's self-regulating team system is a plant where everyone minds everyone else's business (Fucini and Fucini 1990, p. 137)."²⁸ This is in marked contrast to the typically low supervision in American factories.²⁹

Second, visibility is increased by giving great discretionary powers to unit leaders. At the Mazda plant in Flat Rock, Michigan, unit leaders determine which workers get assigned to which jobs, how often they are rotated (thus reducing the chance of occupational injuries from repetitive motions), whether to permit workers to go to the bathroom between breaks, and even whether to accept written doctor's notes as excuses for absences. Because the unit leaders have these powers, workers try to please them; some are willing to spy on their comrades and report their misbehavior to the unit leaders (Fucini and Fucini 1990, p. 141; Junkerman 1987, p. 20).

²⁸"By having workers fill in for absent teammates, Mazda created a self-regulating attendance system in Flat Rock, which relies on peer pressure to discourage tardiness and absenteeism. At a traditional Big Three plant, with its pool of reserve workers to cover for absences, the worker who shows up late or skips work altogether to go hunting does not incur the wrath of his fellow workers -- for, although he has broken the rules, he alone must pay for his transgression. To his fellow workers he is the other driver, pulled off to the side of the road for speeding. His problems are not theirs. This is not the case at Mazda. The speeding driver is not ticketed on the side of the road, but in the middle, forcing all traffic to come to a halt. The transgression of one team member creates problems for all team members. When one worker is absent, his teammates will have to work that much harder to pick up the slack. Mazda's team system also encourages one another to maintain a rapid work pace. A worker's teammates must pay the consequences if he is too slow or mistake prone, since this will disrupt the flow of work through the team's station. This, in turn, will make it difficult for the team to complete its collective job assignment on time and will increase the likelihood that everyone will have to put in overtime to meet their production quotas. Because of Mazda's carefully synchronized JIT [Just In Time] production schedule, the team's problems will quickly have a ripple effect on the next team down the line, preventing it from completing its work on time. The members of this team will then complain to their unit leader, who will then pressure the slow worker's entire team to move faster." (Fucini and Fucini 1990, pp. 136-137)

²⁹This heightened supervision in Japanese factories shows a marked contrast to the state of affairs in typical American factories. "Supervision at the large and cavernous casting center [Michigan Casting Center, a Ford subsidiary plant which used to stand where the Mazda factory now stands] was so loose that workers were often able to leave the plant in the middle of their shifts and return later to "punch out" at the end of the day. Most of the truant workers would visit taverns near the plant (Fucini and Fucini 1990: 60)." The Flat Rock local police even suspect that two of MCC workers robbed a bank across the street from the plant during their shift. Before Toyota took over management of NUMMI from GM, the Fremont plant "was characterized by very severe drug and alcohol abuse problems" (Kenney and Florida 1988: 143).

Third, American workers in Japanese transplants tend to spend more time with each other than their counterparts in American auto factories, just as workers in Japan do. Participation in the Quality Circle and team meetings (either daily or weekly) requires longer workdays because it "occurs immediately before or after shift work (Florida and Kenney 1991, p. 387)." There are also mechanisms to increase informal contact between managers and workers at the transplants. Like their counterparts in Japan, transplants in the U.S. have only one cafeteria for both workers and managers (Fucini and Fucini 1990; Florida and Kenney 1991). The Mazda Flat Rock plant has exercise facilities on site for the benefit of both managers and workers (the first of its kind for workers in the U.S.). And "after work, managers would take workers to Fiorelli's, a local pizza parlor, for pizza and beer and some informal shop talk (Fucini and Fucini 1990, p. 42)" just as Japanese managers commonly do in Japan. Finally, architectural features of Japanese transplants also facilitate higher visibility and worker-manager contact.³⁰

All told, Japanese transplants have higher productivity than comparable American firms (measured by both quantity and quality of automobiles produced), and their workers are subject to high dependence and visibility. While this should contribute to somewhat higher levels of order in communities where the transplants are located, I do not expect these communities to have significantly greater social order than similar American cities because these mechanisms affect only a small proportion of the community population. However, these conclusions are consistent with my thesis that dependence and visibility

³⁰"Managers typically do not have walled-in offices but sit at desks on a large open floor adjacent to the production facility. All transplants we visited had single cafeterias. At Nippondenso [a Toyota supplier firm], all executives including the President work at desks on the floor (Florida and Kenney 1991: 386)." "The emphasis that Mazda placed on openness and communication would be reflected in the design of the Flat Rock plant itself. The four major shops at Flat Rock (stamping, body, paint, and trim and final assembly) would be located around a central administration area and computer control room. This "four corner zone" layout, borrowed from Hofu [a Mazda plant in Japan], placed managers quite literally in the "middle of the action," increasing their contact with the shop floor and making them more accessible to workers. At American plants, by contrast, administrative offices were located in front of the manufacturing area, separated from the noise and heat of the factory floor by a long and not-too-frequently traversed corridor." (Fucini and Fucini 1990, pp. 42-43)

mechanisms produce normative compliance independent of the cultural context, and inconsistent with the claim that these effects are conditional on a cultural context emphasizing collectivist values.

CONCLUSION

It is often noted that Japan has a higher level of global order than western industrial societies. Despite its rapid industrialization and economic development, Japan seems to have maintained a level of global order characteristic of preindustrial, *gemeinschaft*-like societies. The traditional explanation ascribes the orderliness of Japan to distinctive values, such as Confucianism and a collectivist orientation. The simple version of this normative explanation fails because it does not account for the relatively low level of global order in South Korea and China, which share many of Japan's Confucian and collectivistic values; the sophisticated version fails because it does not account for the higher local orders (measured by productivity) of Japanese transplant firms in the United States.

In contrast, I argue that global order rests in part on the local orders of groups, and that it is produced by dependence and visibility mechanisms. I have shown that the members of these groups in Japan indeed have comparatively high levels of dependence and visibility. As a result, these groups tend to have greater local orders than their western counterparts. The evidence suggests that global order in national societies tends to covary with the solidarity of constituent groups. Although this evidence is far from conclusive, what it lacks in depth is at least partially compensated for in breadth.

What is distinctive about Japan is not its internalized values, but the various institutional arrangements that foster dependence and visibility in its constituent groups. Because the Japanese are highly dependent on them, these groups are able to impose substantial normative obligations on their members. In turn, members comply with these

extensive obligations because their behavior is highly visible. By making monitoring and sanctioning more economical, Japanese groups can exercise relatively effective social control. When these groups control a larger portion of members' behavior repertoire, the result is the highly orderly society exemplified in contemporary Japan.

Group solidarity, however, is only part of the mechanism producing global order in national societies (see Figure 2.1). What is also important is the productiveness of groups, for only higher solidarity in productive groups promote global order and the same solidarity in counterproductive groups decrease it. The next question, then, is: What determines the group's productiveness? That is the question to which I now turn.

TABLE 3.1

Rates of Reported Crime per 100,000 Population in Selected Nations
in 1979 and 1988

1979	Murder	Rape	Serious Assault	Theft of All Kinds	Robbery and Violent Theft
United States	10.0	35.0	279.0	5198.0	212.0
Great Britain	1.6	2.4	188.7	4022.2	25.4
France	3.6	3.2	61.0	2757.8	60.0
West Germany	4.3	10.7	92.1	3778.6	35.8
Japan	1.6	2.4	22.8	957.6	1.8
South Korea	1.1	6.5	268.1	225.4	4.2
China	7.5	3.0	24.1	138.9	4.4
1988					
United States	8.4	37.6	370.2	5248.0	220.9
Great Britain	2.0	5.7	305.4	5534.1	62.6
France	4.6	6.8	76.3	3569.1	90.4
West Germany	4.2	8.6	102.7	4382.8	47.3
Japan	1.2	1.4	17.5	1160.0	1.4
South Korea	1.3	8.2	19.6	229.3	8.8
China (1986)	1.1	3.7	1.7	40.4	1.2

Source: International Criminal Police Organization (1983 and 1990)

TABLE 3.2**Measures of Civil Strife**

	Person-Days of Strife per 100,000 (1961-1965)	Deaths per Million	TMCV* 1961-1963	TMCV* 1961-1965
United States	673.528	.426	15.0	10.2
Great Britain	265.686	.081	13.0	5.4
France	13771.095	1.178	15.0	12.1
West Germany	2970.666	.000	10.5	4.6
Japan	165.341	.000	3.0	5.9
South Korea	-----	-----	3.0	10.2
Source:	Gurr 1972a	Gurr 1972a	Gurr 1967	Gurr 1972b

*TMCV (Total Magnitude of Civil Violence) is a weighted sum of five basic ordinal measures of civil violence: 1) number of participants; 2) social area ("the extent of the polity affected by the most widespread strife event of the year" (Gurr 1967, p. 31)); 3) number of casualties; 4) property damage; and 5) duration.

TABLE 3.3

Proportion of the Population in School, by Age Group,
in Japan and the United States

Age	Japan		United States
	School only	School + work	
18	66.3	69.4	62.3
19	42.6	47.2	42.3
20	33.2	37.6	34.3
21	25.2	28.9	30.6
22	17.5	20.1	23.9
23	8.0	9.4	18.3
24	3.5	4.3	15.6
25-29	.8	1.0	10.3
30-34	.1	.2	7.1
35-39	.05	.06	4.8
40-44	.02	.03	3.7
45-54	.02	.02	2.2

Source: Brinton 1988, p. 314.

TABLE 3.4**Job Satisfaction in Japan, United States, and United Kingdom****"Are you satisfied with the place of work or not?"**

	Japan	USA	UK
Yes, satisfied			
18-24	8%	32%	32%
over 35	15%	49%	42%
More or less satisfied			
18-24	51%	51%	55%
over 35	56%	40%	49%
More or less dissatisfied			
18-24	28%	10%	10%
over 35	21%	7%	7%
No, dissatisfied			
18-24	11%	6%	4%
over 35	5%	4%	3%

Source: Kono 1984, p. 333.

TABLE 3.5**Job Satisfaction among Japanese and U.S. Workers**

	<u>Japan</u>			<u>U.S.</u>		
	Percentage positive	Percentage undecided	Percentage negative	Percentage positive	Percentage undecided	Percentage negative
"All in all, how satisfied would you say you are with your job?"	17.8	66.4	15.9	34.0	61.4	4.5
"If a good friend of yours told you that he or she was interested in working at a job like yours at this company, what would you say?"	18.5	53.9	27.6	63.4	25.3	11.3
"Knowing what you know now, if you had to decide all over again whether to take the job you now have, what would you decide?"	23.3	37.1	39.6	69.1	22.9	8.0
"How much does your job measure up to the kind of job you wanted when you first took it?"	5.2	32.3	62.5	33.6	52.3	14.0

Source: Lincoln and Kalleberg 1990, p. 65.

TABLE 3.6

Probability of Leaving a Job, by Age and Tenure,
in Japan, United States, and United Kingdom

Age of worker	<u>Tenure</u>			
	0-1 year	0-5 years	5-10 years	10-15 years
Japan, 1977, all persons				
25-29	.28	.08	.06	.04
30-39	.35	.06	.04	.06
40-49	.26	.05	---	---
United States, 1981, all persons				
25-29	.54	.24	---	---
30-39	.52	.18	.09	---
40-49	.50	.15	.05	.07
50-59	.52	.12	.02	.05
United Kingdom, 1979, all full-time workers				
25-29	.19	.10	---	---
30-39	.17	.10	.10	.11
40-49	.09	.07	.07	.09
50-59	.02	.01	.06	.08

Source: Aoki 1988, p. 63.

TABLE 3.7**Economic Cost of Job Changes****United States in 1987**

	Number (in 1000)	Pay in current job compared to previous pay (in percent):		
		Higher	About the same	Lower
Total	9,957	52.5	21.2	26.2
Men	5,391	51.3	21.7	26.9
Women	4,566	54.0	20.6	25.4

Source: U. S. Bureau of Labor Statistics 1987.

Japan in 1977

	<u>Wages after the job change (in percent):</u>		
	Up by 10% or more	Up or down within 10%	Down by 10% or more
Men	33.2	47.4	19.1
Women	27.0	55.3	17.4

Source: Dore 1986, p. 83.

TABLE 3.8**Social Cost of Job Changes**

Distribution of inter-firm job changes
by size of origin and destination employer
in Detroit and Yokohama

Detroit

Firm size of origin	<u>Firm size of destination</u>				Total
	1-9	10-99	100-999	1000+	
1-9	57 (28.2%)	52 (25.7%)	31 (15.3%)	62 (30.7%)	202 (100.0%)
10-99	48 (16.8%)	114 (40.0%)	41 (14.4%)	82 (28.8%)	285 (100.0%)
100-999	23 (11.3%)	39 (19.2%)	71 (35.0%)	70 (34.5%)	203 (100.0%)
1000+	48 (13.2%)	54 (14.8%)	56 (15.4%)	206 (56.6%)	364 (100.0%)
Total	176	259	199	420	1054

Yokohama

Firm size of origin	<u>Firm size of destination</u>				Total
	1-9	10-99	100-999	1000+	
1-9	80 (44.1%)	44 (24.3%)	26 (14.4%)	31 (17.1%)	181 (100.0%)
10-99	42 (21.9%)	84 (43.8%)	33 (17.2%)	33 (17.2%)	192 (100.0%)
100-999	23 (18.4%)	31 (24.8%)	39 (31.2%)	32 (25.6%)	125 (100.0%)
1000+	26 (22.2%)	30 (25.6%)	18 (15.4%)	43 (36.8%)	117 (100.0%)
Total	171	189	116	139	615

Source: Cole 1979, p. 85.

TABLE 3.9**Relationship with Neighbors****Japanese sample****"How closely do you associate with you neighbors?"**

	Associate with them very closely	Associate with them but not very closely	Not associate with them closely	Not associate with them at all	Don't know
Total (n=7739)	49.0%	32.4%	14.4%	3.8%	0.4%
Metropolitan Tokyo (n=479)	44.1%	30.1%	17.1%	8.1%	0.6%
Ten largest cities (n=972)	36.7%	35.5%	21.0%	6.5%	0.3%
Cities with more than 100,000 (n=2777)	40.9%	37.2%	16.9%	4.5%	0.5%
Cities with less than 100,000 (n=1539)	53.4%	30.7%	12.9%	2.7%	0.3%
Towns and villages (n=1972)	64.2%	26.1%	8.3%	1.1%	0.3%

Source: Prime Minister's Office 1987a, p. 14.

American sample**Proportion of respondents for whom more than 30% of the associates are neighbors**

Regional core (n=242)	12.8%
Metropolitan (n=272)	24.3%
Town (n=300)	25.7%
Semi-rural (n=236)	39.8%

Source: Fischer 1982, p. 376.

TABLE 3.10**After-Hour Socializing in Japan****"Who do you mostly socialize with after hours?"**

	Coworkers and work associates	Non-work- related people	Both equally	Don't know	Total
Total (n=1,540)	36.9%	32.1%	27.5%	3.5%	100.0%
Men (n=955)	42.8%	25.5%	28.5%	3.2%	100.0%
Women (n=585)	27.4%	42.9%	25.8%	3.9%	100.0%

"Who do you want to socialize with after hours?"

	Coworkers and work associates	Non-work- related people	Both equally	Don't know	Total
Total (n=1,540)	19.0%	41.7%	36.0%	3.3%	100.0%
Men (n=955)	22.1%	38.1%	36.4%	3.3%	100.0%
Women (n=585)	14.0%	47.5%	35.2%	3.2%	100.0%

Source: Prime Minister's Office 1987b, p. 23.

TABLE 3.11**Outside Socializing among Japanese and U.S. workers**

	Japan Mean (SD)	U.S. Mean (SD)
"How often do you get together with your coworkers outside of work?"	2.14 (.964)	.801 (1.09)
"How often do you get together with your supervisor outside of work?"	1.37 (1.10)	.203 (.547)
"How often do you get together outside of work with managers other than your supervisor?"	1.31 (1.10)	.225 (.593)

Note: Scale for all items (0 = seldom or never, 3 = once a week or more)
 All the differences between Japan and U.S. are statistically significant at $p < .001$

Source: Lincoln and Kalleberg 1990, p. 88.

TABLE 3.12**Productivity of Transplants**

	cars/employee/year
Honda (Marysville, OH)	100
Toyota (Freemont, CA)	100
Nissan (Smyrna, TN)	88
Ford (Wayne, MI)	80
Ford (Atlanta, GA)	76
GM (Linden, NJ)	61
Chrysler (Sterling Heights, MI)	58
GM (Lansing, MI)	53
GM (Doraville, GA)	46

Source: Ealey and McElroy 1987

TABLE 3.13Quality Performance by Location of Parent Firm and Plant¹

<u>Parent/plant</u>	<u>Quality and assembly defects/100 vehicle</u>			
	Best	Weighted average	Worst	N
Japanese/Japan	36	60	98	20
Japanese/North America	42	65	101	4
U.S./North America	52	82	152	40

Note: ¹Includes only those defects that assembly plants can affect and thus excludes such areas as engine and transmission performance and reliability.

Source: Cole 1990, p. 74

CHAPTER 4
THE STATE SUBMODEL:
THE PRODUCTION OF GLOBAL ORDER
IN HETEROGENEOUS SOCIETIES¹

Differential levels of local orders, which the group solidarity submodel of the solidaristic theory explains, are only a partial determinant of the differential levels of global order across societies; what also matters is the productiveness of groups. The state submodel, which is the other half of the solidaristic theory, explains what makes groups more or less productive or counterproductive.

As I noted in Chapter 2, two separate theories underlie the state submodel: the theory of the state and the theory of group resource allocation. The latter, as I also noted in Chapter 2, is the newest, and therefore the least developed, part of the solidaristic theory of global order, and I have so far gathered no systematic empirical evidence in support of the theory (apart from what I present in Chapter 5). (In fact, my critics have gathered some contrary evidence for me.) This chapter will therefore concentrate on the former theory, the theory of the state, and present some supportive evidence.

The theory of the state assumes that groups become counterproductive (and threaten global order) by reducing the state's resources and weakening the state. A group can *directly* expend the state's resources by threatening and challenging the state as the ultimate exerciser of political power; the state's attempt to counter and neutralize such challenges will drain its resources. Alternatively, a group can *indirectly* reduce the state's resources by imposing negative externalities on other groups that have power over the state; the negative externalities and the power of the victim groups will force the state to expend its

¹ An earlier version of this chapter was published as Hechter, Friedman and Kanazawa (1992).

limited resources to defend the victim groups.

Since the state purports to expend as few resources as possible (Assumption 6), the theory holds that the state will be indifferent to any other groups which do not directly threaten and challenge the state or impose negative externalities on powerful groups. In particular, one counterintuitive implication of this theory is that the state will be completely unresponsive to the normative legitimacy or deviancy of the constituent groups. These predictions are largely consistent with evidence on the state's differential reaction to various groups in the United States. The divergent histories and the ultimate fate of two recent religious movements in the United States, Hare Krishna and Rajneesh, illustrate the theory's predictions well.

THE DETERMINANTS OF STATE INTERVENTION:

THE CASES OF HARE KRISHNA AND RAJNEESH

Both Hare Krishna and Rajneesh are independent cult movements in the recent U.S. history. Both are direct imports from India, and thus belong to the "neo-Hindu" tradition. Both movements are well outside of the Judeo-Christian tradition, and their normative status within the American society is therefore marginal at best. Both were led and brought into the United States by charismatic founders and leaders, and both count mostly marginal (though from white middle class background (Rochford 1985, pp. 46-57)) members of American society among their devoted followers. However, despite these similarities, Hare Krishna and Rajneesh have had completely different histories in the United States, and the two factors that the theory of the state identifies (threat to state autonomy and negative externalities on powerful others) hint at the reason why.

The history of the Hare Krishna in the United States began with the arrival of Swami Bhaktivedanta in New York in 1966 (Poling and Kenney 1986, p. 7). He soon

established the International Society for Krishna Consciousness (ISKCON) and began to attract followers at his first temple on Second Avenue. In four years (1966-1970) ISKCON grew from one temple with 16 initiated disciples to 30 temples, 35 initiated disciples, and 347 ministerial students (The Krsna Consciousness Handbook 1970, pp. 98-105). In August 1968, ISKCON purchased 133 acres of land near Wheeling, West Virginia, and established a self-sufficient commune for its members (Poling and Kenney 1986, p. 10).

Although the Hare Krishna movement has experienced a major crisis after the death of Swami in 1977 (Rochford 1985, chapter 9), it has not faced any external attempt at intervention by the state. On occasion, outside "deprogrammers," hired by the parents of ISKCON members, have kidnapped and deprogrammed some members in order to return them to their parents. However, in such cases, ISKCON has successfully prosecuted the deprogrammers and parents in criminal court for kidnapping and First Amendment violations by claiming that it represents a genuine religious tradition (Poling and Kenney 1986, p. 10). The state tolerance for, or co-optation of, ISKCON is to such a high extent that, in Gainesville, Florida, ISKCON operates a Food For Life program, which provides 2,400 meals a month for the urban poor, *with a HUD grant of \$20,000*. As its own financial measure, ISKCON sells the official T-shirt of the Hare Krishna Food For Life Program for \$7. 75 (p. 15).

While the Rajneesh movement in central Oregon shares a similar spiritual origin with the earlier Hare Krishna movement, its short history in the United States represents a marked contrast. Like the Hare Krishna movement, the Rajneesh movement began in 1981 with the arrival in the United States of its leader and founder, Bhagwan Shree Rajneesh, but it soon ended in 1985 with his deportation from the country. Its history is so brief that one observer (Carter 1990) calls it the "Rajneesh incident." What accounts for its quick

demise?

First, unlike Hare Krishna, the Rajneesh movement presented a political threat to the autonomy of the state. It first took over political control of the small village of Antelope, Oregon, near their commune, and changed its name to Rajneesh (Carter 1990, p. xv). It then successfully petitioned to incorporate their commune as another city, Rajneeshpuram (Price 1985, p. 19). Now two municipalities were under complete political control of this religious movement, in clear violation of the separation of church and state. Rajneeshees maintained their own police force ("Peace Force") whose leaders were trained by the Oregon Police Academy (Carter 1990, p. 92). They also constructed their own airport, with three DC-3 planes in their "Air Rajneesh" fleet (Price 1985, pp. 25-26), and their free public transportation system was second only to Portland's in size in the state of Oregon (Androes 1986, p. 52). They also constructed and maintained "a municipal water system conservatively estimated as capable of serving a population of 50,000" (Androes 1986, p. 53). The Rajneeshees increasingly took on and over usual governmental functions, and the public services they provided were often better and more efficient than those provided by other municipalities in Oregon.

What was the purpose behind all of this? From his earlier days in India, Bhagwan aspired to the creation of a self-sufficient "new society," which is independent of the host culture and thus falls outside of its political jurisdiction. With all of its institutions in place, the Oregon commune seemed very close to fulfillment of his dream.

The term "new society" had become more than a metaphor for sannyasin [Rajneeshees] by 1982. The ranch provided sufficient isolation for members to see themselves as independent of outside institutions, effectively *a sovereign state*. The illusion of total autonomy developed quite naturally from the increasing completeness of their institutions (agriculture, finance, medical services) and the separation from outside definitions of reality (an internal press, video and audio productions, limited and controlled outside contact.) (Carter 1990, p. 158; emphasis added)

Of course, the state (the State of Oregon and the United States) could not tolerate a large social group, whatever its normative orientation, which claimed to be, and threatened to become, a sovereign state within its borders.

Second, in its attempt to gain sovereignty, the Rajneesh movement and its activities created a lot of negative externalities upon its neighbors, who felt "intimidated, threatened, and slandered" (Carter 1990, p. xvii). At the outset, the movement had different effects on different people.

Many locals appear to have reacted primarily to Rajneesh dominance and control moves, while other opponents were clearly offended by what they saw as immorality and the challenge to their religious traditions. The environmentalist group pursued the threat to its traditional "preservationist" goals as well as gains in regional popularity accruing from its opposition to an unpopular group. (p. 130)

Some people were afraid of, and adversely affected by, the movement's aggressive expansion to adjacent communities. Those who owned land across river from the commune were thus among the strongest opponents (pp. 133-134). When the followers eventually took over the nearby small village of Antelope, 32 of the original 49 inhabitants were forced to relocate, and those who stayed were continually harassed by their "Peace Force" (p. 93). With the political takeover of the Antelope village government, the Rajneeshees also made some changes in the local public school system (pp. 181-182). These changes forced the local school children to be bussed 50 miles to Madras, Oregon. The quiet way of life, which the prior residents were accustomed to, was suddenly disrupted by the intruders.

Religious fundamentalists in Oregon were alarmed when a "meditation center" established in Antelope suddenly changed its name to Rajneesh International Foundation, and was officially categorized as a church (p. 140). Furthermore, "1000 Friends of Oregon," a regional environmentalist group, was concerned with the Rajneesh's violation

of county land-use plans when the followers began building nonfarm-related buildings outside of the designated Urban Growth Boundaries (pp. 139-140).

Eventually, all these groups in the local communities united in their opposition to Rajneesh. As the opposition became increasingly organized, the Rajneeshees took more militant stance and made further moves to alienate and threaten the local residents. One of these counterproductive moves was to treat Antelope as a "hostage town."

Over the course of the year, the Rajneesh council of Antelope raised taxes and fees, hired security services from the Rajneeshpuram "Peace Force," and took control of the Antelope school. The increased taxes posed some burden on retirees (most of whom left); the Peace Force instituted intimidating surveillance of locals; and the public school controversy broadened the base of public opposition. At one point, Rajneesh leaders offered to "trade" Antelope for a bill officially recognizing Rajneeshpuram. They would withdraw from Antelope to the ranch if the legislature would sanction their incorporated city. (p. 167)²

Rajneesh tactics of intimidation and harassment escalated as the confrontation with the local residents continued.

Additional housing was acquired [in Antelope] and a campaign was begun to discomfit remaining locals. Milne [a Rajneeshee who was later excommunicated for ideological differences] reports instructions to sannyasin to hold loud, all-night parties near the residences of others and to offend locals with public displays of affection. . . . Milne reports several confrontations with locals when he took pictures of their homes in Antelope and dwellings in other parts of the state to document the part-time nature of their residency in Antelope. He also notes that his film "documentation" was intended to intimidate and harass these residents. (p. 150)

The Rajneesh Peace Force stopped and occasionally searched non-Rajneeshees travelling on county roads in and around newly incorporated Rajneeshpuram. All access to the city was tightly controlled by these armed security guards (pp. 182-183).

²The Rajneeshees also employed elsewhere this tactic of raising the cost of living to drive people out. When they purchased the Martha Washington women's hotel in Portland for \$1.5 million, they immediately raised the rent from \$285 per month to \$750 per month. This effectively dislodged prior residents. The hotel was then used almost exclusively by devotees in transit to Rajneeshpuram (Carter 1990, p. 170).

Toward the end of the conflict, the Rajneeshees resorted to criminal tactics (of which some of their leaders were later convicted). They set fire to the field of a rancher near Antelope, who refused to sell land to the group. And Jefferson County District Attorney Michael Sullivan suffered from near fatal arsenic poisoning by them when he became alienated from the movement despite his earlier extended attempt to negotiate accommodation between the Rajneeshees and the locals (pp. 198-200).

To this series of intimidation and harassment, the locals responded with equally strong, if legal, measures; they filed numerous lawsuits against the commune leaders and members. The assault upon the Rajneesh movement eventually involved the federal government. In December 1982, the INS denied Bhagwan's application for permanent residency (p. 163), and he was ultimately deported from the United States after he pleaded guilty to two counts of making false statements to federal INS officials. He was charged with one count of conspiracy and 34 counts of making false statements to a federal official. Under a plea bargain, he was fined \$400,000, given a 10-year suspended sentence, "allowed" to depart the country "voluntarily," and placed on probation for five years. Other leaders of the movement were similarly charged and pleaded guilty for felonies such as attempted murder and first degree arson (pp. 235-240).

The divergent histories of Hare Krishna and Rajneesh illustrate the theory's contention that the state tolerates the activities of any deviant groups as long as they do not threaten its autonomous and exclusive exercise of power and they do not have any negative externalities on others with collective action potentials. It is true that Hare Krishna devotees often accost people at airport and other public places (Rochford 1985, chapter 7). However, the negative externalities Hare Krishna impose on such people are different from those Rajneeshees imposed on Oregonians in two crucial respects. First, occasionally accosting and harassing people at the airport hardly compares in magnitude or seriousness

to the political takeover of an entire municipality or attempted murder. (In other words, "group i's negative externalities on group j" are lower for Hare Krishna than for Rajneesh; see Figure 2.2.) Second, victims of Hare Krishna activities at the airport mostly do not know each other; hence, it is almost impossible for them to pool their resources to deal with the cult members. In other words, there is no closure among the victims of Hare Krishna (Coleman 1988; 1990), and thus they have no power over the state. In contrast, the Rajneesh movement adversely affected long-term residents of Antelope and other central Oregon communities; they knew each other very well, and thus could, and did, pool their resources to combat their intruders collectively. ("Group j's power over the state" is lower for Hare Krishna than for Rajneesh; see Figure 2.2.)

Had Rajneesh not so obviously challenged the state and imposed negative externalities, it might have survived to enjoy the same kind of parasitic relationship with the state which Hare Krishna today seems to have established. Such relationships between the state and some deviant social groups would be parasitic because the normatively deviant groups enjoy the tolerance and even implicit support of the state for their deviant activities (as with the HUD grant to ISKCON), and the state in turn can farm out some of its responsibilities to produce and maintain global order to its deviant constituent groups, which tend to attract otherwise "dangerous" individuals. (Mayors of New York and San Francisco once commended ISKCON for its total ban on drugs among its members (Daner 1976, p. 60).) Since most Americans regard both Hare Krishna and Rajneesh as deviant cult organizations, and most of the internal values, norms, and practices of both are equally incongruent with the values and norms of American society at large, their normative legitimacy cannot account for the state's differential treatment of these two religious groups.

THE SAINTS AND THE ROUGHNECKS: AN ALTERNATIVE INTERPRETATION

In his classic study, William J. Chambliss (1973) observed two youth gangs in Hanibal High School for two years. The Saints were an upper-middle-class gang, while the members of the Roughnecks came from lower-class families. Despite the fact that both gangs engaged in similar delinquent acts, the community, the school, and the police consistently regarded the Saints as "good, upstanding, nondelinquent youths with bright futures" but the Roughnecks as "tough, young criminals who were headed for trouble" (p. 28). During the two years under observation, none of the eight Saints even so much as received a traffic ticket. In contrast, each of the six Roughnecks was arrested at least once; several of them were arrested a number of times and spent at least one night in jail. If the Saints and Roughnecks were equally delinquent, what accounts for the differential police reactions to the two gangs?

Chambliss' answer was a typical interactionist and conflict one. The influential upper-middle-class parents of the Saints (and others like them) were able to exert subtle pressure on the police to disregard their children's delinquent acts as harmless pranks and occasional "sowing of wild oats," while the powerless lower-class parents of the Roughnecks (and others like them) were unable to do so. Furthermore, the rich Saints had access to their own cars, which allowed them to travel to nearby Big City to commit their delinquent acts, an option the poor Roughnecks did not have without cars. The Saints' upper-middle-class appearance and demeanor also biased the police's perception of their behaviors in their favor. Chambliss argues that the local Hanibal residents perceived the seriousness of the delinquent acts committed by the Saints and the Roughnecks quite differently because of their different class backgrounds, and this distorted perception led to the unequal treatment of the two youth gangs by the police.

However, in line with the theory of the state, a slightly different interpretation is

possible. The differential police behavior may have been a result of the amount of negative externalities these two youth gangs imposed, and the kind of people they adversely affected. First, despite the fact that "in sheer number of illegal acts, the Saints were the more delinquent" (p. 29), their delinquent acts created very few negative externalities for the local community members.

[The Saints] simply viewed themselves as having a little fun and who, they would ask, was really hurt by it? The answer had to be no one, although this fact remains one of the most difficult things to explain about the gang's behavior. Unlikely though it seems, in two years of drinking, driving, carousing and vandalism no one was seriously injured as a result of the Saints' activities. (p. 26)

"The Saints were more continuously engaged in delinquency but their acts were not for the most part costly to property" (p. 29); in contrast, the Roughnecks' delinquent acts were. They frequently stole from local stores and other students at school. "The thefts ranged from very small things like paperback books, comics and ballpoint pens to expensive items like watches." (p. 27) Apart from occasional theft of gasoline, the only things the Saints stole were wooden barricades and lanterns from construction sites and road repair areas, which belonged to no private citizens. The Saints abandoned most of these stolen items, and these could thus later be recovered (p. 29).

The Saints and the Roughnecks also had differential propensities toward violence. "The Roughnecks were more prone to physical violence" while "the Saints never fought." (p. 29) The Roughnecks' fighting activities were frequent, and often involved other members of the local community. It seems safe to conclude from Chambliss' accounts that the Roughnecks imposed more negative externalities on others both in their property crimes and violent crimes.

Second, on rare occasions where the Saints' delinquent acts did impose some negative externalities, they almost never involved the local Hanibal residents, who knew

the boys well, but instead affected the people in Big City, who did not know them. In contrast, all of the Roughnecks' delinquent acts took place in Hanibal because they did not have access to cars. So while the Big City driver who drove into a hole in the road deliberately left unmarked by the Saints did not know who the pranksters were (p. 25), the teacher whom one of the Roughnecks threatened to beat up and who consequently had to hide under the desk in order to escape him had no illusion about the identity of the delinquent boy (p. 28). Because the Saints' pranks affected the anonymous people of metropolitan Big City, who knew neither the boys' identities nor each other, they could not pool their resources to deal with the Saints' delinquency. In other words, the Saints operated where there is no closure among their victims (Coleman 1988; 1990). In contrast, the Roughnecks' victims were mostly the local residents, who knew both the boys and each other very well. They were thus able to band together and deal with the Roughnecks' delinquency collectively. They had more power over the local Hanibal police force than the Saints' victims did over the Big City police.

There is no doubt that the Saints were able to commit their pranks on strangers in Big City because they had cars, which their upper-middle-class status afforded; in that sense, their class background, which Chambliss emphasizes, is an important factor. However, the unequal treatment of the two gangs by the police may have happened independent of their class origins if their respective delinquent acts affected, as they did, different segments of the society. With their nice cars, influential parents, and polite demeanor, the Saints may have been arrested anyway had some of their pranks actually resulted in some injuries and/or affected members of the local community, who could act collectively. Chambliss' (1973) accounts of how the Hanibal police reacted to the Saints and the Roughnecks differently are consistent with the prediction of the theory of the state.

THE STATE REACTION TO VICE

If the state tacitly recognizes the positive contributions of deviant groups toward global order and tolerates their existence as long as they do not challenge the state or impose negative externalities on powerful others, it follows that the formal legal status of groups in and of itself does not affect how the state treats these groups. In particular, the state, and the police as its primary apparatus of order maintenance, should be especially tolerant of groups which explicitly engage in "victimless crimes" (such as prostitution, gambling, drug use), unless these groups challenge the state or impose negative externalities on powerful others.

James Q. Wilson (1968) underscores these points in his study of police behavior in eight U.S. communities. Wilson argues that the primary function of patrol officers on the beat is the maintenance of public order rather than strict enforcement of the letter of the law, and calls the police departments characterized by the preponderance of this function "watchman style."

The police are watchman-like not simply in emphasizing order over law enforcement but also in judging the seriousness of infractions less by what the law says about them than by their immediate and personal consequences, which will differ in importance depending on the standards of the relevant group--teenagers, Negroes, prostitutes, motorists, families, and so forth. In all cases, circumstances of person and condition are taken seriously into account. . . . if a man's actions are "private" (gambling, for instance, or driving while intoxicated) or if they involve only another person with whom he has a dispute (an assault or a petty larceny), then, unless the offense is a "serious" one, the police tend to overlook the violation, to handle it informally (by a reprimand, for example), or to allow the two aggrieved parties to resolve it between themselves as if it were a private matter (a storekeeper getting restitution from a shoplifter or an assault victim bringing a civil action). If, on the other hand, the public peace has been breached -- creating a disturbance in a restaurant, bothering passers-by on a sidewalk, insulting an officer, causing a crowd to collect, endangering others, or publicly offending current standards of propriety, then the officer is expected to restore order. If order cannot be restored or respect for authority elicited in any other way, an arrest is appropriate. (pp. 141-142)

In other words, police intervention such as an arrest is appropriate only when a certain behavior: 1) challenges the police as the ultimate authority over order maintenance, and the offender does not exhibit proper "respect for authority"; and/or 2) disturbs the public peace, by creating negative externalities on the public at large beyond those immediately involved. Whether the behavior in question violates the law does not figure into the determination of whether or not the police intervene.

Further, consistent with the theory's prediction that the state will disregard the formal legal status of a group's activities in its reaction to them, if someone violates one of the two criteria mentioned above, the police intervene even when no laws have been violated.

Law enforcement officials have used their power to suppress immorality that might offend the "decent people." . . . A high city official [in Albany, NY] explained how this was done:

[A] bishop called me to say that there was an improper movie being shown in town. We called up the head of the theater and told him to close down immediately and not to reopen the next day, and he didn't. The police chief in a nearby town called to ask what law we had been able to use to close it down. *Of course, there was no law at all. We just did it.* Theaters, what with licensing requirements and all, are pretty vulnerable. If you really want to get them, you can get them. It's not strictly legitimate, of course, but it's effective. Now the word is out, and the movie people don't try to put that kind of film in Albany any more. (pp. 240-241; emphasis added)

The police operate to emphasize public order over law enforcement and tolerate some vice in order to maintain order mostly because city officials, to whom the police chief is responsible, recognize, as I do, the important functions some deviant groups perform in the overall production and maintenance of global order.

The city administration [of Albany, NY] has changed its policy on vice slowly but in accordance with what it thinks public opinion expects. The Gut [the red-light district in Albany] was once defended by officials who felt that it kept the "riff-raff" in one place; no decent citizen would be offended unless he went there looking for action, in which case he could hardly complain. Toward the end, however, it was receiving too much unfavorable publicity. Most of the honky-tonks and brothels torn down by

the governor did not reopen. . . . (p. 240)

A Democratic leader in Albany tells one of Wilson's interviewers:

There was gambling in the Stone Age, there's gambling today, there will be gambling when your grandchildren are as old as I am. I can't see enforcing a law against nature. Anyway, there's never been any gang murders or stuff like goes on in New York as a result of gambling and prostitution. The gamblers up here are nice people, otherwise; they're businessmen. (p. 245)

The implication in this politician's comment is that if there were some "gang murders or stuff like goes on in New York as a result of gambling and prostitution" then the government will act swiftly to close down these operations.

Furthermore, some city officials seem to recognize, once again as I do, the important integrative function of vice and other deviant groups especially for the marginal members of the society.

A high city official told an interviewer that "Nobody wants to eliminate all of the gambling and prostitution, *especially among the Negroes*. We feel that some of it has to go on, but it should be kept down and under control." After the charges made by the Negro minister at the February 1967 council meeting, the city announced that gambling and prostitution had been shut down. Some arrests were made, in fact, but privately a high city official told an interviewer afterwards that the city was not "closed tight"; he explained that "We couldn't close the place down totally *with the minority group that we have here* -- we have to allow some safety valve." (pp. 245-246; emphases added)

Incidentally, what led to both the charges by the minister and the city's action ostensibly to crack down on gambling and prostitution was a wave of burglaries and the murder of a businessman in the area -- serious negative externalities as a result of otherwise tolerated vice operations (p. 244).

Wilson's (1968) work indicates that the police at least in some U.S. communities treat some forms of "victimless crimes" in accordance with my argument here. Further, how the police handle the vice operations seems to reflect the opinions of the municipal

officials that these vice operations have important order maintenance and integrative functions, especially for the marginal members of the society (such as blacks in the context of mid-1960's United States).

At the same time, there are also some variations in the state reaction to the same "victimless crime." For instance, in her review of statutory treatment of juvenile prostitution, Weisberg (1984) notes that:

One trend in the criminal statutes is the enactment of age-based distinctions. These distinctions reflect the different ages of the juveniles involved in prostitution. Specifically, many statutes enhance the penalties for perpetrators according to the age of the juvenile involved. The targeted perpetrators are pimps, and, in some states, patrons as well. Under statutory schemes with age-based lines, pimps and patrons of younger prostitutes are punished more severely than those same persons involved with older prostitutes. (p. 40)

Moreover, the U.S. federal laws on prostitution have always maintained a distinction between adult prostitution and juvenile prostitution, and imposed more severe penalties for the latter. This distinction and higher penalties for juvenile prostitution were evident even in the original Mann Act (the White-Slave Traffic Act) legislated in 1910 (Loken 1986, pp. 108-110). If, as I argue in this chapter, the state tolerates prostitution for its integrative and order maintenance functions, why should it make a distinction between adult and juvenile prostitution and create more severe penalties for the latter?

While the Western states have shifted over the past centuries from presumption of paternal custody over children to presumption of maternal custody (Friedman forthcoming), what has remained constant throughout history is the state's unequivocal presumption that minor children belong to their parent(s) (either the father or the mother or both) or some other adult guardians (whom the state has the right to designate). In this sense, the state has consistently treated minor children almost as personal properties of the parents or guardians rather than independent actors capable of making their own decisions.

Thus anyone who causes harm to minor children in effect inflicts damage on their parents just as does anyone who steals or damages other personal properties such as automobiles or VCR's. Since most people in society view prostitution and those who engage in it negatively, the pimps and patrons of juvenile prostitution thereby impose negative externalities on the juvenile prostitutes' parents.

While relatively few parents ever lose their children to juvenile prostitution, every parent fears that his/her daughter or son might fall victim to pimps and patrons of juvenile prostitution (just as every home owner fears that his/her house might be burglarized whether or not it actually happens). The state therefore enacts and administers stiffer penalties for perpetrators of juvenile prostitution in order to protect all actual and potential parents of juveniles. The same is not true, however, for adult prostitution, where all parties concerned are independent actors. Prostitution among consenting adults therefore imposes no negative externalities.³

DIFFERENTIAL POLICE REACTION TO URBAN STREET GANGS: THE GUARDIAN ANGELS

Urban street gangs are one type of groups that are highly counterproductive (Definition 4). Because their parochial activities impose serious negative externalities (such as narcotics sold to children not only in the inner cities but also in the suburbs, and injuries and casualties caused by indiscriminate drive-by shootings), the state cannot tolerate the existence of such groups and will have to act to contain them. However, there also seem to be considerable variations in the state's reaction to urban street gangs, and the key determinants of such variations once again are the amount of negative externalities imposed by the gangs and the types of people they affect.

³This is not to deny that some pimps coerce women to engage in prostitution. However, it is against the law to coerce adults into *any* behavior, and it is not peculiar to prostitution. Use of force or coercion always creates negative externalities on those who are being coerced. My discussion of adult prostitution here only applies to cases which involve no such force or coercion.

In his classic study of urban street gangs in Chicago, Thrasher (1927) defines a gang as:

an interstitial group originally formed spontaneously, and then integrated through conflict. It is characterized by the following types of behavior: meeting face to face, milling, movement through space as a unit, conflict, and planning. The result of this collective behavior is the development of tradition, unreflective internal structure, esprit de corps, solidarity, morale, group awareness, and attachment to a local territory. (p. 57)

In a recent ethnographic study of urban street gangs in New York, Boston, and Los Angeles, Jankowski (1991) similarly defines a gang as:

an organized social system that is both quasi-private (not fully open to the public) and quasi-secretive (much of the information concerning its business remains confined within the group) and one whose size and goals have necessitated that social interaction be governed by a leadership structure that has defined roles; where the authority associated with these roles has been legitimated to the extent that social codes are operational to regulate the behavior of both the leadership and the rank and file; that plans and provides not only for the social and economic services of its members, but also for its own maintenance as an organization; that pursues such goals irrespective of whether the action is legal or not; and that lacks a bureaucracy (i.e. an administrative staff that is hierarchically organized and separate from leadership). (pp. 28-29)

Neither of these definitions requires criminal activities or violence as a necessary condition for a gang. Then one social organization in the contemporary United States which fits these definitions of a gang quite nicely, but which, unlike other urban street gangs, the state openly tolerates, is the Guardian Angels (GAs).

The GAs officially began its operations in New York as an active citizen crime control group on February 13, 1979, as "The Magnificent Thirteen Subway Safety Patrol" under the leadership of Curtis Sliwa, who remains to date the organization's charismatic national leader (Kenney 1987, pp. 10-11). Upon formation the organization received instantaneous support of citizens of New York, who were fearful of subway crimes. The group soon changed its name to the Guardian Angels, and began establishing chapters in

other major U.S. cities. By early 1985, nationwide membership estimates ran as high as 5,000.

While the GA leadership claims that their organization is an active citizen group which operates within their constitutional right of self-defense against the spiraling crime problem that the police are unable or unwilling to prevent, several outside observers concur that the reality of the organization is hardly as glorious. Although the leadership claims that the recruitment process is highly selective and the recruited members receive three months of rigorous training, reporter Michael Cordts of the Chicago Sun Times, who clandestinely joined the Chicago chapter of the organization to learn more about the GAs, found that screening for new members was almost nonexistent and training was highly inadequate at best.⁴ As a result, "many of the Chicago Angels were former gang members," who joined the organization because they just wanted to "bust heads" (Cordts 1981a; 1981b).

In his study of the GAs in New York, Kenney (1987, p. 18) concludes that "it is quite reasonable to characterize the Guardian Angels as modern vigilantes" where vigilantism is defined as "organized, extralegal movements which take the law into their own hands." (Burrows 1974, p. 6) For instance, the Philadelphia chapter maintains the "Suicide Squad," which is "the elite corps of the Guardian Angels" who places constant emphasis upon the use of violence and "roam the city's streets in search of trouble." (Reinccke 1982, p. 1) The New York chapter, under the direct control of the national leader Curtis Sliwa, maintains the "SWAT team," which operates in the especially tough areas of the city and "comes perilously close to practicing entrapment by having some of the Angels dress in a vulnerable manner." (Pileggi 1980, pp. 17-19) The coleader of a special group of the Chicago GAs, assembled for the purpose of challenging a street gang,

⁴Underscoring Jankowski's (1991, pp. 28-29) emphasis on quasi-secretiveness as a defining characteristic of a gang, the GAs do not allow outsiders to observe their training sessions (Kenney 1987, p. 22).

instructed the members: "If something happens, you jump on their heads. Be a barbarian." (Cordts 1981a, p. 3)

Yet despite these known extralegal activities and their tendency toward violence, which more traditional street gangs also display, the state has been particularly lenient on the GAs; in no major cities with a GA chapter have the police tried to control their activities in any significant way. The highly publicized tensions between the GAs and the police mostly come from the GAs rather than the police. Sixty-eight percent of the off-duty police officers interviewed in New York reported that the GAs reduced fear of crime while 73 percent of them approved of the organization and its methods (Kenney 1987, pp. 96-97).

Over 50 on-duty officers were met by researchers; dozens of other officers were observed on patrol by researchers; and numerous station personnel were met during the tabulation of reported crimes and cited incivilities. Throughout these encounters, few of these police personnel expressed any negative feelings toward the Angels or their efforts. More often, officers expressing opinions were concerned about the safety of Angel patrols and felt that the members were accepting unnecessary risks. (p. 96)

What accounts for the police's tolerance for the GAs and their lenient attitudes toward the organization, when the GAs are clearly "modern vigilantes" and some of their activities are hardly different from those of more traditional urban street gangs? Evidence from firsthand accounts once again suggests that the key to the police's tolerance of the organization is the amount and kind of externalities it imposes.

First, compared to the publicity given the organization and its fame/infamy, the GAs do surprisingly little that affects others (either positively or negatively); they are simply not as active as their nationwide publicity might suggest. While 98% of nearly 2,700 subway passengers in New York interviewed in Kenney (1987) knew of the GAs, a majority (54%) had seldom or never seen them patrolling. Only 9% reported that they usually see GA patrols while on the subways (p. 78).⁵

⁵In comparison, only 14% of the same respondents said they had seldom or never seen police officers on the subway, while 44% of them said that they usually see them (p. 117). This is despite the fact that

Further, despite their philosophy of active involvement in crime control and willingness to perform citizen's arrests when faced with crime, the GAs actually interrupted crimes and made arrests in only 258 instances in the entire nation after three years of active operation (Newport 1982, p. 10). That is less than one such arrest somewhere in the United States every four days. As a result, even the organization's leadership admits that "Angel patrols are most often routine and uneventful." (Kenney 1987, p. 25)

As further evidence of how little the GAs actually accomplish, Kenney's (1987, chapter 6) quasi-experimental field study of New York subway passengers clearly indicates that, while most passengers believe that the GA patrols reduce fear of crime, manipulation of GA presence or absence on the subways actually had very little effect on the passengers' subjective sense of fear. Their fear did not increase when the GA patrols were eliminated, and it did not decrease when they were intensified. Their activities seem to have very little effect on one of the stated goals of the organization.⁶

Second, on rare occasions when the GAs do make a difference, the negative externalities imposed by their activities are limited to certain kinds of people. When the GAs interrupt a crime being committed and arrest suspected offenders, their behavior adversely affects only those who are caught in their act of crime; "their [the GAs'] action is directed against individuals who are believed to be committing criminal acts. . . ." (Kenney 1987, p. 19) Of course, this does not mean that all who are arrested by the GAs are guilty of their suspected crimes or that the GAs always catch and arrest the right persons.

the GAs claim a New York City membership of over 1,000 (almost one-third of the size of the city's transit police force), and are able to restrict their operations to just the subways, during the evening hours, and in the high-crime areas, precisely those chosen by Kenney for his interviews.

⁶Kenney (1987) argues that this is all because there is very little crime on the New York subways to begin with. "This crime problem, which gives the organization its legitimacy, does not appear to exist." (p. 95) In fact, much of the fear of crime is created and stirred by the GA leadership as when Curtis Sliwa publicly named the Number 4 line the "Mugger's Express" and the Number 2 line "The Beast." (p. 98)

However, a collection of people all over the nation whom the GAs mistakenly arrested on occasion do not possess the same potential for collective action against the organization as do, for instance, the residents of an urban neighborhood whose children fall victims to narcotics overdose or unlimited gang warfare. Since the GAs do not use firearms (although some use baseball bats as weapons), there is little possibility of injury to those other than the intended targets of their violence (i.e. suspected criminals).

In sum, the GAs seem to have most of the characteristics of urban street gangs. Yet the police reaction to the organization is nowhere near what it is against more traditional urban street gangs. A close look at the firsthand accounts of the GAs' activities indicates that, once again, what creates the variations in the police reaction toward nominally the same kind of social groups (in this case, urban street gangs) is the amount of negative externalities the respective groups impose on others, and the kind of people such externalities adversely affect.

CONCLUSION

The theory of the state, which partially underlies the state submodel of the solidaristic theory of global order, predicts that the state will expend its limited resources to intervene in the activities of two types of groups: those that directly threaten and challenge the state as the ultimate exerciser of political power; and those that impose negative externalities on other groups with sufficient power over the state. The empirical evidence presented in this chapter, on the state's reaction to a wide range of groups in the United States, from deviant religious cults to juvenile delinquents to adult and juvenile prostitutes to urban street gangs, is highly consistent with the theoretical predictions. It also supports the counterintuitive implication of the theory that the state pays no attention to the normative legitimacy or deviancy of groups in its reaction to them.

In Chapters 3 and 4, I have presented preliminary empirical evidence that supports both submodels of the solidaristic theory of global order (except for the newly-developed theory of group resource allocation). Before turning to discussion of formal tests of the theory in a series of laboratory experiments, I would like briefly to take up one important theoretical issue in the next chapter. It concerns the necessity of the state in the production of global and local orders.

CHAPTER 5
THE NECESSITY OF THE STATE
IN THE PRODUCTION OF GLOBAL ORDER
IN NATIONAL SOCIETIES:
SOMALIA AS AN ILLUSTRATIVE CASE¹

Sixty years of tyranny are better than one hour of civil strife.

An Islamic Saying (quoted in Edgerton 1985, p. 246)

Axelrod's (1984) discovery that the endogenous production of cooperation within dyads is possible has spawned a large number of supportive empirical studies. Both in laboratory experiments and field observations, social scientists have shown that the successful production of joint goods through cooperation is possible without the intervention of the state. On the basis of their empirical findings, these writers conclude that because cooperation in dyads and small groups is possible without the state, *social order* is also possible without it. There is an emerging consensus among those concerned with the problem of order that the state is at least unnecessary and at most undesirable for the production of social order.

This assertion is inconsistent with the basic argument of the solidaristic theory of global order. True, the meso-level production of local orders, free from the state intervention, is an important determinant of the solidaristic theory. However, the other important part of global order is the state's capacity to act as a referee among groups in conflict and competition. One of the two scope conditions of the theory (Scope Condition 2) requires the existence of the central state, not so much because I believe that the causal

¹An earlier version of this chapter was presented at the annual meetings of the American Sociological Association as Kanazawa and Friedman (1993).

mechanisms from the solidaristic theory explains the production of global order only in societies with states whereas another mechanism explains the production of global order in stateless societies, but mostly because I believe that the production of global order is *impossible* without the state in any large and complex national societies.²

My argument in this chapter will involve somewhat of a paradox: *Coercive intervention of a central state is necessary to maintain global order precisely because local orders (cooperation within groups) are possible without it.* I will use the recent events in Somalia to illustrate my argument.

CURRENT CONSENSUS

Endogenous models of cooperation usually explain spontaneous cooperation among members of small groups on the basis of mechanisms derived from the theory of repeated games (Taylor 1976; Axelrod 1984). Through the use of contingent strategies such as Tit-For-Tat that is only possible in supergames with "the shadow of the future" (Axelrod 1984), a player in a two-person prisoner's dilemma game (PDG) can control the other's choices to produce and sustain Pareto-optimal mutual cooperation. The players in two-person PD supergames are interdependent, and thus exercise "behavior control" (Thibaut and Kelley 1959, pp. 103-104) on each other.

Hechter's (1987) theory of group solidarity extends this mechanism for the endogenous production of cooperation from dyads to groups. As long as individuals are dependent on the group for its collective goods which they themselves cannot produce alone, the group as a whole is able to control the individual members' behavior through the threat of expulsion from the group and thus the consumption of the joint goods. Thus, *ceteris paribus*, the more dependent the members are on the joint goods (due to either

²I am aware that the use of scope conditions in this spirit deviates from their original intended purpose in Walker and Cohen (1985).

higher values they place on the goods or fewer alternative sources), the more compliant they will be to the group obligations. *Ceteris paribus*, members will also be more compliant if the group has more efficient system of monitoring and sanctioning to detect and punish defectors. And the more compliant the members are to the collective normative obligations, the higher the rates of cooperation and group solidarity.

Several recent empirical studies have supported Axelrod's and Hechter's theories for the endogenous production of cooperation within groups. Ostrom (1990) has analyzed published studies of both successful and failed common-pool resources (CPR) projects (such as irrigation systems, fisheries, and forests) in various parts of the world. She asks the question of "how a group of principals who are in an interdependent situation can organize and govern themselves to obtain continuing joint benefits when all face temptations to free-ride, shirk, or otherwise act opportunistically" (p. 29), and answers it by inducing eight "design principles" from her survey. These are institutional arrangements which almost universally characterize the successful CPR's and very few failed ones. Ostrom argues that as long as the individuals design their CPR projects with most or all of these institutional features, they will be able to overcome the free-rider problem and produce their joint goods for their own consumption for a long time. Consistent with Hechter's model, some of these design principles promote effective monitoring and sanctioning.

Ostrom and her collaborators (Ostrom, Walker, and Gardner 1992) reach a similar conclusion in a series of laboratory experiments. Actors in their CPR games often honor their ex ante commitments to mutually agreed-upon strategies even when there are no sanctions against defections. Given the opportunity, they even agree to institute and pay for their own sanctioning system endogenously to punish defectors. Ostrom, Walker, and Gardner (1992) thus demonstrate that actors are able to overcome both the first-order and

the second-order free-rider problems without the third-party enforcement.

Ellickson (1986; 1991) studies how neighboring cattle ranchers in Shasta County, California, resolve their dispute involving trespass by livestock among themselves by resorting to informal norms rather than formal laws or the state enforcement mechanisms. "In open-range areas, the norm that a livestock owner should supervise his animals dominates the legal rule that a cattleman is not legally liable for unintentional trespasses on unfenced land. Trespass victims mainly employ negative gossip and physical reprisals against trespassing stock to discipline cattlemen who violate this norm" (1986, p. 685). The ranchers are able to produce Pareto-optimal levels of cooperation endogenously: "Members of a close-knit group develop and maintain norms whose content serves to maximize the aggregate welfare that members obtain in their workaday affairs with one another" (1991, p. 167), and they are able to do so without the third-party intervention and enforcement.

In a laboratory experiment, Kollock (1992) shows that actors are often able to develop committed exchange relations based on trust and still benefit from mutual cooperation even when external enforcement of the terms of contract is absent. Faced with a high degree of uncertainty in a simulated market, actors invest heavily in their reputations of trustworthiness by advertising the quality of their goods truthfully, even when they are not required to do so and there are no external sanctions against deceitful advertisement to increase profit. As a result, mutually beneficial exchange relations based on trust emerge spontaneously.

These are all ingenious studies, employing various research methods, on the mechanisms for the endogenous production of cooperation within groups in a variety of settings, and I have nothing against their immediate conclusion that such endogenous production of cooperation is possible without third-party enforcement. However, I do take

issues with the *implications for global order and the necessity of the state* that these researchers draw from their findings. Ostrom (1990, p. 216) notes that the state is an "amorphous, fictitious, and omniscient [sic] entity" which is not necessary for a robust CPR project. Ostrom, Walker, and Gardner (1992) conclude in their experimental study that both "self-governance" and "covenants without a sword" are possible: "Our findings challenge the Hobbesian conclusion that the constitution of order is only possible by creating sovereigns who then must govern by being above subjects, by monitoring them, and by imposing sanctions on all who would otherwise not comply" (p. 414). The title of Ellickson's (1991) book *Order Without Law* refers to "coordination to mutual advantage without supervision by the state" (p. 4), and all the evidence in his book suggests that it is possible. While very careful to point out that his position "should in no way be construed as an argument for, e.g. a radical anarcho-capitalism," (p. 21), Kollock (1992, p. 16) nevertheless concludes that "at a minimum the results [of his experiment] suggest that creating formal monitoring systems, even if they operate perfectly and at no cost, will not always be a good idea."³

In an attempt to show why I disagree with these implications that the state is not necessary for the production of global order, or even sustained local orders, I will illustrate some direct implications of the solidaristic theory with accounts on the recent events in Somalia. The theoretical distinction (made earlier in Chapter 2) between global order (Definition 1) and local orders (Definition 3) will be essential in my attempt to argue why findings pertinent to the latter have little direct implications for the former.

Ordinarily, it is impossible to study nonexperimentally the implications of local orders for global orders in the absence of the state because it has been thousands of years

³Michael Taylor (1982) also forcefully argues that social order is possible without the state. However, Taylor himself limits the applicability of his theory to small and homogeneous "communities." Since my focus in this chapter is global order in large and complex national societies, I will not discuss his theoretical work here (but see below).

since stateless societies existed on a large scale. However, I am fortunate in this regard because the recent events in Somalia after the collapse of the state simulate quite well the state of nature and what happens to local and global orders under such a condition.

Somalia serves as an excellent illustrative case for another reason. Critics have objected to an earlier attempt to use the solidaristic theory of global order to explain relatively high levels of order in Japan (Hechter and Kanazawa 1993; see Chapter 3) by saying that Japan's cultural homogeneity must account for at least some of its orderliness, even though Hechter and Kanazawa specifically argued against this normative perspective. As it turns out, Somalia is ethnically, religiously, and linguistically very homogeneous, with few of the ethnic and tribal divisions that exist in other African nations (DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder 1988, pp. xiii-xv; Andrews 1991, p. 47; Sheehan 1993, p. 40). The current civil war is between subclans within a single clan, the Hawiye (Biles 1991, p. 36; Gregory 1992, p. 34; Geekie 1993, p. 11; Sheehan 1993, p. 41). The normative perspective on social order loses much of its explanatory force if a complete breakdown of social order can occur in Somalia despite its cultural homogeneity.

BRIEF HISTORICAL BACKGROUND ON SOMALIA

In July 1960, Somalia gained independence, reunifying the British protectorate in the north and the Italian protectorate in the south.⁴ Parliamentary democracy ruled the country from the first elections in 1961 until October 1969, when Major General Mohammed Siad Barre seized power through a "bloodless" coup with popular support. With the Soviet military backing, Siad Barre pursued "scientific socialism" and authoritarian dictatorship. After the war broke out between Somalia and the Marxist regime in Ethiopia in 1977, however, the Soviet Union abandoned Siad Barre, who was then

⁴I draw on DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder (1988), Gregory (1992), and Sheehan (1993), *inter alia*, for the following brief history of Somalia.

promptly supported by the American military aid.

Throughout the 1980's, as disgust with Siad Barre's corrupt and brutal rule increased among the populace, rival clans united in their opposition against the Barre regime. In May 1988, civil war broke out when the anti-Barre Somali National Movement (SNM) launched attacks in the northern region. The fighting quickly spread to the central and southern regions of the country, where the Hawiye and allied clans formed a second rebel group, the United Somali Congress (USC). In January 1991, after three years of intense war, the socialist regime of Mohammed Siad Barre collapsed under the concerted attacks from the USC. Siad Barre fled the country to Kenya and then to Nigeria, and thus reverted Somalia to the true state of nature.

Forces that rallied behind USC in their opposition to Said Barre quickly turned on each other. The interim President Ali Mahdi Mohamed and the USC chair General Mohamed Farah Aidid engaged in a military contest for the political control of the government, while SNM seceded to establish an independent (albeit hitherto internationally unrecognized) nation of Somaliland in the north. Fighting continued on the streets of Mogadishu between Ali Mahdi and Aidid forces, until the U.S. military intervention in December 1992. Since then, most military confrontations seem to be between the Aidid supporters and the combined U.S.-U.N. forces.

THE SOLIDARISTIC THEORY OF GLOBAL ORDER AND THE SOMALI DISORDER

The recent events in Somalia illustrate three logical implications of the solidaristic theory of global order. First, because the theory holds that the state functions as a societal referee to control groups' negative externalities upon each other, to prevent "the war of all *groups* against all *groups*," it would predict, contrary to the conclusions reached by Ostrom (1990; Ostrom, Walker, and Gardner 1992), Ellickson (1986; 1991), and Kollock (1992),

that sustained global order is impossible in the absence of the state.⁵

Second, a direct implication of the theory of group resource allocation (which underlies a portion of the state submodel of the solidaristic theory) is that, in the absence of the state, local orders will also decline as groups, now unable to count on the state for protection against negative externalities from other groups, are forced to fend for themselves and to expend their own resources to do so. This diversion of collective resources from internal to external monitoring and sanctioning hampers the production of local orders. This implication is in even starker contradiction to the conclusion reached by Ostrom (1990; Ostrom, Walker, and Gardner 1992), Ellickson (1986; 1991), and Kollock (1992) about the possibility of cooperation without the external intervention of the state. In contrast to the current consensus, I maintain that not only global orders but, over time, sustained local orders are also impossible without the state.

Finally, another implication of the theory of group resource allocation is that, given the initial unequal distribution of resources among groups, those with more collective resources are better able to produce and maintain local orders in the absence of the state than those with less collective resources. Thus, while the main thesis of this chapter is the necessity of the state in the production of global order, the last two empirical sections also provide considerable evidence for the theory of group resource allocation.

The Effect of the State on Global Order

The theory conceives of the state as an agent, which the groups as principals instituted to curb their negative externalities upon each other so they may devote more of

⁵Technically, it is impossible to conceive of global order without the state because it is defined in terms of norms that the state attempts to enforce (Definition 1). In the Somali case, however, I would predict that the global order will decrease after the collapse of the state in that individual behavior in violations of norms that the state *would* enforce (had it existed) or *did* enforce (when it existed) will be rampant.

their collective resources on the production of local orders rather than on the effort to protect themselves against other groups. The state in this sense is an "executive committee" of *all groups* in society.⁶ In the absence of the state to act as a third-party enforcer or referee among the groups, the groups are free to impose negative externalities upon and victimize each other, and they are left to defend themselves against the predatory acts of other groups.

This is why I believe that the empirical findings of the endogenous production of local orders may have little direct implications for the production of global order. In large and complex national societies where groups have heterogeneous and potentially conflicting goals and interests, the successful production of joint goods by one group is likely to have some negative externalities on other groups. In the absence of the state, groups may still be able to produce local orders (as the host of empirical studies discussed above suggest), but higher local orders will impose negative externalities on other groups and reduce their local orders. My theoretical contention is that the state is necessary to maintain global order precisely because local orders (cooperation within groups) are possible without it.

This process is best seen in the events immediately following the collapse of the state in Somalia. Counterintuitive though it may seem at first, looting is an act of cooperation. "Looting is not a random occurrence, though its perpetrators plan to be as unpredictable as possible, to make defense as difficult as possible. *Looting is organized.*" (De Waal 1993, p. 28; emphasis added) To the extent that successful looting requires a concerted effort of multiple individuals, it is an act of n-person cooperation, but it is cooperation with severe negative externalities on others. The solidaristic theory predicts that the state under normal circumstances deters and punishes cooperation by such

⁶I thank Michael W. Macy for bringing this metaphor to my attention.

counterproductive groups as looters. This is why "the most comprehensive and profitable looting was carried out *immediately after the flight of Siad Barre*, with subsequent bouts whenever there has been a new round of fighting, as each militia loots property belonging to the others." (De Waal 1993, p. 28; emphasis added) One reporter notes that most homes and shops were already looted, forcing looters to loot other looters, in the first six days after the flight of Siad Barre (Press 1991, p. 16). Global order in Somalia has decreased precisely because local orders of counterproductive groups (such as looters and armed militias) have increased in the absence of the state.

The Effect of the State on Local Orders

While groups are able to produce local orders without the state, another implication of the theory is that the level of local orders will eventually decrease after the collapse of the state. As groups must spend increasing amounts of their collective resources on monitoring and sanctioning outsiders, in order to fight them, they can spend proportionately less of their collective resources on internal control, which is essential for the production of local orders (Hechter 1987).

Because the federal government often collects the most reliable statistical information, it has been very difficult to obtain any sort of quantitative data on Somalia after January 1991 (Little 1992, p. 119n). I thus have to rely mostly on international bodies (such as the European Community or the United Nations) for recent statistics on Somalia.

In order for a nation to export goods, various meso-level groups must engage in successful cooperation to produce necessary commodities to export. If meso-level cooperation becomes difficult as a result of the collapse of the state, one would expect the amount of export also to decrease. Table 5.1 shows the monthly figures on Somali export

to the entire European Community across all commodities from January 1988 to June 1992, in thousand ECU's (European Currency Units) which take inflation into account. From 1988 through 1990, the volume of the trade is stable or slightly on the increase, as the cumulative percentages are generally above 100, indicating growth. Then it plummets in January 1991 and stays at this low level through June 1992, the latest available month.

The monthly statistics indicating a sudden drop in export to the EC in January 1991 are important because they rule out two alternative explanations: Drought and the civil war. Drought in Somalia and the rest of East Africa had been persistent for decades (DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder 1988, p. xxvii), and the civil war between rival subclans had been going on for almost three years, prior to January 1991 (Gregory 1992, p. 34; Sheehan 1993, pp. 40-41). Neither of these seems to have affected the trade with the EC very much; Somali export to the EC grew, though very gradually, in the face of these hardships. The only thing that happened in January 1991 to produce such a dramatic change was the collapse of the state.

Tables 5.2 and 5.3 provide further supportive evidence from agriculture, the largest sector in Somali economy, accounting for 66% of GDP and 71% of the labor force in 1990 (Europa 1992, p. 2443). Table 5.2 shows that the food and, especially, crops and cereals production went down rather dramatically in 1991. Table 5.3 indicates that the Somali cereals production as a percentage of the previous five years plummeted in 1991 and stayed at that level in 1992. Once again, although Somalia has experienced widespread drought in recent years, one cannot attribute these sudden drops in agricultural production in 1991 to drought. "Drought has played only a minor role" in the "exceptionally severe famine" (De Waal and Omaar 1992, p. 62).

In general, extensive meso-level economic cooperation is necessary for any macro-level economic growth. Table 5.4 presents more comprehensive figures on the state of

Somali economy in the form of annual growth in GDP. It shows that the Somali economy was gradually expanding from 1985 to 1990, but the growth turned negative in 1991.

Another type of meso-level cooperation still observed in Somalia after the collapse of the state is the activities of the international relief agencies (such as the International Committee of the Red Cross and the United Nations). Members of these groups aim to provide the joint good of aid and relief to impoverished Somalis (albeit motivated by mostly altruistic values). Available qualitative evidence shows that their local orders (the production of joint goods) in the absence of the state have been reduced by negative externalities imposed by other groups.

According to David Bassiouni, UN coordinator for humanitarian aid in Mogadishu, during the first six months of this year only 30,000 tons of foodstuffs had been brought to Mogadishu through his organization, a mere 40% of what had been promised by donors for the first half of the year. United Nations spokesmen blame the inadequate reaction on continued fighting and a lack of safety guarantees for aid workers.

... Except in the south, near the Kenyan frontier, no truck convoys have managed to penetrate the Somalian interior. The "fees" imposed in Mogadishu by the various armed clan factions for unloading cargo reportedly add up to more per ton of aid supplies than commercial port costs in New York City. According to UN official Alistair Dawson, never in the history of humanitarian action has it been so expensive as it is in Somalia to provide a child with a 250-gram ration of rice (Haefflinger 1992, p. 13).

Although heterogeneity of groups, with their conflicting goals, is sufficient for groups to impose negative externalities upon each other through their mere attempt to increase their own local orders, heterogeneity is not a necessary condition. Even if all groups in a society have the same goal, the successful production of joint goods in one group necessarily impacts other groups negatively *if* there is a scarcity of resources in the society and the available resources cannot satisfy the goals of all groups. Two capitalist firms in the same product market trying to increase their market shares, or two mainstream religious organizations intent on increasing their memberships, may have relatively similar group goals, but the success of one necessarily produces the failure (or at least reduces the

success) of the other because the society's resources (the number of potential consumers or religious followers) are finite.

Since group heterogeneity and/or scarcity of resources characterize all extant national societies, increased local orders for all groups in these societies do not automatically translate into an increase in global order. In order for the mechanism for the endogenous production of cooperation or local order to have a direct implication for the production of global order (as Ostrom, Ellickson, and Kollock seem to argue), the society must *both* be completely homogeneous with respect to goals and interests of its groups *and* have unlimited resources. For instance, in a chapter entitled "Social order without the state," Taylor (1982) argues that the state is not necessary to produce order in small and homogeneous societies, where the "community" produces order instead. However, in order for his community to work as the guarantor of social order, the society must not only be small and homogeneous but also be affluent without limit.

Negative Externalities and Resource Inequality

One final implication of the solidaristic theory of global order (and the theory of group resource allocation) is that, in the absence of the state as an arbitrator among groups, already resourceful groups are able to victimize and impose negative externalities on less resourceful groups; the latter must spend a larger proportion of their collective resources on protection than the former. Then it follows that local orders among resourceful groups should suffer less in the absence of the state than local orders among less resourceful groups.

There is some indication that this might be true in post-1991 Somalia. Bananas are the principal cash crop in Somalia, accounting for more than 40% of export earnings in 1988 (Europa 1992, p. 2443; DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder

1988, p. xxiv). Banana plantations in Somalia began as an Italian colonial project under Mussolini before World War II (Sheehan 1993, p. 40), and to this day they still receive large foreign investment (Samatar 1993). If banana growers as a group are more resourceful than other farmers both because of the larger profit they make from export and the support of the foreign investors, I would predict that the banana growers in Somalia are better able to maintain their local order than other groups after the collapse of the state. Statistics from the Food and Agriculture Organization of the United Nations show that, while production across all crops decreased by 35% on the average from 1990 to 1991 (before and after the collapse of the state), the production of bananas (measured in metric tonnage) went *unchanged* (FAO 1992a, p. 168). The production of sugarcane, another major cash crop in Somalia, also did not decrease in 1991 (FAO 1992a, p. 156).

Journalistic accounts substantiate the sketchy statistical evidence. Banana and sugarcane plantation owners have long dispossessed weaker clans, such as the descendants of former slaves, the Rahanweyn and Bantu groups, in their attempt to expand their plantations.

As disadvantaged groups, the [Rahanweyn and Bantu] farmers had great difficulty in obtaining firearms and making alliances on equal terms with the forces fighting Siad Barre. Thus when the collapse of government came in 1991, they were ripe for plunder by their better armed neighbors. The Juba and Shebelle valleys and the dryland farming region of Bay were pillaged on at least three separate occasions by different armies from other contending clans, most consistently and devastatingly by the forces of Siad Barre. The inhabitants were unable to resist. They lost their crops, their livestock, and many of their possessions....

The wealthy and powerful were able to protect their investments. Merchants maintained a tight grip on the food market, ensuring that their profits were maintained by keeping prices high. They continued to trade in all parts of the country, paying protection money to cross the battle lines if necessary. The trade in the stimulant *qat* alone is worth several million dollars per week. Plantation owners ringed their land with armed guards. Villagers in Qorioley starved next to huge banana plantations; if they gathered grass from between the trees, they were likely to have their hands tied together and a bullet put through their palms.

It will come as no surprise to learn that the Rahanweyn and the Bantu are the two groups most stricken by the famine. (De Waal and Omaar

1992, p. 63)

About 60% of the Somali population are nomadic herders (DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder 1988, p. xxiv). The sale of livestock is therefore an important facet of Somali economy as well, accounting for approximately 79% of the country's export earnings in 1983, although its importance for export has declined somewhat in recent years (DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder 1988, p. xxiv). Still, breeding livestock accounted for more than 35% of GDP in 1988 (Europa 1992, p. 2443). Consistent with the theoretical prediction, FAO statistics show that the livestock production decreased only very slightly (1.7% in total production) from 1990 to 1991 (FAO 1992a, p.45).⁷

CONCLUSION

In this chapter, I challenged the current consensus in both the theoretical and

⁷While somewhat tangential to my current discussion of Somalia after the collapse of the state in January 1991, the history of Somalia provides yet another illustration of the key causal mechanism of the theory of group resource allocation. The logic behind my claim that the global order is impossible without the state is the contention that local orders will decrease in the state of nature because groups must expend their collective resources to monitor and sanction outsiders and could not use the same resources to monitor and sanction their own members to increase local orders. Given limited resources, effectively monitoring and sanctioning outsiders (necessary for intergroup conflict) *and* insiders (necessary for the production of local orders) is impossible. However, as I stated earlier (see note to Scope Condition 1 in Chapter 2), the solidaristic theory is a general theory which cuts across different levels of aggregation. Thus the collection of "insiders" might be a group, or it might be a whole nation state.

Somalia and the neighboring Ethiopia have had a long history of border conflict over the small region of Ogaden (DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder 1988, pp. xvi-xviii). With the superpower support on each side, Somalia's Siad Barre and the Ethiopian dictator Mengistu Haile Mariam had been at war over Ogaden since 1977 (Sheehan 1993, p. 40). However, the civil war began in Somalia in 1988 around the same time as a series of civil wars took place in Ethiopia. "The two despots predictably struck a deal, abandoning support for insurgent groups waging war from their respective territories." (Clark 1993, p. 111) "Neither dictator could any longer spare troops to face down each other. They both wished to transfer their soldiery to counter escalating civil conflicts." (Greenfield 1991, pp. 17-18) It is very difficult for a country to be at war with another when the internal turmoil consumes so much of its collective resources, and vice versa. Radical students in the 1960's essentially understood this, when they attempted to subvert the U.S. government when the latter's resources are depleted due to a long war in Vietnam, and captured this with the slogan, "One, two, many Vietnams." From the perspective of the solidaristic theory, Somalia and Ethiopia had to abandon their external cause of territorial expansion for the same reason as the agricultural production in general fell in Somalia after the collapse of the state: limited collective resources.

empirical literatures on the endogenous emergence of cooperation that cooperation and *hence perforce* social order is possible without the coercive central state. The solidaristic theory of global order draws a sharp distinction between local and global orders, and argues that the state intervention is necessary for the production of global order precisely because local orders are possible without it. I question the theoretical implications drawn by Ostrom, Ellickson, and Kollock, precisely because I believe in the validity of their empirical results.

In the absence of the state, in the proverbial Hobbesian state of nature, individuals can still form and join groups to produce their desired joint goods through mutually-beneficial cooperation; they can produce local orders. However, in societies characterized by group conflict or resource scarcity, which essentially are all societies in human history, increased local orders will eventually decrease global orders through the groups' negative externalities upon each other. Hence the paradox: The state intervention is necessary to produce global order precisely because local orders are possible without it. Ultimately, however, local orders themselves will decrease in the absence of the state because the groups must expend a significant portion of their collective resources for external surveillance and protection which they could otherwise use to augment the efficiency of internal monitoring and sanctioning essential for the production of local orders.

This, I believe, is the reason for the local and global disorder currently witnessed in Somalia. The collapse of the state (with the flight of Siad Barre in January 1991) allowed counterproductive groups in Somalia (no longer subject to the state sanctions) to increase their local orders freely. Their heightened negative externalities took away from the collective resources of other groups, which were now less able to produce local orders. As the average level of local orders plummeted in the absence of the state, individual Somalis (now subject to less group control) became less compliant with norms, and global *disorder*

resulted. The solidaristic theory provides an alternative explanation for Somali disorder to more widely accepted explanations: drought and intergroup violence. Drought has been constant for the last few decades, both in Somalia and elsewhere in the Horn of Africa (DeLancey, Elliot, Green, Menkhaus, Moqtar, and Schraeder 1988, p. xxvii), while interminable intergroup violence does not seem to lead to total chaos in other African nations such as South Africa.

While very limited both in scope and in depth, the available evidence on cooperation and local orders in Somalia before and after the collapse of the state seems to support the solidaristic theory of global order (especially its subcomponent, the theory of group resource allocation) and to cast at least some doubt on the current consensus that global order is possible without the state intervention. The evidence is circumstantial, of course, and ultimately all theories must be tested experimentally. This is what I now turn to and discuss in the next chapter.

TABLE 5.1

Somali Export to European Community nations
Total Trade
January 1988-June 1992

1,000 ECU's
(% of previous year)

1988			1989		
January	3644	(119)	January	4084	(112)
February	4009	(132)	February	3235	(94)
March	2722	(107)	March	6471	(131)
April	5414	(126)	April	3308	(107)
May	2791	(120)	May	3968	(112)
June	3534	(126)	June	2581	(106)
July	3507	(127)	July	4209	(107)
August	4354	(139)	August	3389	(103)
September	1795	(130)	September	3586	(108)
October	3620	(133)	October	4391	(109)
November	2890	(118)	November	3946	(107)
December	2235	(112)	December	3379	(108)

1990			1991		
January	5858	(143)	January	3800	(65)
February	4453	(141)	February	1617	(53)
March	5213	(113)	March	2231	(50)
April	3937	(114)	April	631	(43)
May	4475	(114)	May	1926	(43)
June	1569	(108)	June	1101	(45)
July	4192	(107)	July	383	(40)
August	1768	(101)	August	976	(40)
September	2726	(98)	September	1430	(41)
October	3751	(97)	October	303	(38)
November	4371	(98)	November	1241	(37)
December	4402	(100)	December	1050	(36)

1992		
January	1792	(47)
February	120	(35)
March	1565	(45)
April	569	(49)
May	82	(40)
June	224	(38)

Source: European Community 1988-1992

TABLE 5.2
Agricultural Production
Somalia 1985-1991

Unit: 1979-1981=100
(per capita)

	1985	1986	1987	1988	1989	1990	1991
Food	114 (96)	114 (93)	119 (93)	124 (94)	127 (93)	124 (88)	113 (78)
Crops	146 (123)	144 (117)	144 (113)	154 (117)	167 (122)	149 (106)	96 (67)
Cereals	168 (142)	191 (156)	177 (139)	196 (149)	218 (161)	192 (137)	83 (58)

Source: Food and Agriculture Organization of the United Nations 1992a

TABLE 5.3
Cereal Production
as Percentage of Previous Five Years
Somalia 1989-1992

1989	119%	646,000 tons
1990	100%	574,000 tons
1991	43%	255,000 tons
1992	39%	205,000 tons

Source: Food and Agriculture Organization of the United Nations 1992b

TABLE 5.4

**GDP Annual Growth Rates
Somalia 1985-1991**

1985	3.5%
1986	3.2%
1987	5.3%
1988	-1.3%
1989	2.9%
1990	3.6%
1991	-3.0%

Source: United Nations Industrial Development Organization 1991; 1992

CHAPTER 6

EXPERIMENTAL TESTS OF THE THEORY

I will conduct a series of four separate laboratory experiments to test key hypotheses derived from the solidaristic theory of global order. Due to the complexity of the theory (Figure 2.1), however, I will have to test the group solidarity and the state submodels separately. The test of the group solidarity submodel requires one laboratory experiment (Experiment 1) and the test of the state submodel requires three additional ones (Experiments 2 and 3 for the theory of the state and Experiment 4 for the theory of group resource allocation). I have so far designed the first three of the four experiments necessary for the complete test of the solidaristic theory, and conducted one of these experiments (Experiment 3). I will discuss the design of the three experiments, and present the results of the one already conducted in this chapter.

I choose to test my general theory of global order in laboratory experiments because the experimental method is unexcelled in its ability to provide unambiguous evidence for confirmation or disconfirmation of deductive hypotheses (Aronson, Brewer, and Carlsmith 1985, p. 443). Since the purpose here is to test a general and abstract (not descriptive) theory of global order, the artificiality of the laboratory experiment is a major advantage (Zelditch 1969; Webster and Kervin 1971; Martin and Sell 1979).

THE GROUP SOLIDARITY SUBMODEL

The first experiment will test the hypothesis that dependence and visibility of group members have an interactive effect on the level of group solidarity. Group solidarity (Definition 3) is a collective good, jointly-produced and consumed by group members. Within the group, however, it is a *public* good, nonexcludable to any legitimate member at

the time of its production (although members may be excluded from *future* consumption). There have been a series of experimental studies on the production of public goods. I will first review them with respect to the two variables of interest here: dependence and visibility.

EXPERIMENTAL LITERATURE ON PUBLIC CHOICE

Dependence

Dependence in Experiment 1 will be operationalized as the value of jointly-produced collective goods to the individuals relative to what they can produce alone. The higher the value of collective goods relative to private goods, the more dependent individuals are on their group.

A large number of experimental studies provide unambiguous support for the structural effect of the payoffs on the cooperative choice (Messick and Brewer 1983, pp. 30-32). Individuals contribute more to the provision of public goods when the returns from such contribution are higher even when defection still dominates cooperation (Isaac and Walker 1987, pp. 10-12). Thus, Isaac, Walker, and Thomas (1984) observe that there is more free riding, and, consequently, the total contribution to the public goods provision as a percentage of optimal is smaller, when the marginal per capita returns from such contribution is .30 than when it is .75. This finding is consistent with many other studies (Kelley and Grzelak 1972; Bonacich, Shure, Kahan, and Meeker 1976; Komorita, Sweeney, and Kravitz 1980; Isaac, McCue, and Plott 1985; Dorsey 1992). Although not unanimous (see, for example, Frohlich and Oppenheimer 1984; Goetze and Galderisi 1989), the preponderance of empirical evidence points to the prediction that dependence of group members on joint goods increases their contribution to the production of such goods, and, therefore, group solidarity.

Visibility

Visibility in Experiment 1 will be operationalized as the amount of information that individuals have about others' choice behavior. While some have investigated the effect of different *types* of information (whether others are cooperating or defecting) on cooperation (Messick, Wilke, Brewer, Kramer, Zemke, and Lui 1983; Samuelson, Messick, Rutte, and Wilke 1984; Fleishman 1988), only one experiment (Sell and Wilson 1991) has investigated the effect of different *amounts* of information (and thus visibility) on cooperation. Sell and Wilson show that individuals contribute more to the provision of public goods when individual information on others' choice behavior is available than when either aggregate or no information is available. Consistent with this result, Ostrom, Walker, and Gardner (1992) note that when a sanctioning mechanism exists, the availability of individual information, coupled with the opportunity to communicate, significantly increases cooperation in resource dilemma games.

Past experimental research thus suggests that both dependence and visibility *independently* increase individuals' contribution toward the provision of public goods. However, no one has investigated the interactive effect of these two factors. That is what Experiment 1 will do.

EXPERIMENT 1: GROUP SOLIDARITY SUBMODEL

Basic Design

The experiment will be a 2 (high dependence vs. low dependence) x 2 (high visibility vs. low visibility) between-subjects factorial design.

The Game

The basic game is a four-person social dilemma game (adapted from Isaac, Walker and Thomas 1984 and Sell and Wilson 1991). Each subject will receive 30 points on each trial. The subjects will divide these points between contribution to the group project and contribution to the individual project. Contributions to these two projects will yield different returns, depending upon the subjects' dependence condition (see dependence manipulation below). All four players equally share the returns to the contributions to the group project while the individual player alone consumes the returns to his or her contribution to the individual project. There will be 30 trials, but the subjects will not know the exact number of trials to avoid the possible end-game effect.

Group Sanction

Consistent with Assumption 5, subjects in all conditions maintain a collective capacity to impose negative sanctions on any member of their group. After the subjects make their decision about contributions to individual and group projects, the computer program will ask them if they would like to exclude any *one* member of their group from the consumption of returns from the group project. (All subjects will be identified by either numbers or letters.) If three members *unanimously* agree to exclude the fourth member, then this member will be excluded from joint goods consumption *for one trial*, and the returns from the group project (contributed by all four) will be shared by the remaining *three* players. The sanctioned member essentially loses his or her contribution to the group project for one trial. This sanctioning mechanism is constant in all conditions.

Dependent Measure

The dependent variable is the total number of points contributed to the group project: $Y = \sum_{j=1}^4 \sum_{i=1}^{30} x_{ij}$ where x_{ij} is the number of points ($0 \leq x \leq 30$) player j contributes to

the group project on the i th trial. The statistical unit of analysis is therefore the four-person group rather than the individual. This is a measure of group solidarity which is highly correspondent to the theoretical concept (Hechter 1987; 1989; see Definition 3 above).

Manipulations

Dependence. In the *low* dependence condition, the subjects will receive the following instruction.

Each point you contribute to your individual project will yield one cent, and you alone get to keep all the returns from your contribution to the individual project. Each point you contribute to the group project will also yield one cent, but all the returns from all the contributions to the group project from all players will be divided equally among the four of you regardless of whether or how much you contributed.

The subjects in the *high* dependence condition will receive the same instruction *except* that each point contributed to the group project will yield three cents instead of one. In other words, subjects' effective marginal return for contribution to the group project is .25 cents per point in the low dependence condition and .75 cents in the high dependence condition. The effective marginal return for contribution to the individual project is constant at 1.00 cent in both conditions.

Visibility. In the *high* visibility condition, each subject will be able to monitor the choices that other three subjects in the group made on the previous transaction on the computer screen. In addition, subjects in this condition will always have access to information on other players' past choices and their own earnings history (à la Sell and Wilson 1991).

In the *low* visibility condition, subjects will not have access to any information on the other players' previous and past choices. However, they will be able to monitor their own earnings history.

Prediction

Since group solidarity is a *multiplicative* function of dependence and visibility (see Figure 2.1), and since visibility of subjects' behavior in the low visibility condition is essentially zero, the group solidarity submodel predicts a significant *interaction* effect (and nonsignificant main effects) of dependence and visibility.

THE STATE SUBMODEL: THE THEORY OF THE STATE

EXPERIMENTS WITH SUPRAINDIVIDUAL ACTORS

While the actor in both exchange theory and game theory can be either an individual or a collectivity (see Assumption 9 above), neither of these theoretical perspectives, nor their experimental tests with human subjects, is *specifically* about supraindividual (macro or meso) actors; the perspectives and their experimental tests are equally applicable to both individuals and collectivities. There have been only two experimental traditions in social sciences in which the actor is specifically supraindividual. The first is the experimental economics research on market entry and entry deterrence (Coursey, Isaac, Luke, and Smith 1984; Coursey, Isaac, and Smith 1984), where the actor is the firm. The second is the game-theoretic literature on war and peace, mostly published in the *Journal of Conflict Resolution* (Shubik 1968; Gruder and Duslak 1973; Kaplowitz 1973), where the two players of a Prisoner's Dilemma game are nation states or "superpowers." However, in the latter tradition, the game players are sometimes conceived of as national leaders (i.e. micro actors) with certain personality characteristics that importantly affect their choice behavior in the dilemma (Beer, Healy, Sinclair, and Bourne 1987).

In Experiments 2 and 3, I will test the theory of the state (Figure 2.2) in which all actors are specifically supraindividual: meso-level constituent groups and the macro-level

state. Human subjects will play the role of the macro-level state while simulated actors will be the meso-level groups. The experiments will utilize a new paradigm called a referee game (see below). The assumption of equivalent behavior between natural persons and corporate actors (Assumption 9) justifies the use of human subjects in these experiments (see Appendix to Chapter 2 above).

Experiment 2 will utilize what I call the "threat game" and test the additive effect in the theory of the state (see Figure 2.2). Experiment 3 will involve the "negative externalities game" and test the multiplicative effect in the theory. Because the theory of the state clearly underlies a portion of the state submodel of the solidaristic theory of global order, empirical evidence for the former will provide partial support for the latter.

EXPERIMENT 2: THE THREAT GAME

Basic Design

The experiment will be a one-factor (high threat vs. low threat) within-subjects design.

The Game

Experiment 2 examines the effect of a group's direct threat to the state on the state's attempt at containment. The game is what I call five-person "referee game" with one human subject ("the state") and four simulated persons ("the groups").¹ The basic imagery of the game is a hockey game, with the state as the referee and the groups as players. The state begins with 50,000 points and each of the four groups with 1,000 points. I will

¹ Note that the state in the theory of the state satisfies Emerson's (1981, p. 46) two requirements for an elementary actor that it: 1) confront the environment as a single unit; and 2) be dealt with by other actors in the environment as a single unit. It also satisfies the game theoretic stipulations that it be: 1) the basic decision unit; and 2) the basic evaluation unit (Shubik 1982, p. 18). Satisfaction of these requirements, combined with Assumption 9, justifies the use of human subjects for the role of the state in this experiment.

instruct the subjects to maximize their earnings (or points), and tell them that the other four players in the experiment are human subjects who also aim to maximize their earnings, by taking points from the state. I will tell the subjects (the state) that other players (the groups) may only take a maximum of 100 points at a time.

On each trial, the state observes on the computer screen that some or all of the groups take some points from the state. Groups can add the points taken from the state to their own accounts. After this, the state has an opportunity to contain the behavior of any number of groups for any number of trials for a fixed cost of 10 points per group per trial. Containment is like putting the groups into a penalty box (much like in a hockey game); the contained group is not able to play for as long as it is in the penalty box. There will be 30 trials. However, the subjects will not know the exact number of trials; I will simply tell them that the game will be over after a certain number of trials or when at least one of the group's account becomes larger than the state's.²

Dependent Measure

The dependent variable is the total number of trials that the state puts each group in the penalty box. The conceptual variable of interest here is the state's attempt to contain a group, which is the amount of resources the state expends to intervene in a group's activities or to keep it from accomplishing its goals. Since the state believes that the groups' ultimate goal is to maximize points by taking them from the state, and the state must expend its own points to keep the groups from achieving this goal, this dependent measure is highly correspondent to the theoretical concept of interest.

²Given the initial set of parameters (the state's original endowment, the number of points groups can take on one trial, and the number of trials), it is virtually impossible for any group to accumulate more points than the state has before the end of the experiment. However, I will tell the subjects that such a possibility exists because it simulates the overthrow of the government (which happens when another actor in society becomes stronger than the state) and I want the subjects to guard against such occurrence (see Assumption 6).

Manipulation

Group i's Threat. Group i's threat to the state is the extent to which group i takes the state's resources and thereby weakens its strength. I will program Groups 1 and 2 to pose high threat to the state's resources, and Groups 3 and 4 to pose low threat.³ The number of points that each group takes from the state on any given trial is a random variable with a given distribution. The distribution for Groups 1 and 2 is normal with $\mu=50$ and $\sigma=5$. The distribution for Groups 3 and 4 is normal with $\mu=5$ and $\sigma=5$.

Prediction

The theory of the state predicts a significant main effect of threat on the state's attempt at containment. Thus it predicts that the state's attempt at containment will mostly be concentrated on Groups 1 and 2 (high threat groups).

EXPERIMENT 3: THE NEGATIVE EXTERNALITIES GAME⁴

Basic Design

The experiment is a 2 (high negative externalities vs. low negative externalities) x 2 (high group j power vs. low group j power) within-subjects design.

Subjects and Procedure

³Since there is only one dichotomous independent variable in this experiment, I can conduct the threat game with only two groups. However, I decided to use four groups to maintain uniformity with the negative externalities game explained below.

⁴Research grants from the Social and Behavioral Sciences Research Institute and the Office of the Vice President for Research (both made to Michael Hechter at the University of Arizona) provided financial support for Experiment 3. I thank Vernon L. Smith and Amnon Rapoport for giving me generous access to their laboratories, Sean Coates and Zhu Li for expert programming, and Debra Friedman for help with subject recruitment.

Subjects are 20 (7 male and 13 female)⁵ undergraduate students in a large introductory sociology course at the University of Arizona. Subjects who volunteered to participate for the opportunity to make money were individually contacted by telephone to schedule their participation. They were scheduled in groups of five, and the experimenter took them individually to separate rooms in the laboratory. Subjects did not see each other either before or after the experiment.

In the room, subjects read all experimental instructions on the computer terminal and engaged in some practice rounds. Before the actual rounds began, they had the opportunity to ask questions to the experimenter. After all the rounds were over, they were individually taken to the control room to be paid and debriefed. The whole experimental session took about one hour.⁶

The Game

Experiment 3 examines the multiplicative effect of group *i*'s negative externalities on group *j* and group *j*'s power over the state on the state's attempt to contain group *i*. The basic game is the same as in Experiment 2: five-person "referee game" with one human subject (the state) and four simulated persons (the groups). The state and groups begin with the same number of points as before, and I instructed the subjects to maximize their earnings and told them that other four players in the game were human subjects with the same goal. The negative externalities game is different from the threat game in two respects.

⁵Preliminary analysis showed that gender has no significant main or interaction effect on the dependent variable. Thus I will discuss men and women together and will not include gender in the subsequent analysis.

⁶In addition to not knowing the exact number of rounds, subjects were consistently told before the experiment that it would take about two hours, in order to extend their time horizons and avoid possible end-game effects.

First, what the state observed on each trial on the computer screen is different. The analogy to a hockey game is more apt in this experiment because now the state observes the groups take points *from each other* instead of from the state. The experimental instructions tell the state that each group could choose to take only from one other group (their "target") throughout the experiment, and that the rules of the experiment allow them to take various numbers of points at a time; some groups can take more from their targets than others. Second, the state has additional information about the groups. It now knows that two of the four groups are more powerful than the other two (see group j power manipulation below).

The state's behavioral choice remains the same. On each trial, the state can choose to put any number of groups into the penalty box for any number of trials for the same fixed cost of 10 points per group per trial. The game is over after 30 trials, once again unbeknownst to the subjects.

Dependent Measure

The dependent measure for Experiment 3 is identical to the one in Experiment 2 because the theoretical variable of interest remains the same.

Manipulations

Group i 's negative externalities. Group i 's negative externalities on group j is the extent to which group i negatively affects group j without the latter's consent (Definition 5). One way that group i can negatively affect group j is to consume the latter's resources without its consent; therefore, one specific manifestation of negative externalities is the number of points that group i takes from group j without its consent.

Groups 1 and 2 in the negative externalities game impose high negative externalities

while Groups 3 and 4 impose low negative externalities. The number of points that a group takes from another on any given trial is a random variable with a given distribution. The distribution for Groups 1 and 2 is normal with $\mu=50$ and $\sigma=5$. The distribution for Groups 3 and 4 is normal with $\mu=5$ and $\sigma=5$.

Group j's power over the state. Group j's power over the state is the extent to which group j can force the state to expend its limited resources for protection against group i's negative externalities. At the outset of the game, the experimental instructions tell the subjects that Groups 1 and 2 can take 5 and 15 points, respectively, from the state whenever their original endowment of 1,000 points are depleted, and that Groups 3 and 4 can similarly take 450 and 500 points, respectively, from the state when they are bankrupt as a result of other groups' negative externalities. The subjects learn that this provision is necessary for the bankrupt groups to continue to play the game. There is no limit to the number of times the state must bail out the groups in this manner; it must do so as often as the groups go bankrupt. This is group i's *own* power over the state.

Each group takes points only from one "target" group. Group 1 only takes from Group 3; Group 2 only from Group 1; Group 3 only from Group 4; and Group 4 only from Group 2. In other words, Groups 2 and 4 only take from groups whose own power over the state is low (Groups 1 and 2, respectively), and Groups 1 and 3 only take from groups whose own power over the state is high (Groups 3 and 4, respectively). This is group j (*victim*) power over the state. Group j power over the state for Groups 2 and 4 is low, and it is high for Groups 1 and 3. Manipulations of group i's negative externalities and group j power over the state are orthogonal.

The experimental instructions make it clear that the state must incur two distinct costs in their attempt to maximize earnings: 1) the cost of containment (10 points per group per trial), which the state chooses to expend as it sees fit; and 2) the cost of bailout (5

points for Group 1, 15 points for Group 2, 450 points for Group 3, and 500 points for Group 4), which the state has no choice but to expend every time groups go bankrupt.

Prediction

The theory of the state predicts a significant *interaction* effect of group *i*'s negative externalities and group *j*'s power over the state. In other words, the theory predicts that the state's attempt at containment is primarily limited to Group 1, which imposes high negative externalities ($\mu=50$) on a powerful group (Group 3 with its ability to command 450 points from the state when bankrupt).

Results

Table 6.1 presents the results of analysis of variance of the experimental data. The effects of both Group *i*'s negative externalities (Factor A) and Group *j*'s power over the state (Factor B) are statistically significant: Group *i*'s negative externalities, $F(1,19) = 70.75$, $p < .001$; Group *j*'s power over the state, $F(1,19) = 24.81$, $p < .001$. This means that the state punishes groups that impose high negative externalities (partly regardless of who the victims are) and groups that impose negative externalities on powerful groups (partly regardless of how much damage is done). The predicted interaction effect between Group *i*'s negative externalities and Group *j*'s power over the state is also highly significant: $F(1,19) = 24.51$, $p < .001$. No other effects are significant at .05 level with the Greenhouse-Geisser correction.⁷

⁷The use of the F-test for within-subject or repeated-measures analysis of variance (which I employ here) assumes that differences between all possible pairs of scores have equal variances (Huynh and Feldt 1970; Rouanet and Lépine 1970). In my case, this means that the difference between the expenditure on containment on Round 1 and that on Round 2 across all 20 subjects has the same variance as the difference between expenditure on containment on Round 1 and that on Round 3; the variance is assumed to be homogeneous across all $(30 \times 29)/2 = 435$ such pairwise comparisons. When this condition holds, the variance-covariance matrix of differences of scores is said to have the property of sphericity (Huynh and Feldt 1970) or circularity (Rouanet and Lépine 1970).

The Nature of the Interaction Effect. The theory of the state predicts a *positive* interaction effect between Group i's negative externalities and Group j's power over the state. Since the analysis of variance (ANOVA) treats all independent variables as (non-ordinal) categorical variables, I will need to conduct further analyses to determine if the significant interaction effect in Table 6.1 is indeed the kind predicted by the theory.

If Group i's negative externalities on Group j (A) and Group j's power over the state (B) has a positive interaction effect on the state's expenditure on containment (Y), when both A and B are dichotomous variables, as they are in Experiment 3, then the effect of A on Y ought to be stronger when B = 1 (high) than it is when B = 0 (low). Conversely, the effect of B on Y ought to be stronger when A = 1 (high) than it is when A = 0 (low). Tables 6.2 and 6.3 present further analyses of variance to ascertain if this is the case.

Table 6.2 shows the effect of Group i's negative externalities on Group j (A) on the state's expenditure on containment (Y), separately when Group j's power over the state is low (B = 0) and when it is high (B = 1). While the effects of Group i's negative externalities in both cases are statistically significant at $p < .001$ (the smallest level of significance available in SPSS MANOVA procedure), the F ratio when B=1 is more than twice as large as the F ratio when B = 0 ($F = 85.53$ vs. $F = 37.45$). Thus the effect of Group i's negative externalities on the state's expenditure on containment is more than twice as strong when Group j's power over the state is high than when it is low. Had

Geisser and Greenhouse (1958) propose a method of correction for F-test when sphericity is low. The Greenhouse-Geisser epsilon varies from 1.0 to $1/(j - 1)$ where j is the number of treatment conditions. If the epsilon is substantially lower than 1.0, it should be used to adjust the numerator and denominator degrees of freedom to obtain the accurate critical F value.

For example, take the main effect of trials (Factor C) in Table 6.1. The F score for this factor is 1.79. With unadjusted degrees of freedom (29 and 551), this F score would be significant at .01 level. However, the Greenhouse-Geisser epsilon associated with this test is .23782, which is low in the potential range from 1.0 to $1/(30-1) = .03448$. So I use it to multiply the numerator and denominator degrees of freedom. These become $29 \times .23782 = 6.90$ and $551 \times .23782 = 131.04$. When these adjusted degrees of freedom are used, the obtained $F = 1.79$ becomes significant only at $p = .095$. (For a very lucid exposition of this procedure, see Girden 1992, pp. 13-21.)

SPSS been able to compute finer levels of significance than $p < .001$, then the difference in the strength of effects would have shown in the significance levels of F ratios.

A similar pattern is much clearer and more easily discernible in Table 6.3, which shows the effect of Group j's power over the state (B) on the state's expenditure (Y), separately when Group i's negative externalities on Group j are low ($A=0$) and when they are high ($A=1$). When Group i's negative externalities are low ($A = 0$), the effect of Group j's power over the state is not significant, $F(1, 19) = 3.51, p > .07$, while the same effect is highly significant when Group i's negative externalities are high ($A = 1$), $F(1, 19) = 33.90, p < .001$.

Tables 6.2 and 6.3 together show that Group i's negative externalities on Group j (A) and Group j's power over the state (B) indeed have the predicted positive interaction effect on the state's expenditure on containment (Y). The statistically significant interaction effect indicates that it is precisely when both of these factors are present that the state is most responsive, and that the response is greater than would be expected from the two additive effects alone. The state expends most of its limited resources to punish those groups that impose high negative externalities on powerful victims. The data strongly support the experimental hypothesis.

CONCLUSION

In this chapter, I have presented the design of the first three laboratory experiments to test various causal mechanisms derived from the solidaristic theory of global order, and the empirical results from one of these experiments: Experiment 3 to test the multiplicative effect in the theory of the state (Figure 2.2). As analyses presented in Tables 6.1 through 6.3 show, the data strongly support the experimental prediction that the state expends its limited resources to contain the activities of groups that impose high negative externalities

on powerful groups.

However, Table 6.1 also shows that the two factors have residual main effects: The state moves to punish groups that impose high negative externalities regardless of who the victims are, and it also expends resources to punish groups that impose negative externalities on powerful groups regardless of the extent of such negative externalities. While the effect of Group j's power over the state disappears when Group i's negative externalities are held to be low (see Table 6.3), as predicted by the theory, the effect of Group i's negative externalities remains highly significant whether Group j's power over the state is low or high (see Table 6.2).

The theory of the state did not predict the main effect of Group i's negative externalities. From the theory's perspective, it is not rational for the state to expend its limited resources to punish those groups that impose high negative externalities on victims who have little power over the state. However, this might be a function of the particular experimental parameters that I used. In Experiment 3, the state was very resourceful; it had 50,000 points in their account when containing one group for one round cost it only 10 points. It is possible that the state's expenditure becomes more rational as its resources dwindle.

In order to conduct a complete test of the theory, however, I must design another experiment to test the main hypothesis derived from the theory of group resource allocation: Group i's negative externalities on group j has a positive effect, and the amount of external resources available to group j for protection has a negative effect, on group j's expenditure of its own collective resources for protection against group i's negative externalities. The designing of Experiment 4, as well as the programming for and running Experiments 1 and 2, constitute part of my immediate research agenda.

TABLE 6.1

The Analysis of Variance (ANOVA) for Experiment 3: Negative Externalities Game

Source	SS	df	MS	F
Subject (S)	45.37	19	2.39	
Group i's negative externalities (A)	95.60	1	95.60	70.75***
SA	25.67	19	1.35	
Group j's power over the state (B)	13.95	1	13.95	24.81***
SB	10.69	19	.56	
Trials (C)	39.42	29	1.36	1.79
SC	418.19	551	.76	
AB	5.90	1	5.90	24.51***
SAB	4.57	19	.24	
AC	37.29	29	1.29	2.00
SAC	354.69	551	.64	
BC	22.68	29	.78	1.43
SBC	301.92	551	.55	
ABC	18.84	29	.65	1.36
SABC	263.94	551	.48	
Total	1658.72	2399		

*p < .05 **p < .01 ***p < .001

Note: All significance levels are adjusted with Greenhouse-Geisser epsilons (where appropriate).

TABLE 6.2

The Effect of Group i's Negative Externalities on Group j
on the State's Expenditure on Containment

When Group j's power over the state is low ($B=0$):

Source	SS	df	MS	F
Subjects (S)	31.23	19	1.64	
Group i's negative externalities (A)	27.00	1	27.00	37.45***
SA	13.70	19	.72	
Trials (C)	17.35	29	.60	1.27
SC	260.22	551	.47	
AC	15.25	29	.53	1.34
SAC	216.05	551	.39	
Total	580.80	1199		

When Group j's power over the state is high ($B=1$):

Source	SS	df	MS	F
Subjects (S)	24.83	19	1.31	
Group i's negative externalities (A)	74.50	1	74.50	85.53***
SA	16.55	19	.87	
Trials (C)	44.75	29	1.54	1.85
SC	459.90	551	.83	
AC	40.87	29	1.41	1.93
SAC	402.58	551	.73	
Total	1063.98	1199		

* $p < .05$ ** $p < .01$ *** $p < .001$

Note: All significance levels are adjusted with Greenhouse-Geisser epsilons (where appropriate).

TABLE 6.3

The Effect of Group j's Power over the State
on the State's Expenditure on Containment

When Group i's negative externalities on Group j is low (A=0):

Source	SS	df	MS	F
Subjects (S)	14.10	19	.74	
Group j's power over the State (B)	.85	1	.85	3.51
SB	4.61	19	.24	
Trials (C)	4.67	29	.16	1.10
SC	80.40	551	.15	
BC	3.55	29	.12	1.04
SBC	64.99	551	.12	
Total	173.17	1199		

When Group i's negative externalities on Group j is high (A=1):

Source	SS	df	MS	F
Subjects (S)	56.94	19	3.00	
Group j's power over the state (B)	19.00	1	19.00	33.90***
SB	10.65	19	.56	
Trials (C)	72.03	29	2.48	1.98
SC	692.48	551	1.26	
BC	37.97	29	1.31	1.44
SBC	500.88	551	.91	
Total	1389.95	1199		

*p < .05 **p < .01 ***p < .001

Note: All significance levels are adjusted with Greenhouse-Geisser epsilons (where appropriate).

CHAPTER 7

CONCLUSIONS

It should be patently obvious that this work is unfinished. I began this dissertation with a big question, probably the most important question in all of social sciences: The Hobbesian problem of order. In chapter 1, I cursorily reviewed two traditional explanations for social order: Parsons' "normative" solution through the creation of central value system, and Hobbes' "coercive" solution through Leviathan. I pointed out that, while both solutions make logical sense, neither can account for the *empirical* variations in the levels of global order across societies and over time. Recent endogenous models of cooperation cannot account for global order because their scope conditions are too limiting and they fail to specify the aggregation mechanism.

In Chapter 2, I presented the solidaristic theory of global order, which explains global order as a by-product of local orders. The group solidarity submodel explains how groups can produce local orders, and the theories of the state and group resource allocation (which together logically imply the state submodel) explain how the state adjudicates between groups in conflict (and all groups in modern societies, under the condition of resource scarcity, are in conflict), and how negative externalities between groups can affect their levels of local orders, respectively.

Chapter 3 presented preliminary empirical evidence to support the group solidarity submodel, drawing comparative evidence from groups in Japan and the United States. Chapter 4 discussed the differential state reaction to groups in the United States in support of the theory of the state. Chapter 5 drew on evidence from the recent events in Somalia to provide initial support for the theory of group resource allocation, as well as argue against the current consensus that the state is not necessary for the production of global order.

The bulk of new work went into Chapter 6, where I presented the design of three experiments to provide a rigorous test of the solidaristic theory of global order, and empirical results from one of them. Experiment 1 will test the group solidarity submodel, while Experiment 2 (the threat game) will test the additive effect in the theory of the state. I have conducted Experiment 3 (the negative externalities game) to test the multiplicative effect in the theory of the state, and the experimental data strongly support the hypothesis.

Experimental tests can necessarily only add small incremental support for the theory. Supportive results from Experiment 3 show that the state adjudicates between rival groups in society in a manner consistent with the theory of the state. The theory of the state is now partially supported. I need to conduct Experiment 2 to see if the theory is fully supported. The fully supported theory of the state only begins to provide support for the state submodel of the solidaristic theory of global order. I will need to conduct Experiment 4 (see below) to decide whether the state submodel is fully supported. Then I will need to conduct Experiment 1 to see if the group solidarity submodel is supported. Only after all four experiments have been conducted and produced supportive results will I have full support for the solidaristic theory of global order. The bulk of the work lies ahead.

So the question is: *What now?* Where do I go from here? I would like to conclude this dissertation with my plans for the immediate future, the cognitive map of the directions to which I plan to take this nascent project.

I plan to extend this work in two different directions. Empirically, I will continue to conduct further experiments to provide more support for the solidaristic theory of global order. This will entail conducting three additional experiments. The design for Experiments 1 and 2 is already presented in Chapter 6. Thus the only remaining work, apart from actually carrying out Experiments 1 and 2, is to design Experiment 4, to test the theory of group resource allocation. I will sketch out some preliminary ideas on the design

of Experiment 4 below.

I also plan theoretical extension of the work. I believe the solidaristic theory of global order (as is presented above) is more or less complete as an explanation of global order: How different societies attain various levels of global order as a result of differential local orders and the behavior of the state. However, the current theory almost begs a further question: Where does the state come from? The state plays a crucial role in the solidaristic theory, and its component theory of the state. Yet it is completely exogenous in the current theory. I will also sketch out my initial ideas for an auxiliary theory of the state emergence below and why I plan to test this theory experimentally.

EXPERIMENT 4: RESOURCE ALLOCATION GAME

Experiment 4 will test the group resource allocation hypothesis derived from the theory presented in Figure 2.3: Negative externalities from Group i has a positive effect and the external resource available for protection has a negative effect on Group j's expenditure of its own collective resources on protection against Group i's negative externalities. Further, as Figure 2.3 shows, these effects are hypothesized to be multiplicative. Thus the straightforward prediction is that groups will expend their own limited resources to protect themselves against other (victimizing) groups only when the damage is great *and* they cannot rely on external actors' (mostly the state's) resources for protection.

The basic design of Experiment 4 will be 2 (high negative externalities vs. low negative externalities) x 2 (high external resources available vs. low external resources available) between-subjects design. Subjects will participate in groups of two or multiples of two. Each subject will supposedly be paired with another, and the two will interact through computer terminals on a series of rounds. In reality, each subject will be

interacting with a simulated actor.

Each subject will begin the experiment with 1,000 points in their accounts. On each round, subjects will learn that their partner took a certain number of points from them. They will then have an opportunity to stop their partners (at a cost) from further taking points from them. Subjects will have to spend 10 points for stopping their partner for a round. They can either pay out of their own account (thereby decreasing their earnings) or use points from an external account available to them. Subjects will repeat the same interaction with their partners on each round, and there will be 30 rounds.

Group i's negative externalities will be operationalized as the mean number of points the partner will take from the subject. The number of points that the simulated actor will take from the subject is a random variable with a given distribution. Subjects in high negative externalities condition will face a partner (simulated actor) who will take 50 points on average ($\mu = 50$, $\sigma = 5$) whereas those in low negative externalities condition will face a partner who will take 5 points on average ($\mu = 5$, $\sigma = 5$).

External resources available for protection will be operationalized as the number of points accessible to subjects on each round. Subjects in high external resources condition will be able to use up to 50 points from an external account to stop their partner, while those in low external resources condition may use only up to 5 points for the same purpose.

The dependent measure will be the number of points that subjects use *out of their own accounts* to stop their partner. The theoretical prediction is that the two independent factors will have a significant interaction effect on the dependent measure. In other words, subjects in the high negative externalities and low external resources condition will expend significantly more of their own points to stop their partners than those in the other three conditions.

AUXILIARY THEORY OF THE STATE EMERGENCE

I will conclude this dissertation with some ideas about the emergence of the state. While every theory has to leave some elements exogenous (Kanazawa 1994; Pollak 1994), the state and its emergence are too important for the solidaristic theory of global order to leave exogenous. I would therefore like to construct an auxiliary theory that explains how the state emerges and thus makes the state endogenous to the solidaristic theory of global order. Here are some ideas.

I take the Hobbesian state of nature as the starting point for the theory of the state emergence for two reasons. First, the state of nature assumes the existence of nothing except for human beings with characteristics described in Assumptions 1-4 above. In this sense, it is the most challenging starting point for *any* sociological theory. Sociologists do not have to explain, and evolutionary biologists already have the answer for, why human beings exist. Second, the Hobbesian state of nature with self-interested rational human beings is the most challenging place to start a theory of any cooperative or social outcome. Social order is the ultimate cooperative social outcome. If one can explain social order from the Hobbesian state of nature, which assumes the least cooperativeness and sociability on the part of its actors, then one can explain it from any other logical point which necessarily assumes (exogenously) the existence of a higher level of cooperation and sociability than the Hobbesian state of nature.¹

In the state of nature, individuals still form groups because they have preferences for certain goods that they cannot produce themselves (Assumption 4). In order to

¹As Wrong (1994, pp. 14-17) brilliantly points out, for Hobbes and any other social theorist, the state of nature is a hypothetical construct, rather than a historical fact. Patrick Nolan pointed out to me that the war of all against all probably never happened in human evolutionary history because humans and proto-humans have always been social animals. Wrong (1994, pp. 99-100) makes the same point, as do Montesquieu and many others. Whether or not it is a historical fact is besides the point. The Hobbesian state of nature is still an important analytical concept for theory construction because *it assumes the least*.

maintain their membership and avoid expulsion from their groups, and in order also to produce the desired collective goods, individuals comply with the collective normative obligations. Since all existing and surviving groups have some mechanisms to monitor and sanction their members (Assumption 5), even self-interested rational egoists will be forced to comply with group norms. Thus all groups will attain some nonzero (albeit variable) levels of solidarity and produce collective goods.

A very important implication of this formulation is that, even in the absence of Leviathan, *the war of all against all will not happen*. Contrary to Hobbes, the state is not necessary to avoid the war of all (individuals) against all (individuals). This is because, even in the absence of the coercive state, individual behavior (or their "passions") will still be constrained by the groups. The war of all against all will not happen, not because it did not happen historically, which is irrelevant, but because it is logically impossible (given Assumptions 4 and 5).

So groups continue to exist and produce collective goods. There is no need for the state yet. However, as long as either: 1) group goals are incompatible (Group A members want to preserve and worship trees, and Group B members want to cut them down to build houses with them); or 2) there is resource scarcity (both Group A and B members want to cut down trees to build houses, but there aren't enough trees for all of them), groups will come in conflict. Even though groups can constrain individual behavior, there is nothing that constrains group behavior. In the absence of the state, groups are free to impose negative externalities on each other. Since, when Groups A and B are in conflict, it promotes Group A's collective goals to impose negative externalities on Group B, the collective normative obligations of Group A will oblige its members to engage in behavior that is detrimental to Group B members, and vice versa. When Group A members attack Group B members and decrease their collective welfare, it increases Group A's solidarity.

Thus, in the absence of the state, the war of all *groups* against all *groups* ensues.

After a (potentially long) period of conflict, groups will come to a mutual agreement to curb negative externalities upon each other, and, since they cannot trust each other, will arrange to select a third-party enforcer to monitor and sanction all groups. Groups will come to this agreement because it will ultimately be less costly to submit to a coercive state than to engage in the war of all groups against all groups. Groups will voluntarily relinquish their natural right to impose negative externalities on others in exchange for a (reasonable) guarantee that all the other groups will not impose negative externalities on them. In other words, in this formulation, *groups* voluntarily submit to the coercive power of the state for exactly the same reasons as *individuals* do in the Hobbesian formulation. The only difference is that there is no need for individuals to enter the covenant because there will be no war of all individuals against all individuals.

Once I formalize and systematize this formulation into a theory, I plan to test it in a laboratory experiment. It should be obvious by now that I believe that all theories can and should be tested in laboratory experiments. However, when it comes to a theory of the state emergence, it turns out that a laboratory experiment is the *only* way to test it. There is no way one can test a theory of the state emergence in natural settings.

As Taylor (1982, pp. 129-139) points out, there have been only six cases of *primary* or *pristine* (Fried 1967) states in the entire human history: Mesopotamia, Egypt, the Indus River Valley, North China, Mesoamerica, and Peru. All other states in human history have been *secondary* (Fried 1967). The emergence and existence of secondary states can be explained either in terms of the need for defense -- faced with the external threat of potential or actual invasion from a neighboring society with a state, a society had to form a state in order to defend itself efficiently --, or colonization -- the colonizer imposed the idea and the institution of the state on the colonized society. Thus the prior

existence of the state (in the neighboring or colonizing society) can explain the emergence of the new states. The state explains the state, and this is no explanation.

There have been only six cases in human history where this is not the case. So we are talking about a total population of six. Further, the last of the six pristine states emerged thousands of years ago. There is no reliable written record, let alone machine-readable data files, on this process. We cannot now know precisely how it happened. Thus the only way to test a theory of the state emergence from the state of nature is to create (or conceptually *recreate*) one in the laboratory.

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