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Power and Influence: A Theoretical Bridge*

DAVID WILLER, *University of South Carolina*
MICHAEL J. LOVAGLIA, *University of Iowa*
BARRY MARKOVSKY, *University of Iowa*

Abstract

Frequently social theorists conflate power and influence, often subsuming influence under a broad conception of power. Two contemporary theories separate them. Elementary theory has investigated power, status characteristics and expectations states theory has investigated interpersonal influence, and neither theory has considered the phenomenon of the other. We use the two theories to explain how power produces influence and how influence produces power. We develop a theory that shows how the emotional reactions of group members mediate the influence produced by power. We examine some new data and hypothesize that influence produces power. We trace the consequences when power and influence are opposed within a single relationship. Implications outside the limitations of the laboratory are discussed along with new hypotheses to be tested.

Conceptions of *power* and *influence* are fundamental to the understanding of society. Consider the ways in which power and influence can occur in a social situation. A successful executive with a legendary work ethic asks a salaried employee to stay late to complete an important proposal. The employee agrees and cancels her plans for the evening. We would say that the executive used her influence to convince the employee to stay. Or, the exchange could have been more direct. The executive might have told the employee that if she stayed late, the executive would recommend her promotion. The executive has offered a reward in exchange for the employee's compliance (and implied a threat if she failed to comply). We would say that the

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executive used power to induce the employee's compliance. Of course, power might be operating in the first scenario as well. Because of the executive's position as her superior, the employee might have perceived a threat or promise of reward though none was stated.

Conceptions of *power* and *influence* are also fundamental to sociology. Both terms are used in many ways by diverse researchers. Influence, for example, is sometimes considered an aspect of power. However, more narrow definitions clearly separating the two concepts may have important advantages for social analysis. Recently, research programs have progressed by defining the domain of power phenomena more narrowly and analyzing it more rigorously. Network exchange theories of power have limited their definition to differences in network position that advantage certain actors when negotiating for resources.[1] Limiting the definition of power in this way excludes most forms of influence. In studies of status characteristics and expectation states, influence derives from expectations that group members have for each other's competence.[2] Influence occurs when the *advice* of competent members is followed. Limiting influence in this way excludes the conditions of power studied by network exchange theories.

Although research programs investigating power have developed independently from those investigating influence, some theoretical connections have been made. Here we build on previous work to explicitly link the elementary theory of structural power (Willer 1981a, 1981b; Willer 1987; Willer & Markovsky 1993) and status characteristics and expectations states theory as it applies to interpersonal influence (Berger et al. 1966; Berger & Conner 1974; Berger et al. 1985). Both theories are good examples of cumulative research progams (Szmatka & Lovaglia 1996); both have been tested in experimental programs as extensive as any in sociology; both have also been applied in the field.[3] Their unusually high degree of development makes it possible to apply the theories jointly, once explicit links between them have been found.

This article does not seek to integrate elementary theory and status characteristics theory into a single theory. Instead we bridge between the theories so that the two can be applied together. These joint applications relate power and influence in ways not possible for either program taken alone. We ask whether power produces influence and whether influence produces power. The answers that we seek have implications that are more general and richer than inferences from either theory taken alone. We offer hypotheses which, if supported, will contribute to the growth of both programs while overcoming limits of each. While not attempting an integration here, we do not reject theory integration as a long-term goal. To the contrary, these joint applications can serve as a feasibility study before the larger task of theory integration is taken up.

Background and Theory

We define *power* as the structurally determined potential for obtaining favored payoffs in relations where interests are opposed. It is the executive's position that gives her power over the employee, rather than anything intrinsic to the person occupying the position. We define *influence* in a way that clearly distinguishes it from power. Influence is the socially induced modification of a belief, attitude, or expectation effected without recourse to sanctions.

The theoretical distinction between power and influence may or may not be warranted. Wrong (1979) adapts Russell's (1938) philosophical ideas to fashion a definition of power that encompasses influence: "*Power is the capacity of some persons to produce intended and foreseen effects on others*" (Wrong 1979:2, italics in original).[4] Psychological definitions of *power* can be even more inclusive. For Heider (1958) *power* is a person's ability to accomplish something, to alter the environment — whether human or nonhuman — in some way, while social power is a person's ability to cause another to do something. On the other hand, the concept of influence can include power. Zimbardo and Leippe (1992:2) define social influence as "the changes in people caused by what others do." Wrong (1979:4) asserts that "Power is identical with *intended* and effective influence" and French and Raven (1968:260) "define power in terms of influence and influence in terms of psychological change." These uses result in a diffuse concept expressed in two different ways depending on the context. When power and influence are identical, that A influences B's activity by changing B's beliefs is an example of power, whereas influence would be A changing B's behavior through threat of force.[5] Although a delimited conception of power has proven easier to approach empirically, the broader view of power continues to spawn some research.[6]

Other theorists have sought to demarcate power and influence. For Parsons, power derives from "positive and negative sanctions" through which "ego may attempt to change alter's intentions" (1963a:338)[7] whereas "influence is a way of having an effect on the attitudes and opinions of others" (1963b:38). This distinction is like that drawn earlier by Bierstedt, for whom "influence and power can occur in relative isolation from each other." For Bierstedt (1950), Karl Marx was influential upon the twentieth century, but he was not powerful. "Stalin, on the other hand, is a man of influence only because he is first a man of power" (1950:732). Zelditch (1992:995) draws the distinction more sharply, "What distinguishes power is that it involves external sanctions . . . Influence, on the other hand, persuades B that X is right according to B's own interests." Mokken and Stokman's distinction is similar: "The exercise of influence takes place mainly by means of persuasion, information and advice" (1976:37), but, for power, "force, coercion and sanctions are *sufficient*" (1976:35, italics in original).[8]

A theoretical distinction between power and influence will only prove useful if it entails empirical consequences. Table 1 shows the different antecedents and consequences of power and influence as the terms are used in the theories upon

which we focus, and the empirical tests in which those theories have been applied. Briefly, elementary theory locates power in the structure of exchange networks and, when power differences occur, predicts different payoffs for exchanging actors. Status characteristics theory locates interpersonal influence in the status (prestige) order of a group. When status differences occur, low status actors alter their behavior to conform with advice of high status actors because that advice is expected to be competent and beneficial to the group.

The two theories do not cover all kinds of influence and power. For example, status characteristics theory does not deal with the effects of persuasion, and elementary theory does not predict power from negotiation styles. Furthermore, here we will focus only on the network exchange theory component of elementary theory,[9] not considering elementary theory's applications to coercive relations with negative sanctions. Nevertheless, the definitions that the two theories provide for power and influence apply to a broad base of literature. In defining power, Weber ([1918] 1968) and Aron (1988) focus on the gain to the high power actor, while Dahl (1957, 1968) and Lukes (1974) focus on the loss to the low power actor. Because the larger payoffs of high power actors result from low power actors' smaller payoffs, power in exchange networks links gains to losses. Wrong's and French and Raven's definitions of power quoted earlier emphasize control. Elementary theory is more specific and deals with control only as it relates to valued outcomes. In regard to the belief change brought about by influence, we mean an expectancy regarding a property of an object or event (Rotter 1972). By implication, expectations need not be consciously recognized by those who hold them. To detect influence it is sufficient to note behavior change in the absence of sanctions for that behavior. In experiments, the acceptance or rejection of influence is measured by the difference between the initial and final decision of a subject given disagreement with another actor when that actor is not capable of rewarding or punishing the subject (Berger et al. 1977).

Having two hitherto independent theories, elementary theory and status characteristics theory, which have not investigated the central phenomena of the other, we begin with power and influence sharply demarcated. Our initial treatment of power and influence as distinct phenomena will not dictate our conclusions, however. Because we bridge between the two, a convergence is possible. For example, if power and influence freely produce each other from similar conditions, the terms should be merged. Alternatively, relations may be asymmetric requiring power and influence to be kept distinct but understood as related phenomena.

As our argument unfolds it will become apparent that the distinction between power and influence is useful and that the relationship between them is complex. For example, whether power confers influence depends in part on emotional reactions and we offer new formulations to explain these mediating factors. The ideas of the article are developed in the following sequence: (1) elementary theory as it is applied to power in exchange networks; (2) influence as formulated by status

TABLE 1: Structures and Predicted Events for the Two Theories

Theory	Type of Structure	Events	Predictions
Elementary Theory	Exchange Network	Power Exercise	High vs. Low Payoffs
Status Characteristics Theory	Status Order	Interpersonal Influence	Stable vs. Changed Beliefs

characteristics theory; (3) theoretical work explicating the effects of structural power on interpersonal influence and new data on the mediating role of emotional reactions; (4) theoretical work explicating the effects of status expectations and influence on power in exchange networks; and (5) implications when power and status are opposed in social relationships.

EXCHANGE STRUCTURES AND POWER

Power occurs in relations where the interests of actors — individual or corporate — are opposed but complementary (Willer & Markovsky 1993). Exchange relations are mixed motive games and interests are opposed in that agreements with higher payoffs to one actor necessarily have lower payoffs to the other (Willer 1985). Interests are complementary in that neither actor can benefit without reaching some agreement. In many experiments, exchange is operationalized as the mutual transfer of rights to portions of valued resource pools to actors A and B (Markovsky, Willer & Patton 1988). In such cases, actors' interests are opposed in the sense that the greater the proportion of the resource pool that is gained by one actor, the less the other can receive.[10] At the same time, A and B have complementary interests in cooperating with one another: Agreements for resource allocations must be *mutual.* Power occurs, for example, when A can demand more from B without fear of loss — as when A has a partner who serves as an exclusive alternative to B, but B has no such alternatives. A's profit in the relation will be greater than B's.

Network exchange theories distinguish "power structure" which refers to network conditions like exclusion from "power exercise," the observable consequences of structural power. Exchange researchers measure power exercise by actors' relative payoffs: the actor gaining more exercises power (Bienenstock & Bonacich 1992; Cook & Emerson 1978; Markovsky et al. 1988). In experimental settings, the situations of two actors are hypothesized to be identical except for their position in the exchange network. This allows the inference that the power structure produced different payoffs for the actors, such that some exercised power over others. Individual differences such as negotiating style are controlled by randomly assigning subjects to network positions.

Elementary theory predicts power from two conditions: an actor's best expected payoff called "Pmax," and the actor's expected payoff at confrontation, i.e., when negotiations break down, called "Pcon" (Willer & Anderson 1981; Willer & Markovsky 1993). Consider the exchange relation between actors A and B where they divide ten resources that are lumpy in units of one, only bundles of whole units can be exchanged. Here $P_A$max = 9: A hopes at best for nine, leaving the minimum of one as the inducement for B to exchange. If neither A nor B has a source of profit outside the relation, the relation is symmetrical so Pmax is also 9 for B. If the two fail to agree on a division, they are in confrontation and both gain zero. That is to say, $P_A$con = 0 and $P_B$con = 0. Neither A nor B has a power advantage and equal division of the resource pool is predicted.

But now assume A has a fixed alternative of six units that can only be realized if A does *not* exchange with B. In this case A need not accept less than six from B, so A's payoff at confrontation is now six, in contrast to B's zero. That is to say, $P_A$con = 6 and $P_B$con = 0. Furthermore, now B can hope for no more than four from A. So now Pmax for B is 4, but Pmax for A remains at 9. When A and B allocate the resource pool, A has an advantage and will acquire more resources than B. The difference in acquired resources indicates A's power exercise over B. The research problem is to predict that resource division.

RESISTANCE THEORY

Resistance theory is the branch of elementary theory that systematically relates expected best payoffs and payoffs at confrontation to predict resource divisions and thus the amount of power exercised in exchange relations (Willer 1981b, 1987). When P_A is A's predicted payoff from exchange and, as explained above, P_A max is A's best expected payoff and $P_A$con is A's payoff at confrontation, A's resistance is:

$$R_A = \frac{P_A \max - P_A}{P_A - P_A \mathrm{con}} \tag{1}$$

Exchange occurs when the resistance of two actors is equal. Then

$$R_A = \frac{P_A \max - P_A}{P_A - P_A \mathrm{con}} = \frac{P_B \max - P_B}{P_B - P_B \mathrm{con}} = R_B \tag{2}$$

For the example above, A and B have a 10-point resource pool to divide, while A has a fixed offer of 6 as an exclusive alternative to exchanging with B such that $P_A$max = 9, but P_B max = 4 while P_A con = 6 but P_B con = 0. It follows that

$$R_A = \frac{9 - P_A}{P_A - 6} = \frac{4 - P_B}{P_B} = R_B \tag{3}$$

Since for any agreement $P_A + P_B = 10$, we solve for $P_A = 7.71$ and $P_B = 2.29$. The inequality of this resource division is the amount of power A exercises over B.

Power Structures

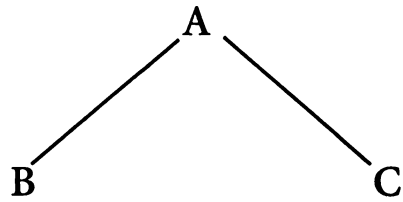
Power in exchange networks results when some positions are more likely than their potential exchange partners to be excluded from exchange and from receiving the profits that thereby accrue (Markovsky et al. 1988; Markovsky et al. 1993). In the 2-branch of Figure 1, A is connected to B and C, and both relations contain ten valued resource units. Assume that only one agreement is possible in any exchange round. If A reaches an agreement with B, then C is excluded from exchange and profit. If A reaches agreement with C, then B is excluded. On the other hand, A need never be excluded.

In a series of exchange rounds, the agreement reached by B or C with A in the previous round determines best hopes and payoff at confrontation for the actors in the current round. The production of power differences in exchange networks is modeled by a series of calculations similar to the analysis of the A - B exchange above where A had a fixed alternative. Now any offer from either B or C affects the other relation as did the alternative payoff. For example, let B offer A an equal division, $P_A = 5$ and $P_B = 5$. The offer of 5 from B affects A's negotiations with C. Because A can gain 5 from B, P_{AC}con = 5 which substantially increases A's resistance to any offer from C.[11] Furthermore, in light of B's offer, C's expected best payoff has declined from nine to $P_C$max = 5. Solving for the equiresistance settlement as above gives $P_A = 7.22$ and PC = 2.78. When A exchanges with C at this rate, A's bargaining position with B will be further enhanced in the next round. The process continues with A very soon collecting nearly all the available resource units in exchanges with either B or C.

The 2-branch of Figure 1 is the simplest example of a family of networks called strong power structures. All strong power structures contain two distinct sets of connected positions. One set consists of one or more high power positions that, like A, need never be excluded. The other set is two or more low power positions, like B and C, at least one of which is always excluded. For example, the 3-branch of Figure 2a is also a strong power structure, but only when A is restricted to no more than 2 exchanges per round of bargaining. In general, interpersonal power in these structures is due to exclusion rates that produce falling expectations for those low in power and increasing payoffs for those high in power. Because some positions are necessarily excluded and others not, power differences are extreme.[12]

Outside the laboratory, the sets of high and low power positions in strong power structures are frequently differentiated by property conditions. For example, owners of capital own their positions in the capitalist firm whereas workers do not. When a labor market is overfull, the capitalists form the set of high power positions for none is ever excluded from buying labor. Workers seek to occupy the set of low power positions, but some will be excluded from employment. Both the size of wages and the direction of labor by capital within firms reflect these power differences.

FIGURE 1: A Two-Branch Network

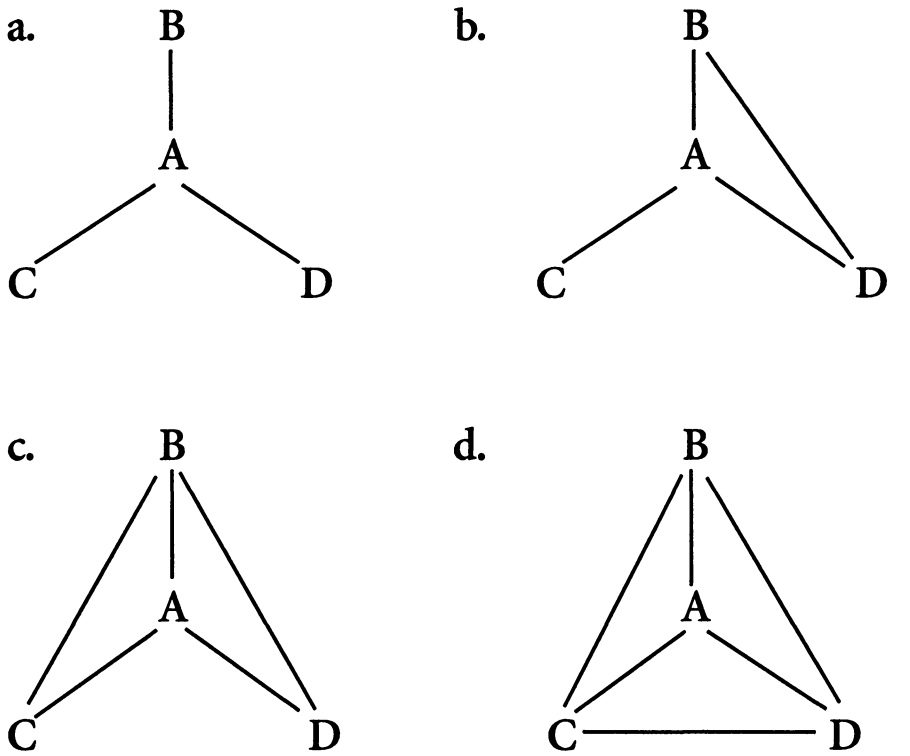


The analysis of "weak power" structures further supports the relation between exclusion and power. When all positions exchange only once, the networks of Figure 2b, 2c and 2d, are not strong power like 2a because no position is necessarily excluded from exchanging. Instead, 2b and 2c are weak power networks in which agreements fall between the extremes of strong power networks such as 2a and the equal divisions of equal power networks like 2d (Markovsky 1992; Markovsky et al. 1993). All else being equal, these resource divisions can be predicted from the differing likelihoods that positions will be excluded (Friedkin 1995; Lovaglia et al. 1995a; Skvoretz & Willer 1993). In Figure 2b, the 2a branch has been "short circuited" by adding a relation between B and D. Now A, which is never excluded, will gain approximately 6 to 4 divisions with C, which is the most likely to be excluded. Adding a B-C relation weakens power differences further. Now B is also never excluded and A and B are of equal power and only slightly higher in power than C and D. Finally, in the Figure 2d network, all positions are identically connected and there are no power differences. Both frequency of exchange and average resource divisions from exchange can be predicted from relative rates at which actors are excluded from exchange (Lovaglia et al. 1995a, 1995b; Markovsky et al. 1988, 1993; Skvoretz & Lovaglia 1995; Skvoretz & Willer 1993).

Competitive mobility in a hierarchy produces structural power differences by a variant of exclusion (Willer 1981b). In the exclusionary structures above, low power positions are either included and exchange, or they are excluded and gain nothing. Payoffs to actors occupying positions in hierarchies are similarly stratified. The promoted official receives higher pay and occupies a more privileged position. The official excluded from promotion remains in a lower paid and less favored position. The effect of mobility on power in hierarchies has been tested directly. In an experiment contrasting two hierarchies, differences in power were found for the hierarchy with mobility but not for the hierarchy where people were fixed to positions (Willer 1987).[13]

Looking outside the laboratory, there are hierarchical organizations, like bureaucracies, which have many pairs of levels. Subordinates compete to move from lower to higher levels and this power condition is manifested between each

FIGURE 2: Strong, Weak and Equal Power Networks



pair of levels resulting in a concentration of power at the top. By contrast, there are hierarchies like feudal structures in which all positions are inherited from birth. Therefore, people are fixed to positions. Because feudal structures lack competitive mobility, though power differences occur due to differences in resources, power concentration falls far short of that typical of bureaucracies.

Not all hierarchies with mobility are equally effective as power instruments because some fail to make promotion competitive. For example, Kanter's (1977) study of gender and promotion in the firm suggests that women are less loyal because of limited promotion opportunities. Power centralization in Soviet-type societies was sharply limited by the existence of patronage systems (nomenklatura) through which some officials were designated for promotion and others not (Kornai 1992; Urban 1989; Walder 1995). Because sexism and patronage reduce competition for promotion, both reduce overall power differences in the hierarchy. When some are designated for promotion and others never promoted, neither group has an interest in competing to offer greater and greater obedience to the top, thus inhibiting power centralization. Because designating those to be promoted in

advance eliminates competition, the effect is like eliminating mobility itself: power is no longer centralized.[14]

In sum, we have shown how the structural capacity to exclude others from valuable exchanges can foster power in a wide variety of social settings, from simple strong and weak power-exchange networks created in the laboratory to more complex hierarchies that allow varying degrees of social mobility. We now turn to examine processes of influence before applying theories of power and influence together.

STATUS AND INTERPERSONAL INFLUENCE

Influence occurs when actors change their behavior because they expect that change to benefit them or the group to which they belong. When a group forms to accomplish a task — for example a rescue team trying to find a lost child, a research and development group developing a product, or a corporation out to make profit — it is necessary for members to coordinate their behavior. They do so by following the suggestions of group members expected to be most competent at accomplishing tasks valued by the group. The rescue team might turn to an expert tracker, the research and development group to the person who recently invented a successful process, and members of a corporation might willingly follow a new CEO known to have successfully turned around several failing companies. The likelihood of success increases when group members follow the advice of those competent at valued tasks. The differing expectations members have for each other's competence creates a status hierarchy with prestige, honor and deference accorded those whose contributions are expected to be most valuable (Berger et al. 1980). Status characteristics theory explains how status hierarchies are created and maintained in task-performing groups (Berger & Conner 1974, Berger et al. 1966, 1972, Berger et al. 1977; Berger & Zelditch 1985). A key consequence of a member's status is the influence she or he has over group decisions.

Status characteristics are differentially valued qualities associated with actors. These characteristics can be either diffuse or specific, and have the capacity to establish and/or alter actors' expectations regarding another's competence. The existence of competence expectations need not have a rational basis. For example, in some cultures light skin is preferred over dark. In the United States, light skin has been associated with competence in a wide variety of situations. Thus, race is a diffuse status characteristic. Chess playing ability, in contrast, is a specific characteristic associated with competence at chess but not necessarily with other abilities. Status characteristics theory proposes that group members form expectations for each other's competence based on observable status characteristics. These expectations then produce a status hierarchy in which high status members (1) are given more opportunities to perform, (2) perform more, (3) are given higher

evaluations for their performances, and, most importantly for the present discussion, (4) have more influence over group decisions.

The theory asserts that group members aggregate information about different status characteristics when forming expectations about each others' competence. For example, suppose that a city council appoints a three-person citizen's subcommittee whose members were strangers prior to their first meeting. The members include a male doctor, a female doctor, and an unemployed woman brought together to work collectively to solve a certain problem. Initially, these people know nothing else about one another. Assuming that the council is in a culture that values males more than females, and doctors more than the unemployed, the theory predicts how these actors will rank themselves in terms of expectations for task competence. In the absence of information pertaining directly to specific task competence, the unemployed woman will be lowest and the male doctor highest.

In fact, unless their status characteristics are explicitly dissociated from the task at hand, it does not matter that the task may have nothing to do with medicine or gender. The group's competence expectations manifest in behaviors during interaction: when diffuse status characteristics are decisive, the male doctor will have influence over the female doctor and both will influence the unemployed woman. Although this example is simple, it suggests the complex and subtle implications of the theory when multiple and sometimes inconsistent status characteristics are salient. The theory has been extensively tested and supported with research both in and out of the laboratory (Berger et al. 1977; Moore 1985; Berger et al 1992; B. Cohen & Zhou 1991; E. Cohen & Roper 1985; E. Cohen 1993).

While status affects the potential for influence, other factors may intervene. Emotional reactions also play a role. Research has demonstrated a wide variety of mood-congruent social judgments (Bower 1991; Forgas & Bower 1987 1988; Mackie & Worth 1991; Shelly 1993). In particular, Baron (1987) found that interviewers in a negative mood evaluated job applicants more negatively than did interviewers in a positive mood. This suggests that mood alters expectations for competence. We evaluate others more highly when we are in a positive mood, more negatively when we are in a negative mood. Recently Lovaglia and Houser (1996) showed that emotional reactions not only produce differences in influence congruent with emotion, but also that the effects of emotional reactions on influence combine with the effects of status characteristics. A theory that takes into account the combined effects of emotional reactions and status characteristics will be useful in showing how power differences affect influence (Lovaglia 1994, 1995, 1997).

REWARD EXPECTATIONS, POWER AND INFLUENCE

The reward expectations branch of status characteristics theory (Berger et al. 1985) suggests that power differences should lead in a straightforward manner to corresponding differences in influence. Recall Bierstedt's (1950) comment that

Stalin was influential because he was first powerful. We examine this relation below. That power can lead to influence agrees with Homans's (1974) contention that power is the fundamental process in society. We do not assert, however, that power necessarily leads to influence. To explain the path from power to influence requires that we also consider scope conditions, actors' perceptions, and emotional reactions.

According to elementary theory, the result over time of power exercise is the accumulation of resources by high power actors, while smaller resource flows to low power actors make resource accumulation difficult or impossible (Skvoretz & Lovaglia 1995). It is the accumulation of resources that suggests increased influence for the powerful. Ridgeway's (1991) status-value theory also concludes that resources are used to form expectations of competence. She adds that because resources can be used to bring about group goals, those who hold resources are accorded high status by group members.

Reward expectations theory proposes that resources are related to status characteristics through cultural beliefs (Berger et al. 1985). For example, assume a capitalist society in which all actors accept the legitimacy of meritocracy. More competent performers should be paid more than less competent performers. Reward expectations theory asserts that the cultural belief that competence is rewarded becomes generalized in members' expectations, thereby engendering a belief that those who are highly rewarded are also more competent. From the belief that competence brings rewards comes the expectation that those rewarded are competent. It follows that highly rewarded actors will be judged more competent. They should then be accorded more influence by group members. This theoretical proposal has been tested and supported in empirical studies (Bierhoff et al. 1986; Harrod 1980; Stewart & Moore 1992).[15]

The fundamental assumption of status characteristics theory is that expectations for competence produce a status hierarchy in task groups. Members for whom the group holds expectations for high competence have higher status and influence than do members for whom the group holds expectations for low competence. We can now put elementary theory together with reward expectations theory and status characteristics theory to specify the relationship of power to influence.

In elementary theory, the exercise of power produces high rewards and an accumulation of resources for the powerful. In reward expectations theory, high rewards produces expectations of high competence for actors attaining them. Ridgeway's (1991) status value theory proposes that resource accumulation also produces expectations of high competence for resource holders. In status characteristics theory, expectations of high competence produce influence. Thus, high power should lead to increased influence for the powerful. Lovaglia (1995) tested this theory in the laboratory. He found some evidence of increased expectations for competence of a high power partner, but no difference in influence between high power and low power partners emerged. Instead, Lovaglia (1995) found that power exercise produced emotional reactions in subjects. Low power subjects had more negative emotional reactions than did high power subjects. This

brings up problems of scope: Do the power processes described by elementary theory fall within the scope of status characteristics theory?

Issues of Scope

Status characteristics theory applies to situations where group members are collectively oriented to a cooperative task. When the group achieves its goals, all members share in the success though some may have contributed more than others. Elementary theory applies to mixed motive exchange situations where outcomes are both cooperative and competitive. Because group members must agree to exchange before anyone can benefit, exchanges are cooperative. Because the more profit gained by one partner in exchange, the less gained by the other, the terms of exchange are competitive. Since status characteristics theory does not mention competitive situations, application to exchange, while open to question, is not explicitly disallowed.[16]

Berger et al. (1977:37) provide four scope conditions for status characteristics theory. (1) Group members must be task oriented. Their primary motivation is solving some problem. (2) They must expect that some characteristic is instrumental to that solution. Possessing a high state of the characteristic increases the likelihood of success. (3) The task is valued. A successful outcome is preferred over an unsuccessful one. And (4) Group decisions are collective. It is necessary to consider the contributions of all members. Exchange relations satisfy conditions 1 and 3: negotiating an exchange is a problem with valued outcomes. Either an exchange occurs and both parties profit to some extent, or no exchange occurs and neither profits. Reward expectations theory satisfies 2 by linking the profit resulting from exchange to status characteristics. Condition 4, then, is decisive. That exchange agreements are collective is necessary, but is it sufficient? Does the fact that agreements are also competitive put them outside status characteristics theory's scope? Our answer is not global but contingent: only some, not all, exchange conditions are outside status characteristics theory's scope. We propose a scope extension for cases in which exchange is outside of status characteristics theory's present scope conditions.

Applying status characteristics and expectations states theory and elementary theory together raises two distinct questions, and issues of scope bear differently upon them: (1) does power produce influence? (2) does influence produce power? We first consider the path from power to influence in the following section; for that path there is evidence that the scope of status characteristics theory needs to be extended. Lovaglia (1995) found that high power actors were not more influential

than low power actors. We use the theory of emotional reactions and status characteristics (Lovaglia & Houser 1996) to extend status characteristics theory and explain how power produces influence, then demonstrate how the influence resulting from power use sometimes is blocked by emotional reactions. Then we turn to examine the path from influence to power and show that, for that path, the scope of status characteristics theory need not be extended.

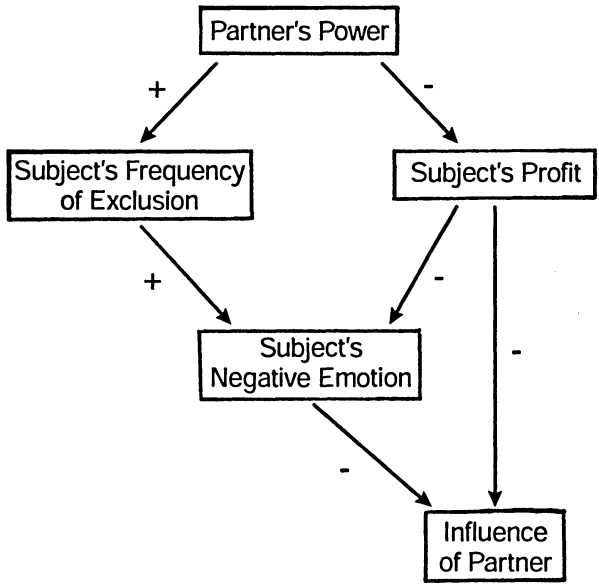
EMOTIONS MEDIATING THE EFFECT OF POWER ON INFLUENCE

It seems likely that a power advantage would produce an advantage in influence for the powerful if influence were not blocked by negative emotional reactions of those on whom power was exercised. However, because we are predicting that emotions mediate the effect of power on influence, demonstrating the process is difficult. Because negative emotional reactions engendered in low power subjects increase their resistance to influence of high power subjects, and positive emotional reactions of high power subjects reduce their resistance to influence of low power subjects, direct effects of power on influence will be countered by the effects of emotional reaction on influence. Lovaglia (1997) proposed to overcome this difficulty through a series of studies. To demonstrate the effects of power on influence mediated by emotion it is necessary to find that (1) power differences produce typical emotional reactions in those high and low in power, (2) these typical emotional reactions affect resistance to influence as predicted by the theory, and (3) the effects of emotional reactions combine with other status cues to affect resistance to influence. If it could be shown that low power actors have more negative emotional reactions than high power actors, that negative emotional reactions increase resistance to influence, and that the effects of emotional reactions combine with other status cues such as rewards, then we can infer that high power actors do gain influence, but that the negative emotions of those low in power can block that influence. Figure 3 models the theoretical elements relating power, emotion, and influence. The following section reports results that satisfy criterion 1 above, and shows how previous research has satisfied criteria 2 and 3.

Emotional Reactions to Power Use: New Research

In this section we present findings from new research connecting power to influence and relate those findings to related work already published. To complete the first study in the series proposed by Lovaglia (1997) above, we measured the effects of power differences in network exchange on the emotional reactions of participants. Following Lovaglia (1994, 1995, 1997), we predict that low power actors in the exchange network would report more negative emotion than high power actors after a series of exchanges.

FIGURE 3: Modeling the Effects of Power Use on a Partner's Influence in an Exchance Relation



To test the hypothesis, subjects negotiated with each other in the 2-branch, a strong power network, where they exchanged at most once in a round of bargaining. Subjects negotiated exchanges in a new variation on an exchange setting that has previously been used successfully to produce power differences (Lovaglia et al. 1995a). Like the old setting, it consists of networked personal computers. Because it is a "limited information setting," subjects were isolated in rooms and knew only the coded designations of their exchange partners. They negotiated exchanges in each of 60 rounds. Subjects did not divide a resource pool as in the older version. Rather, each attempted to trade units of one commodity for units of a second commodity. In each round, subjects sent a message to each partner declaring how much of one commodity they were willing to part with and the least amount of the other they were willing to accept. A central computer awarded agreements to pairs of subjects whose offers were compatible. Subjects began each round with 10 nuts and traded for bolts, and following exchange were awarded 5 points for each nut and bolt combination and 1 point for each extra bolt or nut. For example, if an agreement was reached where a subject traded 4 nuts for 7 bolts, the subject has 6 nut and bolt combinations worth a total of 6 x 5 = 30 points plus 1 extra bolt worth 1 point. The subject earned 31 profit points in that round. Subjects were told that the more profit points they earned the more money they would be paid at the end of the experiment. As with the earlier setting, power is indicated by the

average number of points earned in a round of bargaining. In reporting the results, we average earnings over the last 10 rounds of bargaining to allow power to approach its full potential. If, for example, the peripheral positions in the 2-branch earn substantially less than the central position during the last 10 rounds of bargaining, we can infer that the central actor is in a high power position and has exercised power over the peripheral, low power, positions in the network

After 60 rounds of bargaining, subjects completed a questionnaire that asked them how they felt while trading with their partner(s). Subjects marked a 9-point scale anchored by the emotion items: extremely happy - extremely unhappy, extremely angry - not angry at all, extremely satisfied - extremely dissatisfied, extremely disappointed - not disappointed at all, extremely resentful - not resentful at all, and extremely sympathetic - not sympathetic at all. Lovaglia and Houser (1996) found that subjects who rated themselves more negatively on these emotion items were more resistant to influence. We constructed a negative emotion scale by transforming the items so that the negative end of the scale was 9 and the positive end was 1, adding subjects' scores on the transformed items, then dividing by the number of items. The resulting negative emotion scale ranges from 1 (very positive emotion) to 9 (very negative emotion). If the central, high power, actor in the 2-branch reports less negative emotion than the peripheral, low power, actors, then we can conclude that power use produces negative emotions in those subjected to it.

In all, 60 undergraduate subjects — 20 groups of 3 persons each — negotiated in the exchange setting. In each 2-branch group, one person occupied the high power position, A, and two occupied low power positions, B and C. We first wanted to check that power was created in the experimental situation and that the negative emotion scale was sufficiently reliable before testing the hypothesis that power use would produce negative emotion in low power subjects. A substantial power difference between high power and low power positions is indicated by a t test comparing the average number of profit points acquired in exchanges between A (mean profit = 30.53, std. dev. = 5.92) and either B or C (mean profit = 14.32, std. dev. = 8.20), $t(58)$ 7.87, $p < .001$. In addition, low power actors were excluded from exchange more often (5.75, std. dev. = 2.72) than were high power actors (1.40, std. dev. = 1.23) during the last 10 rounds, $t(58)$ 6.80, $p < .001$. The difference in profit indicates that a power difference existed between positions in the experimental setting. The difference in number of exclusions suggests that structural power operates through exclusion as predicted by elementary theory. The negative emotion scale was also found reliable (Cronbach's $\alpha = .90$).

To directly test the hypothesis that assignment to a low power position increases negative emotion, we compared mean scores on the negative emotion scale for subjects in the high power position (3.41, std. dev. = 1.26) and the low power position (5.55, std. dev. = 1.57).[17] This difference is significant, $t(58)$ 5.29, $p <$ .001, and supports the hypothesis. Subjects in the low power position reported more

Taken individually, each emotion item showed a significant difference in the predicted direction. Further, the negative emotions produced were exactly those shown by Lovaglia and Houser (1996) to increase resistance to influence. Thus we have demonstrated the first finding necessary to show that power produces influence mediated by emotion, while Lovaglia and Houser (1996) have demonstrated the second.

Lovaglia and Houser (1996) develop a theory whereby the effects of status characteristics and emotional reactions on influence can be combined. The theory uses Kemper's (1984, 1991) conception of positive emotions as "integrating" and negative emotions as "differentiating." That is, positive emotions promote behaviors that bind group members together, while negative emotions promote behaviors that drive apart group members. Thus, when a group member feels positive emotion she is more likely to accept the influence of other group members than when she feels negative emotion. Recently, several studies have shown that negative emotions can block the influence effects of status characteristics (Lovaglia 1995; Lovaglia & Houser 1996; Lucas & Lovaglia n.d.).

The fact that emotions can counter status processes explains why power differences may not produce differences in influence. While a power advantage may produce increased expectations of competence for the powerful, negative emotional reactions by those upon whom power is exercised may block the effect of those expectations. Lovaglia and Houser (1996) found that the effects of emotional reactions combine with other status information to affect resistance to influence. A partner's influence over a subject was lower when the subject had been induced to feel negative emotion than when induced to feel positive emotion. A partner who possessed several high status characteristics had greater influence over a subject than did a partner who possessed several low status characteristics. But when emotion and status characteristics were combined, a partner who possessed several high status characteristics had about the same amount of influence over a subject induced to feel negative emotion as a partner who possessed several low status characteristics had over a subject induced to feel positive emotion. Lovaglia and Houser (1996) found that a partner with high status characteristics decreased a subject's resistance to influence, the subjects' negative emotion increased a subject's resistance to influence, and the effects of subject's negative emotion counteracted those of partner's high status characteristics. This demonstrates the third and final finding necessary to show that power produces influence mediated by emotion. The conclusion possible from the three findings is that rewards and resources accumulated by those in positions of power may, but do not necessarily, produce increased influence depending on the emotions generated by power use.

Experiments support the Figure 3 model in the following way. The new experiment reported above shows that power use by a partner has two effects on a subject: (1) the subject is excluded more often and (2) the subject receives less profit from exchange. The experiment also shows that receiving less profit and being

excluded more often are associated with a negative emotional reaction in the subject.[18] However, Lovaglia (1995) shows that receiving less profit also increased the subject's expectations for the partner's competence, which should increase the partner's influence. Countering this process, Lovaglia and Houser (1996) shows that the subject's negative emotion decreases the influence of the partner and that the effects of emotion combine with the effects of other status information. Thus, increased expectations of competence created by the partner's profit advantage are countered by increased resistance to influence caused by the subject's negative emotional reaction.

The role of emotion in power and influence processes has two important implications. First, the exercise of power in one group can produce influence in a second.[19] That is to say, even when all low power actors in one group reject influence because of negative reactions to power exercised over them, accumulated resources can produce high status and thus influence over a second group of actors. The Roman Emperor influenced the Senate in part because of power exercised in the provinces (Antonio 1979). Second, power exercise can produce influence directly and in the same group of actors over which power has been exercised, but only if negative reactions are blocked. Let us assume, as does Weber ([1918] 1968) in his discussion of legitimacy, that low power actors can believe that high power actors deserve the fruits of power exercise. If that belief blocks negative reactions, then exercise of power produces influence directly and over the same group of actors. The following section addresses how influence may produce increased power.

CONVERTING INFLUENCE TO POWER

Analogous to the way power produces influence, it seems likely that influence can produce power. Weber asserts that high status frequently leads to increased power but provided little explanation (Gerth & Mills 1958). The classic description of the mechanism by which status and influence produce power is given by Blau (1964):

> Earning superior status in a group requires not merely impressing others with outstanding abilities but actually using these abilities to make contributions to the achievement of the collective goals of the group . . . , for example, suggestions that advance the solution of the common problem of a discussion group. . . . Having his suggestions usually followed by others is a mark of respect that raises an individual's social standing in a group, while others' social standing simultaneously suffers for two reasons, because they often follow his suggestions and because their own are rarely accepted. Initially, the high respect of the rest of the group may be sufficient reward for the contributions a group member makes. . . . [But] since the value of a person's approval and respect is a function of his own social standing, the process of recurrently paying respect to others depreciates its value. Hence, respect often does not remain an adequate compensation for contributions.

> Those who benefit . . . , therefore, become obligated to reciprocate in some other way, and deferring to the wishes of the group member who supplies the help is typically the only thing the others can do to repay him. As a result of these processes in which the contributions of some come to command the compliance of others, a differentiated power structure develops. (126-27)

Our approach is more specific than Blau's. Below we hypothesize that status characteristics impact on the resistance of exchanging actors by altering the key parameters, Pmax and Pcon. Because the relation is drawn from status characteristics and expectations states theory to *parameters* of exchange, not to the exchange relation itself, issues of fit between the mixed motive conditions of the exchange relation and scope conditions of status characteristics and expectations states theory are not relevant. Pmax and Pcon are expectations and the only issue is whether these expectations, like others, are subject to alteration by status characteristics. If they are, exchange outcomes and thus power exercised will be affected. We cite evidence suggesting that status has effects on exchange outcomes, and we offer a formalization linking expectation advantage and resistance parameters.

The Effect of Influence on Exchange

To describe more precisely the effect of status and influence on an exchange relation, we link status characteristics theory and elementary theory through their use of expectations. Recall from the section on resistance that Pmax and Pcon are expectations that actors hold with regard to the ongoing exchange context (Lovaglia et al. 1995a). Pmax, the actor's expected best payoff, and Pcon, the payoff at confrontation, can both change when power events occur in exchange structures. B, as a low power actor, has rivals whose offers to A set an upper limit on $P_B$max, B's expectations for a best possible payoff. When, as in the 2-branch, a network structure induces power processes, this upper limit declines over time, reducing B's resistance. Conversely, the offers of B and its rivals become better and better alternatives for A, the high power actor. As a result, $P_A$con rises, increasing A's resistance. Thus A exercises power, gaining more from exchange than does his low power partner.

Power exercise occurs because high power actors believe that they have alternative offers and because low power actors believe that they must accept less or be excluded. These beliefs or expectations (the belief may not be consciously held) may or may not be well founded in the existing power structure. It is only the beliefs and not structures that are necessary for exchange outcomes to manifest power differences. But for the effects of power to fully emerge, the beliefs of both high and low power actors must agree. For example, Willer (1987) reports on an auction in which the only person bidding made better and better offers because he believed, due to the methods of the auctioneer and his partner, that there were rival bids. The outcome depended not on the bids of others, but on the single bidder's

belief that there were other bids, and on the auctioneer's belief that the bidder believed there were other bids. This is an example of power produced by influence alone. In terms of resistance, power was exercised by the auctioneer because the bidder's Pmax was declining.

Status characteristics theory suggests that the production of power exercise through influence is common. An exchange relation with a high status partner is likely to be valued more highly than one with a low status partner. Thus we hypothesize that, when similar resources are offered, because resources of high status actors are valued more than those of low status actors, actors will prefer to exchange with high status actors. In terms of resistance, exchange with a high status partner increases an actor's best hope for profit in the exchange independent of the resources available. Similarly, because actors expect that a high status partner deserves more from exchange, a low status actor's point of confrontation may decline independent of the resources available.

We hypothesize that, net of other factors, actors will expect to lose less when failing to exchange with a low status partner than with one of higher status. Consistent with the idea from reward expectations theory that expected social outcomes correspond with social status, we hypothesize further that actors should expect to gain less when exchanging with a high status partner than with one of lower status. If these hypotheses are supported, then as the status of any actor increases, the frequency of encountering lower status actors increases and influence increases. As influence increases so does power as resource accumulation favors the high status actor.

Some research in economics supports these predictions. Two experimental studies have applied status characteristics theory to exchange to investigate the relation between influence and resource accumulation. Ball, Bennett, Eckel and Zame (1995:17) manipulated status in their study of six markets. They observed that high status actors gained "the vast majority of the surplus." They note that, "results so far indicate a surprisingly robust effect for the status treatment." (Also see Ball and Eckel 1993.)

Status characteristics theory has a highly refined and empirically successful formal model from which an experimental test of the production of power through influence can be developed (Berger et al. 1977, 1992). For our purposes, status characteristics theory's coefficient of expectation advantage, calculated on the basis of differences in status characteristics, captures the biasing effect that status-based influence is assumed to exert on structural power.[20] To integrate this factor with the resistance model, we follow Balkwell's (1991) method for standardizing the presumed impact of expectation advantage on a 0-1 scale. Let d indicate the expectation advantage of one actor over the other, and q is a scaling factor that indicates the robustness of the effects of status differences in a given setting. (For the disadvantaged actor, d is negatively signed.) The effect of the expectation advantage is then

$$E = \frac{e^{qd}}{1+e^{qd}} \tag{4}$$

where e is the exponential function. Because E ranges from 0 to 1, it readily integrates with the resistance model. That is, where P is the size of the resource pool over which actors are negotiating, and net of other factors that are known to affect resistance, Pcon = EP/2, and Pmax = (E+1)P/2. In words, an actor with the maximum status advantage would expect to receive, at worst, half the pool and, at best, the entire pool. It follows that an actor with maximum status disadvantage would expect to receive, at worst, nothing and, at best, one half the resources.

To briefly illustrate the predicted biasing effect of a status advantage, assume that (1) two actors are differentiated by a single specific status characteristic, (2) they are in structurally equivalent network positions, and (3) are negotiating over a pool of 10 resource units. Using values calculated by Berger et al. (1992), d = .990 and q is approximately .40. By the assumption that actors negotiate to the point of equal resistance, we would predict that the higher-status actor's profit will be 5.6, and 4.4 for the lower-status actor when negotiated over a 10-point resource pool.

Working the coefficient of expectation advantage from status characteristics theory into elementary theory's resistance model for negotiated exchanges constructs a bridge between two formal theories. From our standpoint, the principal result of this bridge is a broadened array of testable hypotheses. In addition to making predictions for any network configuration under a variety of assumptions about exchange conditions and actor strategies, the two theories together generate explicit predictions for the biasing of exchange outcomes on the basis of differential status characteristics among network inhabitants. We view this as yet another step toward increasing the applicability of highly abstract theories to important real-world phenomena.

If, as hypothesized, influence can produce power in exchange relations in the absence of the structural conditions for power, if power conditions are present then influence should amplify their effect. For example, weak power can become strong. Referring back to the Figure 2b network, A has a weak power relation with C, but assume that A is high status and can change C's belief to the effect that the B - D relation does not exist. Then C believes that the Figure 2b network is the Figure 2a network and we hypothesize that exchange ratios in the A - C relation should be like those in the strong power network. For example, when a manager's position is one of high status as well as high power over workers, those workers may expect increased costs for failure to comply with the manager's orders. The result is increased power for the manager. By using status characteristics theory and elementary theory together it may be possible to predict precisely the power gained by combinations of such factors.

POWER VS. INFLUENCE

Thus far we have focused on how power and influence can come to coincide. We first discussed how power produces influence. Arguably this is a common process. Powerful people in society seem to engage in a process that converts their power to high status, prestige and increased influence. For example, Rockefeller, Ford, Getty, Carnegie and Mellon all amassed great fortunes through sometimes ruthless methods. They then used their wealth to endow large projects dedicated to the public good, increasing their prestige considerably. We then hypothesized that influence produces power, cited limited evidence supporting the hypothesis and drew formal relations for future investigations. None of this suggests that power and influence advantages will always coincide. What if power and influence vary in opposite directions for related actors?

We suggest that power and influence can be opposed in the same relationship. A's influence negates B's structural power when A changes B's Pmax or Pcon in a direction that produces favorable outcomes for A. Assume that an administrative assistant wants the boss to believe that a filing system cannot be understood by anyone but the assistant. If the boss attributes specific, task relevant status characteristics to the assistant, and then believes that there are large costs associated with discharging him, the boss's Pcon becomes very large in a negative direction. The large absolute value of Pcon reduces the boss's resistance: The boss's power, which rests on the right to discharge, is countered. But for the clerk's influence attempt to succeed, he must be believed. This will depend in large part on the assistant's status — perhaps he has a higher academic degree than his boss. Higher status individuals are assumed to act in the best interests of the group (Ridgeway 1982) which in this case would include telling the boss the truth.

Whether an actor's statements are believed becomes important in exchange relations because actors' interests are opposed. If the clerk gets a raise based on his purported indispensability, he has used his influence to gain power at his boss's expense. However, should his boss discover his deceit, his influence would certainly decline. In a more basic exchange network, when the high power actor in the 2-branch bargains aggressively to extract the last penny from his low power partners, the high power actor's status in the group may fall. His heedless pursuit of advantage will elicit disapproval. Thus, the opposed interests present in exchange relations allow influence to be traded for power.

When organizations require expert knowledge and/or abilities in subordinate positions, they provide a basis for opposition between influence based on the specific status characteristic of expertise and power from higher to lower position. Influence based on expertness is like what French and Raven (1968) call "expert power" but status characteristics theory finds its origin in the status order, not in power conditions like exclusion. Taken together status characteristics theory and elementary theory suggest that power struggles in organizations develop when structurally disadvantaged actors have specialized knowledge, which is the basis for specific status characteristics. The theories suggest further that power struggles

such as these will not be resolved as long as structurally advantaged actors do not share that knowledge. For example, consider the power struggles between managers of professional sports teams and their stars. It would be more accurate to call these power and influence struggles, for official position can operate as a generalized status characteristic within organizations. If so, power relations from higher to lower official positions are accompanied by influence flowing from higher to lower official statuses, which is opposed by influence flowing from expert qualifications.[21]

Universities provide an example of organizations with ongoing power and influence struggles. Deans, provosts and chancellors hold formal power, especially in allocation of funds. They also exercise influence based on formal position but can have only a small fraction of the specialized knowledge held by faculty members. Thus the power and influence of central administration is potentially opposed by faculty influence which tends to countervail that power. It also should follow that faculty members whose stature is most generally recognized will be more influential, while those with lower recognition will be more subject to administrative power. Therefore, we hypothesize that high status faculty at research universities are more influential relative to their administrations than their counterparts at lower status universities and colleges.[22]

One way to resolve struggles when power and influence are opposed is for those who are in high power positions to eliminate the specialized knowledge required of those low power positions, thus eliminating their basis for influence. Eliminating specialized knowledge of subordinates has the added advantage of increasing power directly by opening low power positions to less skilled labor markets where rates of exclusion are higher. Such "deskilling" of occupations is difficult to pursue in organizations like universities, where it would tend to make education and research impossible. But the tactic of separating subordinates from knowledge has succeeded elsewhere, for example, in the field of social work. The result has been declining prestige and pay for social workers.

The basic assumption of Taylorism is that workers' knowledge of jobs is unscientific and that only the new class of managers, in cooperation with capital, can organize work rationally (Taylor [1911] 1967). In fact, power in the steel industry had been centralized in 1892 by separating workers from knowledge of the labor process (Stone 1974). Taylorism, as in the Hawthorne studies, depicted workers as driven by irrational motives further lowering their status relative to management (Roethlisberger and Dickson 1964). The scientific basis of "scientific management" is at best doubtful. Reexamination of evidence from the field experiments indicate that central conclusions of the Hawthorne studies were unsupported: workers were motivated by financial rewards (Carey 1967; Jones 1992; Parsons 1974). Antonio asserts that increasing power centralization reduces the organization's capacity to effectively complete tasks (1979). Certainly the attempt to centralize power structurally at any cost by eliminating all bases for influence from below is now seen as typical of the inefficiencies of middle 20th century mass

production. By contrast "lean production" is said to gain efficiency by opening paths for influence throughout the organization (Womack et al. 1990).

Our analysis suggests that not only is it possible to find power and influence opposed in a single relationship, but also that considerable resources may sometimes be invested in eliminating the inconsistency between them. Thus, investigating relations where power and influence are opposed could be a promising research area.

Conclusion

This study began with power and influence sharply demarcated *and* isolated from one another. Elementary theory investigates structural power while status characteristics theory investigates influence due to status. These were independent theoretical research programs and neither investigated the phenomenon of the other. Power and influence are sharply demarcated because their meanings stem independently from the two programs, yet the two have not remained isolated from each other. The conceptual bridges built between the two theories show that power and influence are importantly linked. In some cases experimental studies support these links. When links have not been investigated, specific hypotheses foreshadow future experimental evaluations. At the beginning of this study, elementary theory and status characteristics theory were independent research programs; but the conceptual bridges built here mean that they are separated no longer.

That power and influence were sharply demarcated initially would not prevent us from reaching the conclusion that the two terms should be combined. If power and influence produce each other and do so from similar conditions, the terms should be merged. In fact, the bridges between the theories imply that power produces influence and influence produces power. The two produce each other, but *not from similar conditions*. For example, the exercise of power can be produced directly by exclusion in power structures. It can also be produced indirectly: Bridging between theories, we hypothesize that influence produces power exercise through status-based expectancies. For both, the result is the same: a power exercise indicated by differential payoffs. But exclusion, which produces power directly, and status, which produces influence that then produces power, are very different conditions. Therefore, we conclude that power and influence should be distinct concepts.

Various conceptions of power and influence have long been contended, but our point of departure is different from intellectual forebears: we began with two well-developed theoretical research programs. Each program is grounded in literally hundreds of experiments through which formulations have been tested and refined. The scope of each has been successively extended and work now ongoing promises further substantial scope extensions. These are "structural social psychologies"

(Lawler, Ridgeway & Markovsky 1993) which locate power and influence in structures. But outside the limits of the laboratory, we expect power and influence to be found together in structures. When they are, application of both theories together increases explanatory power.

Our aim in linking the elementary theory of power to the status characteristic theory of influence is to solve that problem — or at least begin its solution. The bridges between the theories uncover a new and broader phenomenal domain in which we are now able to make precise and subtle predictions about group processes. We have seen that power can produce influence and that influence can produce power. We have also seen that the two can be opposed in the same social relationship. In each case our aim has been to relate the two theories and their experimental grounding to some important structures and processes outside the laboratory. It is clear that the implications that can be derived from the two theories together are more general and richer than for either theory taken alone.

Notes

1. Representative research on power includes Emerson (1962, 1972); Cook and Emerson (1978); Cook, Emerson, Gillmore and Yamagishi (1983); Molm (1981, 1988, 1990); Bacharach and Lawler (1980, 1984); Lawler and Bacharach (1987); Willer and Anderson (1981); Willer (1987); Markovsky, Willer and Patton (1988); Skvoretz and Willer (1993); Markovsky, Skvoretz, Willer, Lovaglia, and Erger (1993). That some actors gain resource advantages undoubtedly implies that they control others more than they are controlled. While this research on power does not rule out "power as control," the focus has been on power as measured by resource advantage.

2. See status characteristics and expectation states research including Berger, Cohen and Zelditch (1966, 1972); Berger, Fisek, Norman and Zelditch (1977); Humphreys and Berger (1981); Markovsky, Smith and Berger (1984); Ridgeway (1981, 1982); Ridgeway, Berger and Smith (1985).

3. See, for example, application of the theory to create an effective school program (Cohen and Roper 1972, 1985; Rosenholtz 1985; Cohen, Lotan and Catanzarite 1988, Cohen 1986, 1993). For applications of elementary theory see Willer and Anderson 1981; Willer 1987; Willer et al. 1996).

4. The passage from Wrong does not assert that, for power to be exercised, people must intend to exercise power. It only asserts that power exercise is an intentional act. Since Wrong, considerable evidence supports his assertion. Markovsky (1987) has shown that simulated actors who make and accept offers randomly do not exercise power under known structural power conditions while Willer and Skvoretz (1997) show that power can be exercised over experimental subjects by a (minimally intentional) simulated actor which can do no more than accept its best offer.

5. Power and influence are used synonymously, according to Wrong, because of the absence, in English, of a verb form for power (1979:6). According to Wrong, instead of "The boss powers the workers," we say "The boss influences the workers" and mean by

"influence" that the boss has exercised power. Exchange theories employ the terms "power use" (Cook and Emerson 1978) and "power exercise" (Willer & Anderson 1981). These terms allow the expression "The boss exercises power over the workers" which makes it unnecessary to conflate power and influence.

6. See especially Friedkin's (1993a, b) extension and formalization of French and Raven's earlier theory. However, Friedkin's theory distinguishes structural bases of power from French and Raven's five original bases that include influence.

7. Because Parsons allows power to include the manipulation of symbols, his line between power and influence is not always clear. That he intends the two to be distinct, however, is evident from his postulation of two "circulating mediums," one for power and one for influence. Parsons' idea of circulating mediums, which he draws by analogy from money, is sharply criticized by Coleman (1963) and is not like the structural formulations employed by the two theories of this article.

8. Mokken and Stokman (1976:37) develop new formulations for power and influence that concern the control and selection of choice alternatives, respectively. Also see Stokman and Van den Bos (1992). While we believe that those formulations are compatible with ones offered here, a detailed treatment of their work is beyond the limits of this paper.

9. Research in social exchange has exploded in recent years. Several other social exchange theories are sufficiently developed that they may also be fruitfully related to status characteristics theory. Well developed social exchange theories include the game theoretic approach of Bienenstock and Bonacich (1992, 1993), expected value theory (Friedkin 1992, 1993a), power dependence theory (Cook and Emerson 1978, Cook and Yamagishi 1992), identity theory (Burke 1997), and Yamaguchi's (1996) extension of Coleman's (1990) rational choice approach. For a comparisons among most of these theories see Skvoretz and Willer (1993) and Lovaglia et al. (1995a).

10. In socially close relations, as between friends, when interests are not opposed, the concept of power does not apply. But power differences are not confined to relations among strangers. For example, not a few of the sexual practices found by Laumann et al. (1994) are instances of power exercise.

11. Here "P_{AC}con" means "A's payoff at confrontation with C."

12. Power events are not produced by centralization alone. Nevertheless, central location is always important to power. If A in the 3-branch exchanges three times, no peripheral is necessarily excluded, there are no structural changes in $P_A$con or $P_B$max, and agreements in all relations occur at equal power (Brennan 1981; Skvoretz & Willer 1991). Central location is important to power in structures because it allows command over a number of relations when power has been established by other means, as when one of more peripherals are excluded.

13. In the experiment reported in Willer (1987), power was measured by exchange ratio that varies with resources received. Subjects in the hierarchy with mobility gained less advantageous exchange ratios and thus fewer resources than did subjects in the fixed hierarchy. So only in the experiment with mobility was the central actor (who controlled the mobility of others) high in power. The experiment also had implications for power as control. In the experiment with mobility the high power central actor was able to demand and get better deals.

14. Power differences would be similarly inhibited in the 2-branch of Figure 1 were A to agree to exchange only with B.

15. Since the link between power and influence in capitalist societies is resource accumulation, in a comment on an earlier draft, Phillip Bonacich suggested that resources accumulated by any means can produce influence. We agree, as does Ridgeway (1991). Further, given the joint property system of the family (Willer 1985), resources accumulated by one spouse may produce status and thus influence for the other.

16. For scope conditions of an earlier application of elementary theory see Markovsky et al. (1988). In general, elementary theory requires that self-interested actors recognize the value in lowering demands in order to be included in exchange or raising demands when inclusion is assured. These requirements do not appear to conflict with situations in which status characteristics theory applies. Thus, the problem of scope does not arise when using status characteristics theory and elementary theory to explain how influence can produce power.

17. When two actors exchange, the profit of one actor determines the profit of the other. Similarly, when one low power actor is included in exchange, the other is necessarily excluded. Thus, observations for these variables cannot be considered independent. In addition, there are twice as many observations for low power actors as for high power actors, precluding a straightforward paired sample t-test. These problems can be overcome by analyzing data at the group rather than individual actor level. We replicated the analyses with one-sample t tests that compared (1) whether the advantage in profit enjoyed by the high power actor over the average of the two low power actors was greater than zero, (2) whether the difference in number of exclusions between the average of the two low power actors and the high power actor was greater than zero, and (3) whether the difference in negative emotion between the average of the two low power actors and the high power actor was greater than zero. Results corroborated the independent samples t tests in all 3 cases. For the 20 three-person groups, the high power actor's profit advantage was significantly greater than zero (mean = 15.96, std. dev. = 10.95), $t(19)$ 6.52, $p < .001$. The high power actor's exclusion deficit was greater than zero (mean = 4.35, std. dev. = .131), $t(19)$ 33.13, $p < .001$. And, in support of the main hypothesis, the high power actor's negative emotion deficit was greater than zero (mean = 1.95, std. dev. = .154), $t(19)$ 5.67, $p < .001$.

18. Both exclusion and low profit are associated with negative emotion, but are too highly correlated to determine whether each has an independent effect. In the future we intend to disentangle the two by investigating emotional effects in inclusively connected networks (Patton & Willer 1990) where inclusion, not exclusion, produces low profits.

19. Also worthy of study is the suggestion by Joseph Berger that bystanders who observe but do not engage in a power process, as in the e-state structuralism model (Fararo & Skvoretz 1986), may also form expectations and thus influence or be influenced. This suggestion raises the possibility that power exercised over some members of a group may result in influence over others of that same group. The status of those subjected to power is important. Observers may not feel threatened by power use directed at a despised minority.

20. For more on biasing effects in exchange relations see Skvoretz and Lovaglia (1995), Lovaglia et al. (1995a).

21. Power and influence struggles can also stem from subordinate status outside the organization. For example, the subordinate wealthy from outside income may influence the poorer boss, the male subordinate influence the female boss and similarly.

22. In addition, the greater mobility of faculty at research institutions increases their power relative to central administration as does their ability to provide resources through extramural granting.

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