

Expectations, Shared Awareness, and Power*

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Introduction.

The purpose of the present paper is to develop a theory of expectations about interpersonal power. "Power" in the present sense means control over rewards and/or penalties that give one actor, A, the capacity to induce otherwise unwilling compliance by a second actor, B. A theory of expectations about power is concerned with assumptions by both A and B about its future use and compliance with its use.

If A repeatedly promises a reward r to B if B will do X and threatens a penalty t to B if B does not do X, B will come in time to have expectations about (1) A's preferences--what A will wish, request, demand, or direct; (2) what A will promise for compliance and/or threaten for noncompliance; and (3) the probability that A will or will not carry out such promises and threats. In turn, A will come in time to have expectations about (4) B's preferences--what B will easily do, what B will resist; (5) the probability that B will or will not comply with A's wishes; and (6) what B will do in retaliation for A's promises or threats.

With sufficient time, A and B each may further elaborate such "first-order" expectations by coming to have expectations about the other's expectations. A may come to expect that B expects certain preferences and resources, and believes certain probabilities about their use. B may come to expect that A expects some particular rate of compliance and/or retaliation. Thus, second-order expectations also emerge.

But past experience of A with B and B with A is not the only

way in which expectations emerge. Expectations are transmissible, hence need not depend on direct experience. In fact, expectations arise in at least 4 ways: (1) by direct experience of B with A and A with B; (2) by report of a third party, C, telling B about A or A about B; (3) by generalizing direct experience with people like A or B; or (4) by socialization into traditions about people like A or B.

The only theory of power to treat expectations about power at all is the subjective expected utility (SEU) theory of power (Nagel, 1968; 1975; Pollard and Mitchell, 1972; Tedeschi, et al, 1973). An SEU theory is a decision theory in which choice among alternatives is determined by their relative SEU. The SEU of an alternative is the sum of the products of the utility (i.e. subjective value) of each possible outcome of the choice weighted by the subjective probabilities of the outcomes. That alternative is preferred that has the highest SEU. Obviously, subjective probabilities are a kind of expectation (for example, about the likelihood that promises or threats are carried out). But SEU theories neglect any other kind of expectation.

SEU theories explain some important properties of power relations that are more difficult to explain by other theories of power. Nagel (1968; 1975), for example, is motivated to make SEU central to his theory in order to explain Friedrich's "law of anticipated reactions" (1937; 1963), in which the rate of compliance by B is determined by B's expectations about A's exercise of power (as distinct from A's actual exercise of power). Nevertheless, the neglect of other kinds of expectations

leads even SEU theories to understate the speed with which expectations about power come to define power relations, the amount of power they create, and the stability of power (i.e. its rate of change); and to overstate the visibility of power (i.e. the overt use of directives, promises, threats, and retaliations).

Thus, our purpose in constructing a theory of expectations about power is to derive implications about emergence, amount, stability, and visibility of power that go beyond existing theories of interpersonal power. Put slightly differently, we frankly admit that we are guided by certain intuitions about power, derived from our own observations, with which others may or may not agree. These intuitions are that:

- (1) Power is in some sense "sticky," i.e. in time the amount of power of A over B becomes stable unless disturbed by exogenous forces.
- (2) This implies that there is a process through which such stability emerges. But emergence sometimes appears instantaneous, at other times not. Both kinds of emergence require explanation.
- (3) As stable power emerges, it increases in effect; it tends to become amplified, the same resources creating more compliance.
- (4) At the same time, power becomes less and less visible, i.e. there is less overt expression of preferences, promises, and threats, and less actual use of penalties.

In other words, we regard as unsatisfactory any theory that does not imply these intuitions about power and the goal of constructing an alternative theory is to explain these four properties.

The paper is divided into four parts. In part i we very selectively review the existing literature on interpersonal power. This will prove tedious for the reader already familiar with it, who may wish to skip directly to part ii. However, the purpose of part i is largely to motivate part ii, i.e. to show that in fact existing theory does not adequately explain what we intuitively believe about the stability, emergence, amount, or visibility of power. In part ii we formulate a theory of expectations about power. In part iii we derive from it implications about stability, emergence, amount and visibility of power. Finally, in part iv we consider some of the factors that increase or decrease the magnitude of the effects that expectations have on power.

Part I. Theories of Interpersonal Power.

A. Concepts of Power.

we need to locate the sense in which we use the term "power" in relation to the large literature on the subject before going any further. Few words have more meanings: For Russell (1938), power is simply the capacity to pursue and accomplish a goal (individual or collective); a sense sometimes referred to as the "power to...". This sense of the term recurs in Hawley (1963) and Parsons (1963), for whom it means the power to pursue collective goals, and again in Poulantzas (1973) and Lukes (1975) for both of whom it is the capacity of a class to realize its interests. (This kind of power is called "macro" power by many, e.g. Lehman, 1969.) It is used in quite a different sense in Weber (1947) and Dahl (1957) who both use it to refer to interpersonal power, often referred to as "power over...". Weber uses it to refer to potential power (what one actor could do to another) while Dahl refers to actual power (power use), but both use the term very broadly to refer to any kind of change in behavior of one actor caused by another. Hence, persuasion, inducement, coercion, authority, manipulation, and force are all "power." In French and Raven (1959) we find some of these kinds of power distinguished from others because persuasion behaves differently than rewards and punishments which behave differently from authority. It is for this reason that Festinger (1953) uses the term more narrowly for "forced" or "unwilling" compliance,

compliance that is public but not private, and Harsanyi uses it to refer to compliance induced by desire for rewards or fear of penalties (as opposed to persuasion or acceptance of authority, both of which are extrinsic, as distinct from intrinsic, motives for compliance. It is in the Festinger-Harsanyi sense that we use the term in the present paper.²

B. Theories of Power.

(1) Preliminaries.

It will help to bring some order into the confusion of contemporary theories of interpersonal power to distinguish first of all between theories of acts of compliance and theories of power-dependence relations. The latter, of which Emerson's power-dependence theory is the most important (Emerson 1962; 1972; Cook and Emerson, 1978), is essentially a structural theory and does not deal with tactics, acts, or even sequences of acts (as pointed out forcefully by Bacharach and Lawler, 1980; 1981). The former, on the other hand, is concerned with units of action, not structure, and analyzes power as choice (in decision theories) or as particular instances of compliance to particular instances of the exercise of power (in field and behavioral theories).

While power-dependence theory stands more or less in a class by itself as an analysis of relations, there is a considerable profusion of theories of compliant action. These fall into three groups: Field theories, which conceptualize acts such as compliance in terms of the state at a given moment of a field of

forces (in the psychological sense) and power as the capacity to affect the forces, or valences, in the field (as in Cartwright, 1959; or French and Raven, 1959); behavioral exchange theories, which conceptualize behavior such as compliance in terms of reinforcement contingencies and power in terms of control over these contingencies (as in Homans, 1961, ch. 5); and decision theories, which conceptualize behavior as choices determined by the value or utility of outcomes, weighted in some instances by the probability of the outcomes, and power by control over these outcomes (as in Biau, 1964; Harsanyi, 1962; Tedeschi, et al, 1973; Thibaut and Kelley, 1959).

In practice it has proved difficult to empirically distinguish among field, behavioral, and decision theories of power. There are substantial similarities in their underlying structure and they differ little in their implications (Crosbie, 1975, 344-355; Schopler, 1965). More useful are distinctions among various kinds of decision theory, some of which define value objectively and some subjectively, some of which define choice deterministically and some stochastically, some of the latter defining probability objectively and some subjectively. There are material differences, for example, between theories like (1) Thibaut and Kelley's (1959) which are deterministic, objective, "value," theories and (2) theories like Harsanyi's (1962) which are subjective, or "utility" theories although also deterministic; between both these kinds of theories and (3) stochastic value models like March's (1955) or (4) stochastic utility theories like Alker's (1973), in which the probabilities

are objective; and between all these and (5) subjective expected utility theories, like Tedeschi, et al (1973), in which value is subjective, choice is probabilistic, and the probabilities are subjective.

In reviewing this literature our only purpose is to motivate interest in four problems to which we believe expectations are a solution. For this purpose, it is sufficient to selectively review just three kinds of theory of power, (1) power-dependence theories, (2) deterministic utility theories, and (3) subjective-expected utility theories. Our interest in these theories is in how little power-dependence theory has to say about these problems and how much utility and subjective-expected-utility theory underestimate (a) the emergence, (b) the amount, and (c) the stability of power and overestimate (d) its visibility.

(2) Power-Dependence Theory.

Power-dependence theory treats power in such a way that its use is invisible, its amount often greater than any particular promised reward or threatened penalty, and its emergence instantaneous. These are all properties that we, in effect, claim a theory of power ought to have. But the theory predicts that power is stable only if it is equal, which seems to us highly improbable, and it is a somewhat unsatisfactory solution to the questions of use, amount, and emergence because it tends to rise above rather than answer them. It is a theory of structure, not action; its principle difficulty is in fact in linking acts to structure (Bachrach and Lawler, 1980, 1981).

Power-dependence theory is founded on a theory of exchange relations. It is concerned with two actors, A and B; two acts, x and y; and four subjective values, A_x , A_y , B_x , B_y . If X is the amount of x that is traded by A to B for the amount Y of y, an exchange at a given price (ratio of values of amounts traded) occurs if and only if $A_y Y - A_x X > 0$ and $B_x X - B_y Y > 0$. If exchange between A and B acquires both a past history and a prospective future, $A_x; B_y$ is an exchange relation. It is the concept of an exchange relation that sets Emerson's power-dependence theory apart from theories of compliant actions. Emerson's sociology is a study of social relations, not acts or persons.

Power in an exchange relation depends on resources and their control. A resource is any act, attribute, or object that is instrumental to accomplishing the ends of an actor. Power depends on the fact that resources are sometimes controlled by others. Its amount depends on the extent of B's dependence on A, which in turn depends on two factors: It increases as the subjective value to B of a resource of A's increases, but decreases as the number of alternative sources of the resource increases. Power is of course a reciprocal relation, hence each actor is to some extent dependent on the other. Therefore, a second factor decreasing A's power over B is A's dependency on B. But the less dependent actor is the more powerful: Thus, the basic principle of the theory is that $P(AB) = D(BA)$, where $P(AB)$ is the power of A over B and $D(BA)$ is the dependence of B on A. Assuming that A is the less dependent, more powerful actor, the

power advantage of A over B is $P(AB) - P(BA)$, or equivalently, $D(BA) - D(AB)$. It is this advantage (which can be 0) which drives all behavior in the theory.

This power advantage refers, however, to potential power, not power in use. (Cf Molm, 1985.) The basic theorem of the theory is true only if (a) one assumes all potential power is used or (b) one uses it to refer only to structure. Cook and Emerson, for example, assume use is equal to potential in deriving steady-state transactions between A and B at the point at which $AyY - AxX = BxX - ByY$ (Cook and Emerson, 1978). Their experiments are constructed to eliminate constraints on the actual use of power. But there is clearly a difference between power at any point (except the equilibrium) and the steady state because both A and B undergo changes in the subjective value of a resource as the number of transactions increases. Nor can the theory predict actual use of power even at the steady state. It simply is not a theory about the use of power in the sense of making demands, making promises, making threats, giving rewards, penalizing others. Michaels and Wiggins, (1976) and Burgess and Nielson, (1974) (all of whom are in the Emerson tradition) argue, we believe correctly, that the theory is purely a structural theory, describing characteristics of relations, and the "balancing" operations Emerson incorporated into it do not in fact logically derive from it without further assumptions about use of power. Emerson himself, in discussing power "use" makes it clear that what he means by "use" is not use in the sense of

using or withholding rewards contingently (which is Molm's attempt to define use in power-dependence terms), but, essentially, the amount of exploitation, however brought about. (See Emerson, 1972, 1985.)

The "balancing operations" just mentioned refer to various means by which inequality in power can be reduced, for example by forming coalitions or differentiating status. Emerson carries the idea of reactance, that the exercise of power creates resistance (Brehm, 1966), to its logical conclusion: A power-advantage of A over B is defined in Emerson as an "imbalance," and the theory supposes that power relations tend towards balance. Asymmetric relations are therefore unstable, giving rise to pressures towards change until an equilibrium state is reached at which $P(AB) - P(BA) = 0$.

Thus, power in power-dependence theory is inherently unstable. It has a certain stability by comparison with any theory of compliant actions because it deals with potential, rather than actual power, with relations rather than acts, and is therefore issue-free. It does not vary with the utility of X at any particular time to either A or B, nor with the amounts of r and t exchanged on particular occasions. But there are at least four ways in which, nevertheless, potential power is unstable. First, the objective stock of A's resources may change over time as they are consumed by B. Second, some resources, like information, change the value of $D(BA)$ over time because they are not consumed in use, but their transfer is irreversible, hence they become resources of B (Palmer, 1963). (Both factors are

true in any theory of power whatever, not only power-dependence theory.) Third, motivational investments, on which dependence rests, change with time. And fourth, imbalanced relations are in any case unstable, giving rise to changes in power that continue until A and B are equal in power.

Stability is the one question, however, that power-dependence theory addresses directly. We have already said that it is essentially silent on use. Power is invisible in the theory because it is not about acts. The same can be said for amount and emergence of power. The theory deals more satisfactorily with the problem of the amount of power than any other because it focusses on potential rather than actual power. But the amount of potential power, $P(AB)$, is in 1:1 correspondence with the amount, utility, and sources of A's resources. Repeated use creates no "amplification" of the amount over time. And emergence is instantaneous largely because there is no action in the theory.

Bacharach and Lawler (1980; 1981) have attempted to fill the gap between structure and action by linking Emerson's power-dependence hypotheses to acts in bargaining relations. They argue that the development of tactical implications of power-dependence theory depend on the cognitive (as distinct from behavioral) side of dependence, which they deduce from the factors that determine behavioral dependence and use to predict choices among tactical options. Earlier studies of perceived power had led Bacharach and Lawler to conclude that the perceived power of A over B is an increasing function of the values of the

alternatives (to each side) and a decreasing function of the number of alternatives available (to each side). (See Bacharach and Lawler, 1976; Lawler and Bacharach, 1976; 1979; Michener, et al, 1973.) Such perceived power determines tactical choices by anticipating probable choices by the other, likelihood of success, etc.

But the implication of Bacharach and Lawler's method is that perceived power is in 1:1 correspondence with dependence, hence power. Its properties are therefore like the properties of power-dependence relations: not very visible, and immediately emergent; but the amount of power is unstable and emergence adds nothing to the amount. In a sense, Bachrach and Lawler do not take enough advantage of their basic idea: The only factors which enter their equations are those of power-dependence analysis. Subjective probability, for example, which had been introduced into this kind of analysis by Michener, et al, 1973, drops out of Bacharach and Lawler's later analysis of perceived power. This results in a too-limited analysis of the process by which perceptions and expectations emerge and come to govern the exercise of and compliance with power. Among the elements that are missing are (1) effects of reputations for power on perceived power, hence (2) perceptions of power that are not linear functions of objective amounts of resources and alternatives, and (3) subjective probabilities of power use and compliance which are determined by indirect as opposed to direct experience and are therefore not linear functions of objective probabilities.

(3) Deterministic Utility Theories.

The elements of a utility theory of power are actors, A and B, their acts, X and Y, and unique outcomes of these acts. The outcomes have values which are rewards if they benefit actors and penalties if they disbenefit them. (Penalties forgone are rewards and rewards forgone are penalties.) The motivation to engage in any activity (including interaction itself) depends on the relative utility one expects to gain from it, where the utility of an act is the algebraic sum of the rewards and penalties associated with it. Given a choice between acts X and Y, every actor chooses that course of action that yields the greatest utility. Interaction between A and B is governed by the same principle, hence occurs if and only if it yields each actor the greatest available utility. But the important thing about "choice" in a utility theory is the comparison of alternatives: What looks to an observer like an unattractive course of action may be chosen by A or B because it is preferable to its alternatives.

This is an important fact in understanding power and compliance, which often involves choice between the lesser of two evils. "Power" flows from control over rewards and costs, from the capacity to induce acts by promise of reward or threat of penalty. In Harsanyi's theory, for example, which is probably the most elegant utility theory, A offers reward r to B if B will increase the rate at which B does X from p_1 to p_2 ($p_2 > p_1$) and threatens penalty t if B persists in performing X at rate p_1 . B's compliance is proportional to $(r + t)/x$, where x is the

disutility to B of doing X. That is, it is a monotonically increasing function of the rewards for doing X and penalties for not doing X and a decreasing function of the disutility to B of X. B will therefore perform X at the rate p_2 if and only if $r - p_2x > -t - p_1x$.

But power is even more unstable in utility theories than in power-dependence theory. There is no balance assumption in utility theory, no endogenous pressure for change. But utility theory has most of the same sources of instability as power-dependence theory and at least one that power-dependence theory doesn't have.

There are three sources of change in the amount of power in utility theories (aside from differences in $u(X_i)$): First, the values of r and t change with time (as they also do in behavioral exchange theories such as Homans, 1961--see the analysis by Crosbie, 1972). The whole point of a utility, as distinct from a value, formulation is the law of marginal utility. The value of r decreases with the frequency of r . The behavior of t is complicated by the fact that if it consists in withholding r its value may increase rather than decrease with frequency but it nevertheless fluctuates with time. Second, the supply of rewards and penalties changes over time. If A uses them without replacement the stock decreases. But as the stock decreases the marginal costs to A of a promise or threat increases. But third, the impermanence of power is even greater in utility than in power-dependence theories because the effects of power are determined by the amount of r and t on each specific occasion.

The unit of analysis is the act, not the relation. Each act is independent of any other act, is without reference to either the past or the future, except for frequency. Saturation (in behavioral terms) or marginal utility (in decision theory terms) determines the value of r and t , but in all other respects each unit act occurs as if it had no past and holds no consequences for the future.

Unlike power-dependence theory, utility theories imply (or perhaps, more exactly, require) a high level of visibility of power. Because of the focus on a unit act, the process is described as an act by B in response to a threat/promise by A , which depends on an actual reward/penalty by A . Throughout, no matter how often the sequence has been repeated in the past, compliance occurs because of a demand by A and depends on actual use of power. There is no potential power, no law of anticipated reactions, no compliance without overt exercise of power.

The process does not even depend on A 's stock of resources, except as it affects A 's costs by depletion. Each act is determined entirely by $(r + t)/x$. There are theories (like Parsons' theory of power as a system of credit, Parsons, 1963) in which resources are pyramided by the reputation they create, the faith they build up, and the resources obtained from others by previous use of power, but none of these factors operate in a deterministic utility theory of power, which depends only on the value at a given instant of r , t , and x . For the same reason, power may be thought of in such theories as power instantaneously created and as instantaneously dissipating. One cannot speak of

it as "emergent": It is a continuous process in time (as opposed to a process that creates "expectations" which, when activated, determine behavior).

(4) Subjective Expected Utility Theories.

A "Subjective Expected Utility" theory is a stochastic theory of power in which the values and the probability of outcomes are both subjective (Nagel, 1968; 1975; Pollard and Mitchell, 1972; Tedeschi, et al, 1973). Thus, utility affects choices to an extent weighted by the subjective probability that the outcome to which the utility is attached will occur. A utility of, say, 100 will have less effect than one of, say, 10 if the probability that 100 occurs is .001 while the probability that 10 occurs is 1.00 because $(.001 \times 100) < (1.00 \times 10)$. As Nagel (1968) notes, an SEU theory makes it possible to reason that B complies with A's "demands" without A openly promising rewards or threatening penalties because B, based on prior experience, is able to anticipate A's reactions (captured by the subjective probability of an outcome). B infers A's probable future behavior based on a knowledge of A's preferences and B's subjectively held beliefs about the probability of a reward for compliance or penalty for noncompliance. (This hypothesis is confirmed by Ford, 1986.) Furthermore, A is as capable of inferring B's probable future conduct as B is A's. Therefore, power is less overtly exercised. Not only is it less needed from B's point of view, it is also less needed from A's. In a deterministic utility theory, A exercises power every time A

believes s/he will gain from B's compliance. The rate at which power is exercised is an increasing function of the utility of an outcome of B's actions to A and a decreasing function of the cost to A of the exercise of power (in terms of alternatives forgone, for example). In an SEU theory of power, A exercises power whenever the SEU of its use is greater than the SEU of not using power (Tedeschi, et al, 1973). But the factors determining the use of power include the utility to A of B's compliance, the costs to A of B's noncompliance, the costs of exercising power, the probability of success if power is exercised and the probability of retaliation if B resists compliance. In consequence, there is a law of anticipated reactions for A just as for B (pointed out by Dahl, 1956; 1961); and A may be supposed (1) not to make demands that cannot be enforced and (2) not to openly make promises/threats when B will comply without overt exercise of power.

An SEU theory therefore predicts much less visibility of power than deterministic utility theories do, and it also implies more stability. Subjective probabilities are beliefs that, once formed, are capable of persistence; knowledge of preferences also persists. Together, they imply that power fluctuates less from occasion to occasion than deterministic utility theories imply.

But SEU theory faces serious measurement problems and applications of the theory in practice tend to undermine its more powerful implications. (For a review of these measurement problems see Coombs, Dawes, and Tversky, 1970, pp. 129-137, 145-147.) In practice, it is typically assumed that "the average

of the subjective utilities and subjective probabilities should approximate the objective values and probabilities" (Tedeschi, et al, 1973, 57). In practice, therefore, investigators tend to lose sight of the distinctive value of the theory. Of even more far-reaching consequence is the fact that the theory assumes subjective probability is founded in the specific history of the AB relation (except Nagel, 1968). The result is that many other sources of expectations for A's and B's behavior are treated as insignificant. The theory therefore implies that at each new encounter between previously unacquainted A and B the process begins as if it had no history. It takes time for subjective estimates of another's preferences and probable actions to emerge. And it remains true, as in deterministic utility theories, that A's stock of resources plays no role in the theory except that its depletion affects A's costs.

Thus, SEU theories depend more on past events and expectation of future events than deterministic utility theories, hence are not committed to analyzing power in terms only of unit choices, and they incorporate a kind of expectation (subjective anticipations of reactions) that increases stability and decreases visibility of power. But they still tend to underestimate the effects of expectations because they begin sequences of events between A and B as if history begins always at the beginning. One of the important ways in which an expectation, once introduced, makes a difference is that it can be transmitted to others, hence can operate on them before the specific history of a relation has even begun.

(5) Summary and Conclusions.

We regard a theory of power as satisfactory if it can explain four features that we intuitively believe to be true of power:

- (1) It is relatively stable,
- (2) sometimes emerging instantaneously, but sometimes not,
- (3) amplifying the amount of power as it becomes stable,
- (4) at the same time decreasing its visibility.

Power-dependence theory predicts instant emergence, and virtual invisibility of power, but no amplification of the amount of power and assumes pressures towards instability of asymmetric power. Thus, it does not explain those instances in which emergence is not instantaneous, perhaps outdoes our intuitions about visibility, and understates both the amount and stability of power. Bacharach and Lawler's (1980, 1981) attempts to link power-dependence relations to particular acts of compliance, although taking perceptions of power into account, have the same tendency to understate stability and amount of power.

In utility theories there is no stability at all, no emergence, no amplification, and power is always visible. Thus, they explain none of the properties we intuitively attribute to power.

SEU theories match our intuitions better than other theories, but still underestimate stability, have only one kind of emergence (explaining it only when it is comparatively slow), underestimate the amplification of power created by emergence, but still overestimate the visibility of power.

PART II. Expectations, Shared Awareness, and Power

We shall model a process in which one actor, A, directs another, B, to do X. By hypothesis, B attaches sufficient disutility to X that B would not do X were it not for either promises of reward, r, for doing X or threats of penalty, t, for not doing X, or both. A's requests or directives, promises and/or threats, rewards and/or penalties are referred to as A's exercise, or use, of power and B's behavior is referred to as B's compliance, if B does X, or noncompliance, if B does not do X. B also may use power, as retaliation for A's threats and/or resistance to A's directives.

Both A's and B's behavior are thought of in the theory as choices among alternative courses of action. That is, it is assumed that each alternative is in principle possible, any alternative could in principle occur. Perfectly institutionalized behavior is outside the scope of this kind of theory and alternatives that are made impossible by a given social structure are not among the alternatives the theory treats. Hence, the probability of a "choice" is to begin with neither 0 nor 1.

The choice of a course of action by A and by B is assumed to depend in the first instance on the subjective expected utility of the outcomes associated with each action. That is, each alternative X_i is associated with one or more outcomes, O_{ij} . Each outcome, O_{ij} , is associated with a subjective value, called a utility, $u(O_{ij})$. If there is a unique outcome for each alternative, it is assumed that each actor chooses that

alternative that has the most preferred outcome, i.e. for which $u(O_i)$ is greatest. (If the actor is indifferent between alternative outcomes, it is assumed that s/he alternates equally among them.) But alternatives may have more than one outcome, i.e. choice may only probabilistically determine the outcome. While there may be a true probability distribution over the outcomes, in SEU theory it is assumed that actors do not know this distribution. They do, however, have subjective probabilities associated with each possible outcome of each possible choice, which we denote by ψ_{ij} . But it is assumed that if the "outcome" of a choice is itself decomposable into parts, the utility of a choice is a linear combination of (1) the utility of each outcome, (2) weighted by its subjective probability, i.e. $\sum \psi_{ij} u_i$. If we accept as axiomatic the principle that actors chose that alternative that has the most preferred outcome, it seems reasonable to suppose that in the probabilistic case they chose that alternative that has the best expected outcome. That is, they should be expected to choose the alternative that is associated with the largest value of $\sum \psi_{ij} u_i$.

Although virtually all decision theories will have this same basic framework, it is worth noting that they differ considerably in what elements enter the choice function and how the function itself is formulated. In particular, virtually any theory of "choice" in one way or another assumes that the actor is driven to choose X_i by all the positive features associated with it but is driven away from X_i by all its negative features. Consequently, one may also think of the actor as driven toward X_i .

by all the negative features of its alternatives. In Camilleri, Berger, and Conner, 1972, this idea underlies how gains are computed. But there are obviously many functions which might represent this idea. That is, in any choice theory the choice of X_j depends as much on what the actor does not like about its alternatives as about what the actor does like about X_i . But in the simplest such function, which is the one we have adopted as our starting point, this is implicit rather than explicit. We do not ourselves have any interest in the question of what choice function is best and believe that our theory will have the same implications regardless of which is chosen. What we like about the function we are using is simply that it is so transparent.

If, as we are supposing, A prefers that B do X while B prefers not to do X, it follows that whether or not B actually does X depends on the utilities of r and t and the probabilities with which r follows compliance and t follows noncompliance. That is, B should do X if and only if the expected utility of r + t exceeds the difference in utility between X and its most preferred alternative, $u(\bar{X}) - u(X)$. (Without loss of generality we can speak simply of two alternatives.) For in general, B will do X if and only if $\sum \psi_{ij} u(X) > \sum \psi_{ij} u(\bar{X})$. Assuming that absent r and t, $u(\bar{X}) > u(X)$, B will therefore do X if and only if $u(X) + \psi u(r) > u(\bar{X}) - \psi u(t)$.¹ Equivalently, B will do X if and only if $\psi u(r) + \psi u(t) > u(\bar{X}) - u(X)$.

On A's side, whether A actually attempts to use his/her power to compel compliance by B will depend in the first instance

on the subjective expected utility of X to A and on the cost of obtaining B's compliance. ("Cost" here refers simply to the marginal utility to A of r and t.) This should depend in part on the probability that B complies, because the actual use of r and t depends on whether B complies or not. If the subjective probability of B's compliance is ψ_x A should exercise power over B if and only if $u(X) - u(\bar{X}) > \psi_x u(r) + \bar{\psi}_x u(t)$.

Thus, taking SEU theory as a starting point, we assume first of all that

Assumption 1. (SEU assumption). For given X, r, and t,

1. B complies with preferences of A that s/he do X if and only if

$$\psi u(r) + \bar{\psi} u(t) > u(\bar{X}) - u(X).$$

2. A promises r to B for doing X and/or threatens t if B does not do X if and only if

$$u(X) - u(\bar{X}) > \psi_x u(r) + \bar{\psi}_x u(t),$$

where ψ is B's subjective probability that A actually rewards compliance, which may or may not differ from B's subjective probability that A actually penalizes noncompliance, and ψ_x is A's subjective probability that B actually complies with the directive to do X and $\bar{\psi}_x = 1 - \psi_x$.

If now we assume that this interaction is repeated a number of times, or that others like it are reported to A and B, or that

traditions about it are transmitted from the past to A and B, we can also assume that A and B develop expectations about what the other will want and will do. We refer to these as first-order expectations when we speak of (1) B's expectations about A's preferences, A's resources (i.e. A's stock of rewards/penalties), the probability that A uses these resources, and the probability that A complies with B's own preferences (for example, if B attempted counter threats); and (2) A's expectations about B's preferences, B's resources, B's use of these resources, and the probability of B's compliance with A's preferences.

Without introducing the idea as an assumption of our theory, we note that the concept of an expectation implies that some elements at least of the power/compliance relation are stable. For expectations change if and only if behavior is incongruent with them. But expectations, once formed, are important determinants of behavior and the behavior that they determine is congruent with expectations. They tend, therefore, to maintain themselves once formed.

Expectations do not change the conditions under which compliance occurs, but they do change the rate at which A openly expresses preferences, promises rewards, and/or threatens penalties. Thus, the second assumption we adopt is Friedrich's "law of anticipated reactions" (1937, 1963; also see Ford, 1986), according to which

Assumption 2. (LAR) For given X, r, and t,

1. If B expects in advance that $\sum \psi_{ij} u(\bar{X}) > \sum \psi_{ij} u(X)$,

then B complies with A's preferences independently of any overt expression of preferences, promises, or threats by A.

2. If A expects in advance that $\sum \psi_{ij}u(\bar{X}) > \sum \psi_{ij}u(X)$, then A does not express preferences, promises, rewards, or threaten penalties to B with respect to X.

That is, Assumption 2 holds both that (1) A need not exercise power to cause compliance if B knows already what A prefers and that $\psi_{ij}u(r) + \psi_{ij}u(t)$ exceeds the disutility of compliance and (2) that A will not demand X of B if it is highly likely that B will resist and the costs of using power exceed the expected gain.

Note that not only will compliance often occur without A overtly voicing demands, promises, or threats, but in the case of coercion A does not even overtly use penalties.

A and B may each, in addition, form expectations about the other's expectations. These we refer to as second-order expectations, consisting of (1) A's expectations about B's expectations about A's preferences, A's resources, the probability that A uses them, and the probability of A's compliance with any preferences of B and (2) B's expectations about A's expectations about B's preferences, B's resources, the probability that B uses them, and B's compliance with any preferences of A's. When such expectations form on both sides, we refer to this as snared awareness of the components that go into determining use of and compliance with power.

About shared awareness, we assume that when first and

second-order expectations are either absent or incongruent, power becomes more overt, more visible. If A knows that B knows exactly what A will do to compel X there is no need for A to express preferences, promise rewards, or threaten penalties (which follows from the LAR). But if A expects that B expects more or less than A will do, it becomes necessary to exercise power overtly. This will be necessary if B expects less because B is therefore less likely to comply. If B expects more, it will be necessary to renegotiate terms of exchange. Similarly, if B knows that A knows exactly what reward or penalty will induce B to do X, B will do X without a murmur if B expects that $\psi_{ij}u(r) + \psi_{ij}u(t)$ exceeds $u(\bar{X}) - u(X)$. But if B does not know what A expects him to expect, or believes that what A expects is less than B will actually take to do X, then either noncompliance or renegotiation of terms, either of which are likely to lead to open struggles, are more likely. (In B's case, incongruence that promises too much reward probably does not lead to any renegotiation on B's side.)

Thus, we assume in addition to the LAR, a "law of shared awareness," which holds that

Assumption 3. (LSA) For given X, r, and t,

1. If A knows B's expectations for A, overt expression of preferences, promises, and/or threats by A occurs if and only if A's second-order expectations are incongruent with A's actual preferences and willingness to use resources.

2. If B knows A's expectations for B, noncompliance and retaliation occur if and only if either

1. the SEU of noncompliance exceeds that of compliance,
2. or B's second-order expectations for A are less than B's actual preferences and terms of compliance.

Thus, not only does A not need to overtly express preferences, promises, and threats or overtly use penalties, A knows that they are not necessary. Hence their overt use is less likely. Overt power on either side is more likely when one, the other, or both either do not know what the other expects or believe that they do know (correctly or not) but believe that the other's expectations are wrong.

Part III. Implications.

At least four implications may be logically derived from shared awareness. These are: (1) power is less visible than SEU theory would predict, (2) it is more stable, (3) the process itself amplifies power, and (4) under some conditions instant emergence of expectations is possible.

A. Visibility of Power.

The most immediate implication of the LAR and LSA assumptions is that overt exercise of power is seldom visible once expectations form, especially when A has more power than B. If A has more power than B, and expects that, at $\psi u(r)$ and $\psi u(t)$, the utility of X exceeds that of \bar{X} , A expects B to comply with

his/her preferences; whereas B expects A to reward him/her with r in return for compliance or penalize him/her with t for noncompliance. Given these first-order expectations, A is unlikely to express directives, threats or promises in order to attain B's compliance. It will be unnecessary. By the same token, B is unlikely to express threats of retaliation or demand a specific reward, r , for his/her compliance.

Given second-order expectations (i.e., A knows that B knows, B knows that A knows...), A is even less likely to penalize B and B is less likely to retaliate than otherwise, since they both share the same expectations, i.e. expectations and behavior are congruent, and, therefore, both correctly anticipate behavior and outcomes.

As a result especially of shared awareness, power therefore plays an almost invisible role in interpersonal relations. Neither acts of power or acts of counter-power (retaliation) need to be overtly exercised by either party. The theory predicts, in fact, that if A has more power than B, A exercises overt power only when B is not expected to comply but the value of $u(X)$ to A is greater than the costs of exercising power; or when A has no second-order expectations about B's expectations; or when A's second-order expectations are incongruent with A's actual $u(X)$, $\psi u(r)$, and $\psi u(t)$. On B's side, B openly struggles with A only if B expects that $\psi u(r) + \psi u(t)$ is less than the difference between $u(\bar{X}) - u(X)$, or B has no second-order expectations about A's expectations, or when B's second-order expectations are incongruent with B's actual $u(X)$, $u(r)$, $u(t)$, and probability of

compliance. From this theoretical viewpoint, it is no wonder than open threats of promises are rarely expressed in work relations between superordinates and their subordinates in conjunction with routine assignments and task performance. The invisibility of power in such cases is mainly a result of shared awareness concerning both sides' preferences, resources, and probabilities of action. It appears, however, that exercise of power and retaliatory attempts are quite common in parent-child relations. This pattern of visible power may be mainly due to the fact that parents doubt the emergence of first-order expectations in younger children.

B. Stability of Power.

Our theory of expectations predicts that power is much more "sticky" than any other theory would have suggested. "Stability" refers in the first instance to the stability of the expectations underlying power/compliance, which are stable if and only if the expectations with which an exchange begins are unchanged by its outcome. This should be reflected in stability of the observable behavior of A and B, i.e. of their use of and compliance with power, with respect to X through time. Stability in power relations is a property which emerges from two underlying trends: continuity and regularity. Continuity is the length of time that a given power-dependence relationship between two or more persons persists. Regularity is the amount of variation in A's and B's modes of behavior over time: Hence, the extent to which participants are likely to behave in a predictable way at any given point of time. Both are positively affected by shared

awareness of mutual expectations.

Without the effect of expectations, four forces are likely to drive power relations to discontinuities (cf section i): (a) actual resources are subject to considerable fluctuations due to changes both in the actors' stocks of resources and the external conditions under which they operate; (b) the utilities attached to outcomes decline as a function of repetitive transactions; (c) frequent use of threats and promises exerts pressure from which actors attempt to escape or which generates resistance; and (d) each exercise of power is independent of its past and future.

Not all of these are affected by expectations. Nevertheless, expectations change at a much slower pace than actual resources. The basic property of any "expectation" concept is that it causes behavior that is congruent with itself. While change in expectations will occur (probabilistically) if behavior is incongruent with them, incongruent behavior is in fact unlikely to occur except for the effects of exogenous factors. If the Law of Shared Awareness holds, only incongruence between an actor's second-order expectations and actual preferences, resources, and likely reactions gives rise to change in expectations. "Expectations" therefore introduce a quite stable element into the otherwise fluctuating power of A over B. They do not counteract the changing marginal utility of $u(X)$, $u(r)$ and $u(t)$, but they do introduce a past and a future into the AB relation, and because they decrease its visibility they also reduce the resistance created by the overt exercise of power.

Thus, the effect of expectations is to increase the

continuity of the relation A>B. They also increase regularity, because by definition they increase predictability. There are fewer unexpected, provocative, acts by either actor, less need to test the credibility of either's promises or threats. Each can anticipate in a predictable way the consequences of their acts in terms of the other's likely behavior.

C. The Emergence of Expectations.

Of the four ways that actors can form expectations for each other, three are indirect. The fact that expectations can be created by means other than direct experience implies that actors A and B can enter a new relationship with already formed expectations. Therefore, the level of dependence, expected compliance, expected sanctions, or expected retaliation which determine both exercise of power and compliance can be determined instantaneously. Such predetermined expectations, then, motivate both actors, A and B, to behave in a specific manner at the outset of their relation. Pre-formed expectations probably play such a role mainly in well-structured social contexts, as in organizations, in which rules, procedures, ranks and symbols reduce the level of ambiguity. Similarly, in traditional families spouses may come to their marriage with strictly defined expectations concerning, among other things, their relative power and its derived modes of behavior. Thus, a causal-chain of effects may be postulated between structural settings, instantaneous expectations, and the exercise of power, compliance, and retaliation. That there is sometimes less than instantaneous emergence is due to variations in the extent to which expectations are pre-formed.

D. Amplification of Power.

Expectations in fact appear often in the literature on power as "reputational" effects of power (e.g. Gamson, 1966). One of the important consequences of reputations for power is that they amplify the amount of A's power over B. That is, as expectations emerge the rate of B's compliance with A's preferences increases even if the actual stock of A's resources does not.

This effect occurs for three reasons. First, one effect of expectations is that at least t is seldom actually required. While expenditures of r will be necessary, the total costs of the exercise of power are reduced by the fact that threats seldom need to be carried out. In cases where the only inducement employed is threats, expectations in fact preserve the stock of resources relatively unchanged. This inflates the actual stock of A's resources by comparison with models in which there are no expectations for power. But second, because expectations are "reputations" for power they also add a resource to A's stock. The effect is not unlike that Parsons' (1963) attributes to power in the collective, "power to" sense, though it will in general not be true that interpersonal power is therefore a variable-sum quantity. (That is, even amplified power will be 0-sum for "power over.") A given stock of resources makes possible something like the extension of "credit," i.e. more power can be created by the same actual resources as reputations for power emerge. Hence, reputations pyramid the amount of power. Third, stability itself amplifies power. Actual resource stocks fluctuate more than expectations do. Expectations therefore

introduce a steadying hand on the flow of power, but are especially significant in maintaining the reputed level of resources when they are in fact decreasing. So long as the decrease is not secular, i.e. a long-term decline, the correction of downside fluctuations has the effect of increasing A's overall power over B.

IV. Contingencies.

The fact that expectations "emerge" suggests the obvious possibility that at different stages of their emergence expectations differ in how certain the actor is of them. Furthermore, that they emerge in different ways and have different sources may give rise to additional uncertainties. We must therefore think of expectations as weaker or stronger, in the sense of being more or less certain. And the magnitude of the effects claimed for expectations in section III should be proportional to their certainty.

A. Effects of Uncertainty.

One way to think of what "emergence" means (in the context of power) is that expectations begin to form that, with time, become both stronger and more widely shared. Hence, to the extent that expectations are not at first certain, the rate of emergence is slower, and the greater the uncertainty the slower the rate of emergence ought to be.

A slower rate of emergence immediately implies, of course, that the amount of power created by uncertain expectations should be less than that created by certain expectations, hence there

should be less amplification of the amount of power.

On the other hand, visibility will be greater with uncertainty. For, in part, it is visible power that creates expectations. There are actually two somewhat different ways power may be made visible, of course; by "real" use and by symbolic use. One can think of a kind of gestural politics in which A and B give off cues to each other (and to other parties) about their preferences, resources, and probable reactions, in order to create expectations, in the way that Reagan's aides continually talk of "giving signals" to Gorbachev. Uncertainty should increase visibility by increasing one or the other of these kinds of public display of power.

Finally, uncertainty should decrease stability of power relations. That is, not only will stability take longer to emerge, which follows from the conclusions already reached about emergence, but the weaker the expectations at any given point the greater the likelihood that some kind of change will take place. This follows simply from the fact that the weaker the expectations, the greater the likelihood of behavior incongruent with expectations, hence the greater the endogenous pressures for change.

Despite its importance, we have made no attempt to exhaustively study all the factors that give rise to certainty or uncertainty in expectations. But we wish to call attention to at least four: (1) consensus, (2) the sources of expectations, (3) validation of expectations by others, and (4) the sharing of symbols of power.

B. Consensus, Congruence, and Certainty.

To the extent that B's first-order expectations for A are the complement of A's first-order expectations for B we can say that their first-order expectations are congruent and they share a consensus about expectations. B's expectations for A complement A's expectations about B when, for example, if A supposes that s/he is superior in power to B then B at the same time supposes that B is inferior in power to A. (This can be made more precise in terms of actual SEU values, but greater precision is unnecessary for present purposes.) If A supposes that A and B are equal, then B complements A if B also supposes that they are equal. Finally, if A supposes that B is superior in power to A, B is the complement of A if B supposes that A is inferior to B.

To the extent that A and B do not share a consensus about their respective roles in the relation, behavior caused by expectations should be incongruent with the expectations of at least one of them. This, in turn, should induce a higher level of uncertainty about the actor's expectations for the other, driving the process towards some change in expectations.

Thus, dissensus should have the effect of slowing emergence, deflating power, inducing more visible exercise of power, and decreasing stability.

The role of consensus, however, is not limited to first-order expectations. An important form of it already referred to in section III is congruence between second-order expectations and actual preferences, resources, and reactions.

One may in fact think of a triadic relation between one actor's actual state (say A's), the other's first-order expectations of that state (say B's), and of the first actor's second-order expectations about the other's expectations. This triadic relation is illustrated in Fig. 1, in which the "actual" level is denoted the "zeroth" level.

Level of Expectations	ACTOR	
	A	B
2	A expects that B expects that $u(X)$,	
1	$\psi(r,t)$	B expects $u(X)$, $\psi(r,t)$
0	$u(X)$, $\psi(r,t)$	

Fig. 1. Congruence between expectations at different levels.

It should be evident from Fig. 1, however primitive its representation of the features in actual power/compliance situations, that consensus depends not only on similarities in first-order expectations but also across levels. If A and B do not share a first-order consensus, this will be evident to each of them, if second-order expectations exist, because of incongruence between second-order expectations and what each actor expects of him/herself. As a result, uncertainty of expectations about the other should be greater. If second-order expectations do not exist, the LSA assumption implies that the "consensus" is incomplete, which will have the same effect. The result in either case will be more visible use of power, slower emergence, less amplification of power and less stability.

C. The Effect of Differences Among Sources of Expectations.

Some point was made in section III of the fact that there are a number of different sources of expectations in addition to direct experience. One may therefore think of the more indirect sources as differing both in the quantity and quality of the "information" they provide the actor. Some of them are highly institutionalized and therefore probably unquestioned and unquestionable. Some of them are unique, and therefore idiosyncratic, to the particular source.

While a rather complicated theory of this subject could probably be developed, one obvious starting place is to think simply of the amount of certainty that can be created by (1) the number and consistency of sources that provide the same information and (2) the credibility of the source, for example, its status value. If a large number of well-placed people consistently believe in A's power, for example, the certainty with which B believes in the expectations they transmit about A should increase, which should accelerate emergence, inflate power, decrease visibility, and increase stability.

D. Social Validation, Social Support, and Certainty.

To the extent that objective reality itself is not sufficient to validate the "information" provided by individual and cultural sources, its reality is "social," i.e. depends on the beliefs of people around A and B. If C is a third party to the relation of A to B, to the extent that C shares the same expectations, acts by C that are consistent with them socially validates them for A and B. Thus, other people are not only the

sources, they are also the guarantors of expectations about power.

But over and above the impact of C on the certainty with which A and B hold expectations for each other, there is the fact that third parties imply a new kind of expectation, expectations of support by C. Interpersonal relations typically take place in larger social contexts. An important effect of parties like C is more or less support for the use of power by A and B's compliance with it. Support will frequently be expected, by both A and B, for exercises of power by A that are within culturally defined limits. On the other hand, noncompliance, even resistance, by B will often be supported by C if it appears justified by circumstances. For example, noncompliance is likely to be supported in cases of child abuse, sexual harassment, or immoral demands.

We are not trying to offer a theory of the causes of social support. It may derive from legitimacy, from material interest, from sentiments (such as liking for A or B), or any number of other motives. What matters is that both A and B have expectations about who and what C will and will not support.

These third-party expectations will in the first instance affect A and B's actual behavior. If C is expected by A to support B's noncompliance, A is less likely to use power. If C is expected by B to support noncompliance, B is less likely to comply. Because they are a factor in A and B's behavior, third-party expectations affect the congruence between behavior and expectations. Hence, validation is a source of certainty not

only directly, because of its effects on expectations, but also indirectly because of its effects on behavioral congruence with expectations. If C's behavior, and A's and B's expectations of C's behavior, are incongruent with A's and B's first-order expectations for each other, the effect is to increase uncertainty first of all because A's and B's expectations have less social validity and second of all because they have less anticipated support, changing actual behavior. The two effects taken together will decrease stability, deflate power, and increase visibility.

E. The Effect of Symbols of Power on Certainty.

The process of emergence is frequently associated with "gestural" politics, i.e. public displays of power the purpose of which is to create (or maintain) expectations about intentions, resources, and willingness to use them. Sometimes this involves actual use of power, i.e. overt demands, promises, threats, rewards, penalties, used less to induce compliance than to create or maintain expectations about future use of, support for, or compliance with power. But sometimes what it involves is symbolic power ritually displayed.

Some of these displays are symbols of the potential use of power, like such symbols of the police power as visibly worn sidearms, clubs, and handcuffs. Some are symbols of deference, of potential compliance with power, such as the military salute. By means of such symbols, rituals, like reveille and retreat on a military base, transmit expectations to new members and maintain them for already socialized members. They affect, first of all,

the actual or potential objects of power; but they also are important for the actual or potential users of it, for they also create expectations that one has power to use and that others support its use.

While some symbols and rituals are well institutionalized, like reveille and retreat, some are less widely shared, even unique to a particular A and B. The gavel will probably create immediate understanding of who is in authority in a courtroom, but in a delinquent gang it would be understood with a different meaning entirely, adding nothing to authority.

Ceremonial display of less institutionalized rituals and symbols will create less certain expectations either in users or objects of power. To the extent that less well-institutionalized symbols or rituals create less certainty, they should decelerate emergence, deflate the amount of power, and create less stable power. The effect on the visibility of power is perhaps more complicated because symbol and ritual are themselves significant only to the extent that they visibly display power. But there are nevertheless two ways in which more widely institutionalized symbols and rituals of power reduce its visibility. First, visible symbols of the institutions of power, like police weaponry, so widely diffuse expectations, and gives them so much certainty, that no particular exchange between any particular A and B is required to establish them. Hence, particular gestural politics are not needed. Secondly, when particular gestural politics do occur it is possible to carry them on at a largely symbolic level, reducing the visible use of "real" powers, such as firing weapons or wielding clubs.

V. Summary and Conclusion.

Our starting point is a subjective-expected-utility (SEU) theory of interpersonal power. By "power" we refer to the use of rewards and/or penalties to induce or coerce compliance. In an SEU theory, power is used if the gain from its use exceeds the cost. The gain depends on the sum of the subjective values, or utilities, of the various possible outcomes of using power each multiplied by the subjective probability of the outcome. Costs are obtained in the same way, depending in part on how likely it is that the other complies. Compliance itself occurs if the sum of the SEU of rewards and penalties exceeds the difference in SEU between noncompliance and compliance.

The subjective probabilities of an SEU theory are one kind of expectation, about probable future use of rewards/penalties and compliance. Relative to SEU theories, we further complicate the expectations involved in power by introducing more sources, kinds, and levels of them. Sources include not only direct experience of A and B with each other but also various indirect sources such as socialization to a pre-given tradition. Kinds include not only expected reactions but also preferences and resources. Levels include not only first-order but second-order expectations. (First-order expectations include A's expectations about the preferences, resources, and reactions of B and B's expectations about the preferences, resources, and reactions of A. Second-order expectations include A's expectations about B's expectations about A and B's expectations about A's expectations about B.)

A system of expectations that is complete, i.e. all first- and second-order expectations exist, and about which A and B are certain implies (1) that expectations in any particular instance emerge instantaneously; (2) that the amount of power created by a given stock of resources is amplified, i.e. that expectations induce a greater amount of compliance; (3) that the amount of power they create is relatively stable, creating the conditions of its own persistence; but (4) that power is much less visible than any other theory of compliant actions predicts.

But the magnitude of these effects depends on the certainty and completeness of the expectations. The less certain and complete they are, the slower the emergence, the less they amplify power, the less stable power is, and the greater its visibility.

No attempt is made to exhaustively treat all sources of certainty, but four that are important are: (1) Consensus between the expectations of A and B and congruence of their behavior with these expectations; (2) The status, number, and consistency of third parties, C, who transmit expectations to A and B; (3) The extent of social validation and expected support by third parties, C, once expectations are formed; and (4) the extent to which symbols that communicate about power are institutionalized in the system of which A and B are part.

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FOOTNOTES

1. We assume that the utility of penalties is negative. We omit subscripts for $\psi_u(r)$ and $\psi_u(t)$ but note that they may or may not take the same value of ψ .