ALL FOR ONE AND ONE FOR ALL? THE DEVELOPMENT AND TRANSFER OF POWER ACROSS ORGANIZATIONAL LEVELS

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Power in organizations is a fluid social construction subject to multiple interpretations. The extensive literature on power provides insights about the antecedents and consequences of power at the individual and group levels but does not provide a model tracing the linkages between them and describing how power develops and is transferred between individuals and groups. In this article we describe some of the conditions necessary for power identities and reputations to develop and transfer effectively between individuals and groups in organizations.

A nurse, an administrator, and a high-powered physician were asked to join forces as a team to create a new patient scheduling system for a surgical unit at General Hospital. Perceptions of the power of these three individuals differed significantly at the time they formed the team. Despite these initial differences, the team was perceived by its own members and others as increasingly powerful over time. Moreover, perceptions of power were transferred back from the team to its individual members. That is, the team's ultimate power enhanced their own and others' perceptions of each member's power.

Such smooth and successful transfers of power from unequally powerful individuals to a group and back to the individuals do not always take place (Brooks, 1994; Schulz, Israel, Zimmerman, & Checkoway, 1995), and we know very little about the conditions that may facilitate or inhibit their occurrence. Although rich bodies of research on the antecedents and consequences of power at both the individual and group levels

of analysis exist, there is a lack of integration among these streams of research (Podsakoff & Schriesheim, 1985; Spreitzer, 1996). We believe it is time to use the accumulated within-level knowledge to tackle cross-level power issues. Accordingly, our purpose in this article is to describe some of the forces and conditions necessary for effective power transfer across two levels of organization: individual and group.

Following other researchers, we define power as the ability or potential to influence (French & Raven, 1959). Given that it refers to the potential to influence, rather than the use of influence strategies and tactics, power is fundamentally a social construction that is perceptual in nature (Fombrun, 1983). While changes in objective phenomena (e.g., hierarchical authority, right to reward and punish, access to information) obviously affect both individual and group beliefs about power, the potential to influence derives from perceivers' recognition of them as sources of power (House, Rousseau, & Thomas-Hunt, 1995).

Here we develop and describe a model of the multilevel and cross-level cognitive processes that influence the extent to which beliefs about self and others transfer between individuals and groups. Perceptions about one's own and others' power represent one such set of beliefs. We introduce other potential belief transfer applications of our model in the discussion section (e.g., cross-level transfers of perceptions of efficacy).

When power perceptions are patterned and consistent over time, they can become internalized models (Lord & Maher, 1991). We call these "power mental models" (PMMs). Specifically, PMMs are organized mental representations of one's own and others' power that tend to lead to relatively predictable behaviors within a particular context. PMMs can be about oneself or one's group, or they can be about other individuals or groups. We label these "identity PMMs" and "reputation PMMs," respectively. An identity PMM is a unit's own set of beliefs about how powerful it is; a reputation PMM is the set of beliefs others hold about how powerful the unit is.

Even though mental models, by definition, exist in people's minds, identity and reputation PMMs do not develop in cognitive isolation. Individuals develop their power bases through social interaction, and individual behaviors and results affect the power available in their social environment (Giddens, 1993). Similarly, power at the group level can influence the power of individual members. An understanding of how power is transferred across organizational units thus requires multilevel and cross-level modeling of the process (House et al., 1995).

In the following section of the paper, we briefly review the cognitive processes by which antecedent cues trigger attention to power, the cognitive heuristics that affect the formation and maintenance of PMMs, and the manifest behaviors and results of PMMs that influence subsequent attention to and interpretations of power. In order to determine the appropriateness of modeling these processes across levels of analysis, we then examine the extent to which they are isomorphic or similar across levels. These sections set the stage for discussing the focal question of the paper: *How do mental models of power effectively transfer between individuals and groups?*

POWER DEVELOPMENT

In this section we review extant research on the processes by which individuals and groups understand their own power (identity PMM) and the power of others (reputation PMM). We discuss the processes depicted in Figure 1 as they relate to individual and group levels of analysis.

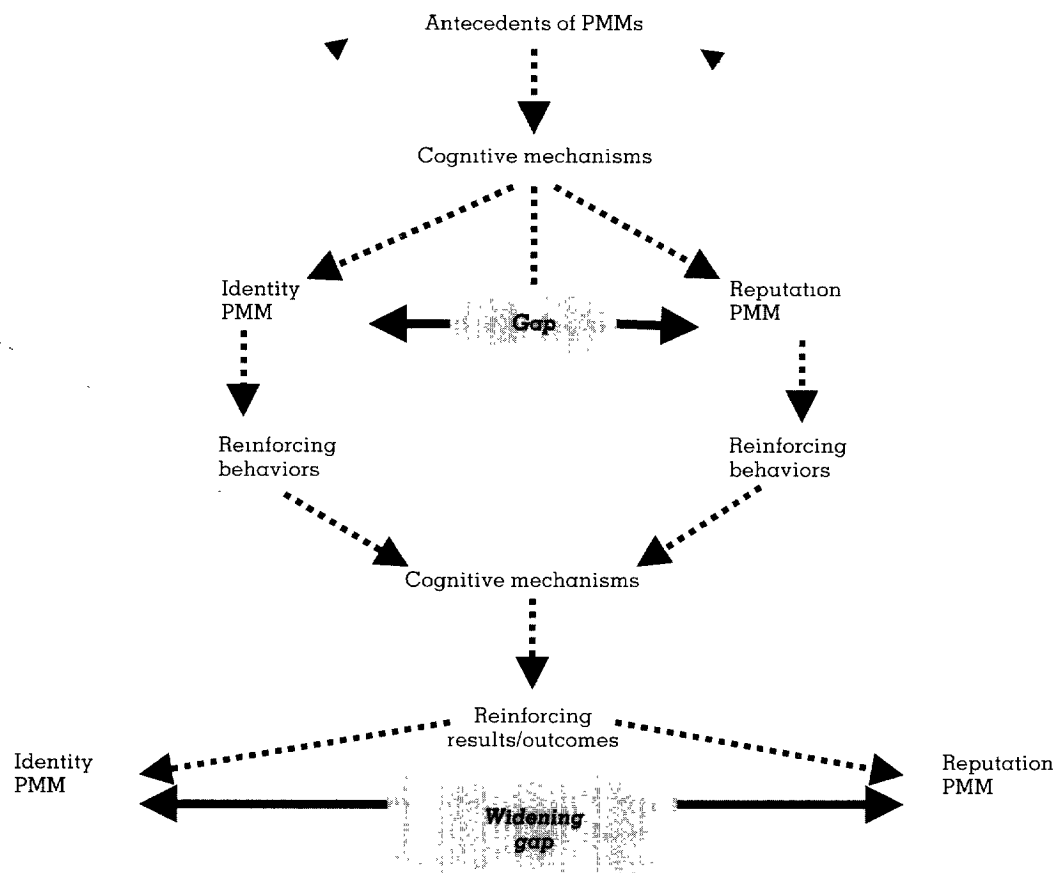Antecedents of PMMs (e.g., formal organizational position, control over resources, network

centrality) are the cues that trigger attention and cause mental representations (PMMs) to arise in the first place. Antecedents do not lead directly to PMMs, however. Instead, they are subject to cognitive mechanisms that filter and often distort the information, creating a potential gap between identity PMMs (unit A's interpretation of its own power) and reputation PMMs (unit B's interpretation of unit A's power). PMMs lead to behaviors (e.g., specific influence tactics) by both unit A insiders and outsiders. Both sides again interpret these behaviors through cognitive mechanisms, potentially leading to different interpretations by those inside and outside the unit. Results and outcomes (e.g., compliance with an influence attempt), also viewed through cognitive filters, tend to reinforce and potentially further widen any existing gap between identity and reputation. Both the behaviors and the results/outcomes provide additional information that, in turn, may shape subsequent antecedents (e.g., a change in formal organizational position), identity and reputation PMMs, and subsequent behaviors and results. Although we acknowledge that the model components might sometimes appear to occur simultaneously, in Figure 1 we summarize the development of identity and reputation PMMs as the typical information-processing sequence of input, throughput, and output (Lachman, Lachman, & Butterfield, 1979).

Antecedents of PMMs

Antecedents trigger attention to the power of both individuals and groups and, thus, provide a critical input into the PMM formation process. Research on power has converged around the following three general categories of antecedents: structural position, network centrality, and unit characteristics (Ragins & Sundstrom, 1989). A number of researchers, for example, have identified the structural position of a unit as a source of power at the individual (e.g., Conger & Kanungo, 1988; French & Raven, 1959) and group (e.g., Astley & Sachdeva, 1984; Fombrun, 1983) levels. At both levels of analysis, a unit's own and others' mental representations of the unit's power derive from its formal position within a larger context.

Prior researchers have also noted the important role of less formal interpersonal relations and centrality in a social network as an ante-

FIGURE 1
Model of Power Identity and Reputation Development

Antecedents of PMMs

Cognitive mechanisms

Identity
PMM   **Gap**   Reputation
PMM

Reinforcing
behaviors   Reinforcing
behaviors

Cognitive mechanisms

Reinforcing
results/outcomes

Identity
PMM   *Widening*
gap   Reputation
PMM

cedent of power. Individual power derived from networks (e.g., Brass, 1984; Brass & Burkhardt, 1993) and the power of groups in their networks (Franz, 1998; Pfeffer & Salancik, 1978; Rowley, 1997) both refer to a unit's informal ties to critical others.

Finally, researchers have addressed the role of characteristics of the unit itself as antecedents of power. Although many of these have been noted at the individual level (Aguinis, Nesler, Quigley, Lee, & Tesdeschi, 1996; Ibarra, 1993), group-level characteristics (Brooks, 1994; Franz, 1998; Kelsey, 1998) are thought to play a similar role as antecedents of mental representations of power.

Cognitive Mechanisms and PMMs

Figure 1 shows that antecedents of power lead to the formation of PMMs via the mediating effect of cognitive mechanisms. PMMs, like any

other mental model, lower the demands for conscious control of information processing (Aguinis, Nesler, Quigley, & Tedeschi, 1994; Lord & Maher, 1991). As organized mental representations, they reduce uncertainty and tend to lead to scripts that guide resulting behaviors (Hackman, 1990).

Established theory indicates that people have a tendency to make self-serving attributions by attributing success to themselves and failure to the situation (Ross, 1981). In contrast, outsiders tend to take the opposite stand, attributing success of ingroup members to the situation and failure to the members themselves. Social comparison theory, which emphasizes the need for self-esteem, suggests that groups exhibit similar tendencies (Crocker & Luhtanen, 1990; Hogg & Abrams, 1990). Based on these theories, it might appear that the existence of ingroup and outgroup categorizations and attributions leads to systematic biases that can create a gap be-

tween the PMMs of insiders and outsiders—that is, between identity and reputation PMMs. For example, as members of the newly formed team at General Hospital saw improvements in the patient scheduling system, they attributed them to be the result of their team's influence, whereas outsiders attributed the success to external technological advances.

The biases that characterize power representations are not always that systematic and predictable, however. Theory indicates that this is because self-consistency and uncertainty reduction are often more important motivators than self-enhancement (Hogg & Mullen, 1999; Hogg & Terry, 2000; Swann, 1996). By the time people play the power game in organizations, their power self-concepts in the work setting are relatively set and resistant to change (Baumgardner & Brownlee, 1987; Costa & McCrae, 1980). People strive to verify and maintain their self-conceptions through self-categorizations based on power attributes that characterize the group and distinguish it from other groups (Sherman, Hamilton, & Lewis, 1999). Individuals also form conceptions of others' power and develop prototypical reputational PMMs to characterize them. Here again, uncertainty reduction and consistency with prior beliefs are paramount, and people seek evidence that will confirm rather than disconfirm those conceptions (Hogg & Terry, 2000).

Group-level PMMs emerge when members of the group are exposed to similar social information. Through processes of collective sensemaking, groups of individuals construct shared interpretations of reality (Berger & Luckmann, 1967; Weick, 1995). What starts out as individual and nonroutinized becomes, over time, an institutionalized group-level process with unit-level characteristics (House et al., 1995). The group members' power prototype will tend to be similar and, thus, shared (Hogg & Terry, 2000), or at least compatible enough for coordinated action (Weick, 1995).

Manifest Behaviors, Results, and Outcomes As Reinforcements of PMMs

As noted above, individuals tend to think and behave in ways that are consistent with their self-conceptions (Fiske & Taylor, 1991). Given their consistency with PMMs, observed behaviors and results/outcomes serve as manifesta-

tions of power representations and may be reminders of any existing differences in identity and reputation PMMs. For example, since members of the General Hospital team believed that theirs was a powerful team, they behaved as though they were able to influence the patient scheduling system, despite early indications that outsiders did not share the belief in their power.

In sum, both individuals and groups generate mental models about their own (identity PMM) and others' (reputation PMM) power. These identity and reputation PMMs derive from various antecedents or sources of power via the mediating effect of cognitive mechanisms. Perceptual distortions often lead to potential gaps between identity and reputation PMMs, and resulting behaviors tend to maintain and reinforce those original distortions.

To discuss the transfer of power across organizational units, we must first demonstrate that the relevant constructs shown in Figure 1 can be applied across levels of analysis. Specifically, we address the extent to which the constructs shown in Figure 1 (antecedents, PMMs, and reinforcing behaviors and results/outcomes) are functionally and structurally similar and the extent to which they hold similar relationships with each other at the individual and group levels of analysis. Our application of the model, therefore, is multilevel, in that we address whether relationships among constructs at one level (e.g., individual) are generalizable to other levels (e.g., group). In addition, the application is also cross-level, in that we discuss how constructs at one level (e.g., individual PMM) might affect constructs at other levels (e.g., group PMM).

MULTILEVEL ISOMORPHISM

Isomorphism of multilevel constructs refers to the constructs' similarity across levels of analysis. Organizational researchers have discussed two types of isomorphism: functional and structural (Morgeson & Hofmann, 1999). Functional isomorphism refers to similarities in what the constructs do—that is, are their roles similar across levels of analysis? For example, power antecedents trigger attention to the power of both individuals and groups. Structural isomorphism refers to both the nature of the constructs—what they are—and the process rela-

tionships among them—how they work (Morgeson & Hofmann, 1999). We have broken this type of isomorphism into separate structural and process components. Our reasoning is as follows: The structure of a construct (what it is) and the process by which it influences other constructs (how it works) refer to distinct properties. It is possible that one may be isomorphic across levels while the other is not. We examine each of the three types of isomorphism in greater detail in the Appendix. Table 1 shows a summary of our assessment of the functions, structures, and processes of the constructs of our model across individual and group levels of analysis.

Our assessment suggests the appropriateness of modeling cognitive processing regarding power across individual and group levels. There are compelling reasons to treat antecedents, PMMs, and resulting behaviors and outcomes as functionally isomorphic (i.e., what they do), be-

cause they carry out similar functions across levels. The structure of antecedents and of the behavioral consequences and outcomes of PMMs (i.e., what they are) is similarly isomorphic across the two levels. The summary in Table 1 also suggests the existence of process isomorphism (i.e., how they work). PMMs and resulting behaviors are the result of social interactions at both levels of analysis.

In contrast, alternative perspectives exist regarding the structural isomorphism of PMMs themselves (i.e., what they are). Group PMMs may be identical to individual PMMs or merely similar enough to enable collective coordinated action. While different views have been proposed about the relative complexity of individual and group PMMs, as well as about what is shared at the group level, little empirical evidence exists to support the proposed distinctions (see Appendix). Based on the information currently available, we conclude that individual

TABLE 1
Isomorphism of Antecedents, PMMs, and Resulting Behaviors and Outcomes at Individual and Group Levels

Model Components	Individual	Group
Antecedents	**Function: What do they do?** Trigger attention to an individual's power **Structure: What are they?** An individual's formal position, network centrality, or individual characteristics **Process: How do they work?** Through social interactions and individual biases	**Function: What do they do?** Trigger attention to a group's power **Structure: What are they?** A group's formal position, network centrality, or group characteristics **Process: How do they work?** Through social interactions and accentuated individual biases
PMMs	**Function: What do they do?** Reduce uncertainty and provide internal scripts for action **Structure: What are they?** Organized mental representations about power based on some decision rule, such as category membership **Process: How do they work?** Through behavioral scripts and routines	**Function: What do they do?** Reduce uncertainty and provide internal scripts for common expectations and coordinated action **Structure: What are they?** Fully shared or compatible organized mental representations about power based on some decision rule, such as category membership **Process: How do they work?** Through coordinated behavioral scripts and routines
Resulting behaviors and outcomes	**Function: What do they do?** Confirm expectations and reinforce antecedents **Structure: What are they?** Visible confirmation or disconfirmation of expectations **Process: How do they work?** Through selective attention	**Function: What do they do?** Confirm expectations and reinforce antecedents **Structure: What are they?** Visible confirmation or disconfirmation of expectations **Process: How do they work?** Through accentuated selective attention

and group PMMs reflect varying degrees of structural isomorphism across situations.

In sum, our analysis suggests that antecedents and resulting behaviors are fully isomorphic at the individual and group levels. In contrast, PMMs appear to exhibit varying degrees of structural isomorphism across these levels. In general, our assessment suggests that, based on the information currently available, it seems appropriate to model these cognitive processes across individual and group levels of analysis.

CROSS-LEVEL POWER TRANSFERS

The transfer of power across organizational levels can occur when a relatively less powerful group gains power because of the presence of a powerful new member, as happened when the General Hospital team gained power from the presence of a powerful physician on the team. We refer to this as "upward transfer"—from an individual to a group. Transfers of power can also occur when relatively less powerful individuals gain power because of their membership in a powerful group. We refer to this as "downward transfer."

Such transfers represent changes in prior beliefs. In general, people tend to reject information if it does not match their prior beliefs (Fiske & Taylor, 1991). For example, if we believe we are powerful and you believe we are weak, what we see and do will tend to confirm our beliefs, and what you see and do will tend to confirm your beliefs. This will continue until the inconsistencies become untenable and perceptions change.

What factors influence people to change their prior power perceptions? Anchoring and adjustment cognitive heuristics suggest that in order to arrive at a judgment, one typically starts with an initial reference point as an anchor and adjusts one's estimate or decision away from the anchor (Aronson, Wilson, & Akert, 1997). However, subsequent judgment is strongly tied to the initial anchor and often is not sufficiently adjusted away from this value. Moreover, if people believe something to be true, they will accept confirming examples more easily and quickly (Hinsz, Tindale, & Vollrath, 1997). So, once PMMs are formed, evidence will be gathered to confirm them. Thus, integration of inconsistent information into revised identity and reputation PMMs is a slow and difficult process. The longer the

PMM has been in place, the more taken for granted it becomes and the more difficult it is to change it (Aronson et al., 1997), other things being equal.

Other things are not equal, however. First, as described below, insiders and outsiders tend to pay attention to different sets of power antecedents—insiders attending more to their own internal unit characteristics and outsiders to external structural and contextual antecedents. Second, the power transfers will be especially difficult to the extent that they will require individuals or groups to alter their prior beliefs. As we discuss below, PMM transfers are asymmetrical in that some of them allow for the maintenance of prior beliefs, whereas others require that those beliefs shift. Table 2 offers twelve cross-level propositions, which we discuss below.

Transfers of Identity PMMs

Identity PMMs are mental models of one's own power. Transfers of identity PMMs involve extensions of power identity from individuals to groups, and vice versa. As we discuss below, given self-consistency biases, the primary source of current identity PMMs tends to be a unit's prior identity beliefs (which are formed based on the historical pattern of power antecedents). That is, people tend to base their understanding of their own or their group's power on prior understandings about their own or their group's power characteristics. Identity beliefs tend to be self-reinforcing and highly resistant to change.

At the level of individuals, research strongly supports that identity beliefs are resistant to change (Swann, 1996). Longitudinal investigations (Block, 1981; Costa & McCrae, 1980), for example, have shown that self-conceptions and related psychological structures remain stable over periods of as long as thirty-five years, indicating resistance to external forces for change (House, Shane, & Herold, 1996). Empirical evidence indicates that such resistance to changing identity-based mental models similarly exists at the group level (Dutton & Dukerich, 1991).

This need for self-consistency appears to be stronger than the need for self-enhancement (Swann, 1996). Although self-serving attribution is a cognitive mechanism thought to affect the formation and transfer of mental models (Ross, 1981), it will only have a significant initial impact on identity PMMs if it does not violate prior

TABLE 2
Cross-Level Power Identity and Reputation Transfers, Including Direct and Indirect Facilitators/ Inhibitors

Transfer	Identity	Reputation
Up	**Easy transfers** *Proposition 1: Relatively less powerful members of a group will initially tend to attribute the power identity of a powerful new member to the group as a whole.* **Why?** No need for change in self-perceptions **Direct inhibitor** *Proposition 5: To the extent that the power identity of group members is based on group membership, upward power identity transfers will be inhibited.* **Indirect inhibitor** *Proposition 6: To the extent that the resistance of outsiders to upward reputation transfers is communicated to insiders, upward power identity transfers will be inhibited.*	**Difficult transfers** *Proposition 3: The power reputation of a group will initially tend to remain consistent with prior perceptions, rather than change based on the power reputation of a new, relatively powerful member.* **Why?** Need for change in base-rate perceptions **Direct facilitator** *Proposition 9: To the extent that outsiders are familiar with the power of individual group members, upward power reputation transfers will be facilitated.* **Indirect facilitator** *Proposition 10: To the extent that upward identity transfers are communicated to outsiders—if consistent with direct individuating evidence—upward power reputation transfers will be facilitated.*
Down	**Difficult transfers** *Proposition 2: Relatively less powerful individuals will initially tend to maintain their prior power identities, despite their beliefs about the greater power of a new group to which they belong.* **Why?** Need for change in self-perceptions **Direct facilitator** *Proposition 7: To the extent that the power identity of group members is based on group membership, downward power identity transfers will be facilitated.* **Indirect facilitator** *Proposition 8: To the extent that downward reputation transfers are communicated to insiders—if consistent with direct experience—downward power identity transfers will be facilitated.*	**Easy transfers** *Proposition 4: Outsiders will initially tend to attribute a group's power reputation to new and less powerful members.* **Why?** No need for change in base-rate perceptions **Direct inhibitor** *Proposition 11: To the extent that outsiders are familiar with the lack of power of individual group members, downward power reputation transfers will be inhibited.* **Indirect inhibitor** *Proposition 12: To the extent that the resistance of insiders to downward identity transfers is communicated to outsiders, downward power reputation transfers will be inhibited.*

self-conceptions (Swann, 1996). Both individuals and groups thus tend to resist self-serving power identity transfers that violate prior self-conceptions about power.

Upward power identity transfers. Upward transfers of identity PMMs involve transfers from a relatively powerful individual to a relatively less powerful group. For example, if a faculty member who is able to influence her field joins a relatively powerless school, upward

power identity transfer will occur, to the extent that the school perceives itself as more powerful because of her presence. Such transfers tend to occur relatively smoothly, because they do not require major changes in the individual-level PMMs of those involved. That is, the attributions can be self-serving (Crocker & Luhtanen, 1990; Ross, 1981) without violating self-consistency (Swann, 1996). Recognizing that the new faculty member can produce results for the school,

members can reasonably alter their beliefs about the school's power based on an external justification (the new faculty member), without altering their prior beliefs of their own individual power. To the degree that behaviors and outcomes demonstrate high levels of influence success (e.g., a shift in the field's direction or paradigm), a stronger group identity PMM will emerge as the collective norm.

Downward power identity transfers. Downward transfers of identity PMMs involve transfers of PMMs from a relatively powerful group to relatively less powerful new members. For example, if a researcher who perceives himself as powerless joins a powerful research team, downward power transfer occurs to the extent that the researcher perceives himself as more powerful because of his presence on the team. In contrast to upward power identity transfers, such transfers are difficult to achieve, for they require that members redefine their own sense of self. That is, self-serving attributions (Ross, 1981) would violate self-consistency (Swann, 1996). To avoid redefining their prior self-perceptions, people will thus tend to attribute the group's power to external forces, such as other, more powerful members.

Consistent with these expectations, Schulz and colleagues (1995) conducted work to assess the degree to which participation and active engagement in an effective community organization translated into its members feeling more empowered as individuals. They found that a sense of power did not transfer back to the members. These individuals felt a sense of personal power based on their social and demographic identity—not based on their engagement with a powerful collective. This again illustrates the point that, given the choice, people typically self-confirm, rather than self-enhance (Swann, 1996). Their power identities are "sticky," leading to little or no transfer of their group's power identity to themselves as individuals.

The above discussion leads to the following two propositions.

> *Proposition 1: Relatively less powerful members of a group will initially tend to attribute the power identity of a powerful new member to the group as a whole.*

> *Proposition 2: Relatively less powerful individuals will initially tend to main-*

tain their prior power identities, despite their beliefs about the greater power of the new group to which they belong.

Transfers of Reputation PMMs

Reputation PMMs are others' mental models of an individual's or group's power. Antecedents of reputation PMMs (mediated by cognitive mechanisms) tend to be contextual factors, such as structural position or network centrality. That is, people tend to base their understanding of another individual's or group's power on general contextual factors, rather than on characteristics of the unit itself. This heuristic is referred to as the "base rate fallacy" (Fiske & Taylor, 1991). Base rates represent the frequency with which events actually occur in the general population. People tend to use a base rate when this is the only information available and when it is clearly relevant to the decision being made (Fiske & Taylor, 1991). Even in the face of unexpected outcomes, observers tend to prefer base rates as a source of information.

As noted earlier, a powerful cognitive mechanism affecting the formation and transfer of power reputation is outsiders' tendency to attribute another individual's or group's success to external factors, rather than to their own power (Ross, 1981). This pattern of attributions is consistent with outside observers' attention to base rates, rather than to the individual's or group's own power characteristics.

Upward power reputation transfers. Upward transfers of reputation PMMs involve transfers of a powerful individual's reputation to the group to which he or she belongs. For example, such a transfer occurs when a school's new powerful researcher enhances the power reputation of the school he has joined. In general, upward transfers of power reputation are as difficult as downward transfers of power identity. Because of attention to base rates (Fiske & Taylor, 1991), people tend to believe that vague descriptions, which could apply to or be true of any group, are unique to the group to which they are being attributed (Latkin, Littman, Sundberg, & Hagan, 1993). Stated differently, reputational beliefs about the power of a group are not derived from the unique, individual contributions of its members as much as they are from the larger context into which outsiders have categorized the group.

For example, a department at a relatively powerless university will initially tend to continue to be perceived as being powerless in its surrounding community, even after a "powerful" individual joins the organization.

For outsiders to change their mental models of the group in question, they must alter prior beliefs about base rates, which they can avoid doing by explaining unusual group outcomes that are inconsistent with their initial views through external justifications, such as luck. For example, a management department perceived as weak by other departments within its college might not initially improve its reputation significantly because of the power a new faculty member has in his or her field. Such disconfirming evidence can either be ignored by outsiders (Hinsz et al., 1997) or be explained away based on environmental factors (e.g., "It's easy to be influential in the field of management"). These justifications allow outsiders to maintain their prior base-rate perceptions. As a result, upward power reputation transfers are difficult.

Downward power reputation transfers. Downward transfers of reputation PMMs involve transfer of the reputation of a powerful group to the power reputations of its members. Such a transfer occurs, for example, if a researcher who joins a powerful research team is perceived as more powerful because of his or her presence on the team. Downward power reputation transfers occur regularly and with relative ease. Numerous researchers have noted that others' perceptions of individuals are largely a function of the attributes of the group to which they belong (Dienesch & Liden, 1986).

The ease of downward reputation transfers is based on the same cognitive mechanisms that cause upward reputational transfers to be difficult. That is, vague/generic perceptions of a group's power are attributed to individual members of that group, easing the process of downward transfers from the group to its members (Latkin et al., 1993)—consistent with the "base-rate" argument presented earlier. To the degree that prior individuating information is not readily available, downward transfers can be based on external justifications and require no substantive changes in prior PMMs. For example, outsiders who have limited information about specific members of the General Hospital team will tend to translate the general reputa-

tion of the team's power to the power reputation of its members.

The above discussion leads to the following two propositions.

> *Proposition 3: The power reputation of a group will initially tend to remain consistent with prior perceptions, rather than change based on the power reputation of a new, relatively powerful member.*

> *Proposition 4: Outsiders will initially tend to attribute a group's power reputation to new and less powerful members.*

FACILITATORS AND INHIBITORS OF CROSS-LEVEL POWER TRANSFERS

We have described conditions that affect the transfer of identity and reputation PMMs across individuals and groups. Insiders' resistance to changes in self-perceptions leads to relatively easy upward and difficult downward power identity transfers, and outsiders' resistance to changes in base-rate perceptions leads to relatively difficult upward and easy downward power reputation transfers. Beyond these general conditions, a number of factors can either inhibit what might otherwise be relatively easy transfers or facilitate more difficult ones.

In this section we discuss what we label "direct" and "indirect" inhibitors and facilitators. Direct inhibitors/facilitators act on the transfer conditions we described above through direct experience or knowledge (e.g., insiders' sense of belonging or outsiders' knowledge about specific influence attempts). Indirect inhibitors/facilitators act on the power transfers less directly, through interactions with others (e.g., communication of power beliefs from insiders to outsiders, and vice versa). We begin with inhibitors/facilitators of power identity transfers and then discuss those affecting power reputation transfers.

Upward Power Identity Transfer Inhibitors

We noted that upward identity transfers are relatively easy, because there is no need for group members to change their self-perceptions in order to attribute greater power to the group. This assumes that people are basing their

power identities on individual-level antecedents and PMMs and are not looking to the group as a basis for their own identity. Social identity researchers have noted, however, that group membership can be a primary source of an individual's identity (Sherman et al., 1999). When this is the case, attributing greater power to the group requires a concomitant change in self-perceptions. Given the need for self-consistency, we predict a difficult transition period for relatively less powerful group members. This leads to the following direct inhibitor proposition.

> *Proposition 5: To the extent that the power identity of group members is based on group membership, upward power identity transfers will be inhibited.*

Identities are formed and changed through social interaction (Weick, 1995). Interactions between insiders and outsiders can influence the transfer of insiders' power identity. We have noted that upward power reputation transfers are difficult because of prior base-rate perceptions. If insiders become aware of outsiders' resistance to changing the group's power reputation, their own willingness to rethink their group's identity will likely be reduced. This leads to the following indirect inhibitor proposition.

> *Proposition 6: To the extent that the resistance of outsiders to upward reputation transfers is communicated to insiders, upward power identity transfers will be inhibited.*

Downward Power Identity Transfer Facilitators

In downward transfers of power identity—from a powerful group to its less powerful members—individuals initially will tend not to attribute greater power to themselves because of their membership in the powerful group. How can such downward power identity transfers be facilitated? A greater sense of belonging to the collective may counter the difficulty of downward transfers of identity PMMs. Psychological theories of belonging and identification (e.g., Baumeister & Leary, 1995; Rousseau, 1998) indicate that people have a strong drive to believe they are part of the settings in which they work. When people experience high levels of identification with their workgroups, they perceive the

values and attributes of the group as their own (Mael & Ashforth, 1992; Sherman et al., 1999). That is, to the extent that the need for belonging is greater than the need for self-consistency, downward power identity transfers can be less difficult. This leads to the following direct facilitator proposition.

> *Proposition 7: To the extent that the power identity of group members is based on group membership, downward power identity transfers will be facilitated.*

Here again, we suggest that interactions between insiders and outsiders can influence the transfer. We have noted that downward power reputation transfers are relatively easy and occur frequently because of observers' tendency to attribute group characteristics to individual members. If insiders become aware of and see evidence of outsiders' beliefs in their enhanced power, they will likely increase their willingness to rethink their power identity. For example, team members at General Hospital felt more personally powerful after the more powerful physician joined the team to the extent that they relied on the team's power identity to define their own personal power identity (Proposition 7). In addition, this power transfer will be further facilitated to the extent that outsiders have already altered their beliefs about the power of the team and individual members hear people in the community talking about their power as members of that team. This leads to the following indirect facilitator proposition.

> *Proposition 8: To the extent that downward reputation transfers are communicated to insiders—if consistent with direct experience—downward power identity transfers will be facilitated.*

Upward Power Reputation Transfer Facilitators

In transfers of power reputations, barriers tend to most strongly inhibit upward power reputation transfers—from relatively more powerful individuals to a less powerful group. How can such upward power reputation transfers be facilitated? Given the tendency for outsiders to evaluate power in relation to base rates (Fiske & Taylor, 1991), a new view of the group's general context must be developed, clearly distinguish-

ing it from the past. A critical challenge in shifting power reputations lies in communicating to outsiders that the addition of new, more powerful individual members has changed how the collective should be categorized, thereby enhancing its power base rate. This becomes more possible as outsiders are familiarized with individual members' contributions to the group. That is, to the degree that outsiders obtain direct individuating information (Fiske & Taylor, 1991) as evidence of individual group members' power, transfer of power will be facilitated.

To return to an example used earlier, peer departments will tend to perceive a department as gaining power after hiring a powerful individual to the extent that the departments have specific information about the power of the new hire. This leads to the following direct facilitator proposition.

> *Proposition 9: To the extent that outsiders are familiar with the power of individual group members, upward power reputation transfers will be facilitated.*

Interactions between insiders and outsiders can also influence the transfer of power reputations. We have noted that upward power identity transfers are relatively easy, because individuals can attribute greater power to their group without changing their view of their own power. If outsiders become aware of and see evidence of insiders' beliefs in the enhanced power of the group, they are likely to increase their own willingness to rethink the group's power reputation. As in the case of indirect facilitators of identity transfers, it is the communication of others' beliefs about power, if consistent with any direct evidence, that facilitates the reputation transfers. In the General Hospital example, the team's power reputation could be enhanced after the powerful physician joined it because community members heard or read about specific successful influence attempts of the powerful physician and other team members, thus altering their perception of the team as a whole (Proposition 9). The power reputation transfer also may be facilitated when team members communicate to outsiders their own new sense of power as a team. This leads to the following indirect facilitator proposition.

> *Proposition 10: To the extent that upward identity transfers are communi-*

cated to outsiders—if consistent with direct individuating evidence—upward power reputation transfers will be facilitated.

Downward Power Reputation Transfer Inhibitors

Downward power reputation transfers occur with relative ease. The tendency of observers to attribute a group's power reputation to individual members is strengthened to the extent that the individual units take on general characteristics of the group and to the extent that individuating information is unavailable. Representativeness bias causes people to tend to judge how likely it is that a person, event, or object belongs to a certain category based on whether its characteristics are similar to the characteristics associated with the category (Fiske & Taylor, 1991). Thus, in the absence of individuating information, a representative member of a high-power group will be perceived as having high power and a representative member of a low-power group will be perceived as having low power. As outsiders become more familiar with individual members and their powerlessness relative to how they view the group as a whole, however, this relatively easy downward transfer of power reputation becomes more difficult. This leads to the following direct inhibitor proposition.

> *Proposition 11: To the extent that outsiders are familiar with the lack of power of individual group members, downward power reputation transfers will be inhibited.*

Again, interactions between insiders and outsiders can influence the transfers. We have noted that downward power identity transfers are relatively difficult because of individual resistance to changing prior self-perceptions. If outside observers become aware of insiders' resistance to changing their power identity, this is likely to reduce the outsiders' willingness to rethink the insiders' power reputation. This leads to the following indirect inhibitor proposition.

> *Proposition 12: To the extent that the resistance of insiders to downward identity transfers is communicated to*

outsiders, downward power reputation transfers will be inhibited.

DISCUSSION

In this article we have presented a framework for describing the underlying processes and mechanisms of the development and transfer of power across organizational levels. Although power researchers have argued that the acquisition and distribution of power are a function of the interactions between individual predispositions and contextual variables (e.g., House, 1991), no one has explicitly delineated cross-level relations of power. Our theory of power development and transfer addresses this research gap. After defining the function and structure of the constructs of our model and the processes by which they emerge at both the individual and group levels, we discussed the extent to which our model's constructs are isomorphic, and we proposed a model of cross-level power identity and reputation transfers. We then suggested a number of inhibitors and facilitators of these power transfers.

The value of our proposed cross-level and multilevel approach lies in the explicit recognition that individual- and group-level power are not independent of each other but are mutually affected in critical ways. Failure to recognize these interrelationships leads to misspecified theoretical models and to practical interventions at one level that may be fruitless because of unanticipated influences of other levels (Lindsley, Brass, & Thomas, 1995). The value of the model also lies in the explicit recognition that power identity and power reputation are not independent constructs. The indirect facilitators and inhibitors we have proposed suggest strong linkages between them.

Investigators clearly do not agree on the essential nature of shared mental models (Klimoski & Mohammed, 1994). We do not interpret this as a weakness or a threat; instead, the current level of disagreement is an opportunity for researchers. But this is true only if we proceed in a systematic and clearly defined way. We set the stage for such theoretical development in this paper by carefully defining the relevant power constructs at the individual and group levels, by placing them in a nomological network of antecedents and consequences, and by assessing the degree of isomorphism at the different levels.

Implications for Future Research

The most important implication of our model for future research is the need to focus on power between—not only within—organizational levels. There is also a need to incorporate self-perceptions of power, as well as others' perceptions, given the proposed influence of one on the other. In general, in our research we need to more explicitly address power within its individual and collective contexts and in relation to ingroup and outgroup dynamics.

Here we have explicitly treated power as a multilevel construct and power development and transfer as cross-level processes. Given the complexity inherent in multilevel theorizing, we chose to simplify the paper wherever possible. For example, we limited our focus to cross-level transfers between individuals and groups. In future work researchers could extend these arguments by addressing transfers at successively higher levels of analysis, including organizations, industries, and nations.

There is much left to be specified in the preliminary model we have presented. First, the role of context needs to be further clarified. Clearly, the context in which interactions occur delimits the range of possible transfers of power across levels (Morgeson & Hofmann, 1999). For example, researchers have suggested that in situations in which collectives are highly structured, with formalized rules and procedures, individual predispositions will tend to have less impact on power transfers (House, 1991). In contrast, the relative absence of formal authority and formalization as cues, guides, constraints, and reinforcements in organic organizations requires that influence agents rely more heavily on personal bases of power rather than formal authority. Upward power transfers, thus, would be relatively easier in cases of situational ambiguity, where routines were not well established. Future researchers must examine the impact of these contextual variables on the asymmetries of upward and downward transfers we have noted here.

Another critical contextual factor that must be explored further is the impact on power transfers of the extent and nature of interactions among individuals at the different levels of

analysis. Only through interaction does a collective construct like collective PMMs acquire meaning and structure (Morgeson & Hofmann, 1999). The interactions codify the collective construct, which, in turn, affects individual levels of the construct (Giddens, 1993). The more extensive the interactions across levels and between insiders and observers, the stronger our proposed cross-level and between-group relationships should be. For example, the more I am involved with my college and its activities, the greater the potential is for downward and upward transfers of identity PMMs between the college and me. And the more I interact with outside observers, the greater the potential is for indirect inhibitors and facilitators to operate.

We have exemplified the operation of our cross-level framework with selected cognitive mechanisms. These are clearly not the only processes that distort information and create gaps between different beliefs about power. In future work researchers should examine additional factors that may lead to perceptual distortions (e.g., the impact of diverse communication techniques, formality of power structures, or size of groups) and additional techniques for closing the perceptual gaps.

Although we have focused here on cross-level transfers of power, we believe that the model has the potential to be extended to other socially constructed capabilities. In this sense, the choice of power as the focal construct in our model can be seen as an exemplar, rather than a unique phenomenon. In future work researchers could explore the application of the cross-level forces proposed to inhibit or facilitate the transfer of power to other social phenomena. Take, for instance, the construct of efficacy. Researchers have extensively explored this construct at the individual (e.g., Bandura, 1997) and collective (e.g., Gibson, 1999) levels of analysis. Efficacy has been defined as an individual's (Bandura, 1997) or a collective's (Lindsley et al., 1995) belief regarding the ability to perform effectively. Our model might be used to explain the impact of various antecedents and cognitive mechanisms on the formation of identity (e.g., "my belief that I can perform effectively") and reputation (e.g., "others' belief that I can perform effectively") mental models regarding efficacy, as well as possible gaps between identity and reputation efficacy mental models. It could also help explain the upward and downward transfers of efficacy mental models.

We close this section with a brief consideration of an empirical test of our model. Many of the variables in our model are established constructs with validated measurement instruments. However, since in our model we explicitly address the transfer of power across levels of analysis over time, empirical tests of it require special multilevel design, measurement, and analysis considerations. Stated differently, empirical tests of the propositions need to include (1) research designs that encompass multiple levels of analysis in a longitudinal fashion, (2) measures that allow researchers to capture perceptions of insiders (e.g., identity PMMs) and outsiders (e.g., reputation PMMs), and (3) analysis techniques that are appropriate for the data collected using such designs and measures (e.g., hierarchical linear modeling, latent growth modeling).

Moreover, tests of our propositions require research designs that specifically indicate whether the focus is on transfers of the structure or the function of power or, alternatively, on the processes by which the transfers take place. One cannot easily maximize all three features in a given construct operationalization, and there are tradeoffs that occur as a result of focusing on one aspect to the exclusion of the others (Morgeson & Hofmann, 1999). For example, if one chooses to focus on the functional aspects of power transfers, one might examine the extent to which individual PMMs provide scripts for action at the group level over time. Doing so, however, might result in loss of some of the descriptive richness that would come from a focus on structural aspects of the power transfers, as well as some of the dynamics that would come from a focus on process.

These tradeoffs are again apparent when considering the measurement of the constructs and the choice of analysis techniques (Morgeson & Hofmann, 1999). An analysis of the nature, frequency, and quality of communication linkages, for example, may be an effective way to understand the process by which an individual's mental representation of power is transferred to a group. Such communication measures may serve only to distract, however, if the interest is in the functional role that PMMs play at each level of analysis.

Significant recent effort has been devoted to explicating the analytical and methodological challenges of doing cross-level and multilevel research (Klein & Kozlowski, 2000). Our model and propositions provide the much-needed theoretical framework to complement this work. Like Klein and her colleagues (1994), we believe in the primacy of theory (as opposed to analytic concerns) in designing and testing multilevel research questions.

Implications for Managerial Practice

The theoretical framework we have developed suggests that individuals in a group will tend to use the identity PMM of a powerful new member as a shortcut for attributing power to the group. In contrast, the framework suggests that outsiders will tend to construct reputation PMMs of individual group members based on the reputation PMM of the group. That is, identity and reputation transfers tend to occur through a focus on different levels of analysis, with identity transfers focused on individuals and reputation transfers on the group.

In upward transfers of power—from powerful individuals to their group—barriers will tend to block reputational shifts. For example, members of the accounting department at General Hospital would not tend to initially attribute greater ability to influence to the newly formed team as a result of a powerful physician who joined it, unless they were directly familiar with that physician's power. In contrast, in downward transfers of power—from a powerful group to less powerful individual members of the group—barriers will tend to block identity shifts. For example, less powerful nurses on the powerful General Hospital team would initially fail to attribute more power to themselves as a result of membership on that team. These sets of barriers, inhibiting power shifts, present unique challenges and opportunities for those wishing to facilitate the effective transfer of power identities and reputations. For example, in the case of upward reputation transfers from a powerful new member to the reputation of the team as a whole, several factors must be considered: the enhanced identity PMMs of the team, knowledge dissemination to outsiders about the specific successful influence attempts of individual team members, and increased communication linkages between insiders who believe in the new power of the team and outsiders.

We have presented a number of facilitators and inhibitors of power transfers. Each set of direct facilitators/inhibitors, however, eases one direction of transfers while blocking the other. A critical implication for the management of power transfers is the formidable challenge of simultaneously facilitating transfers in both directions. The indirect facilitators and inhibitors may be especially important in such cases. For example, imagine that a new, powerful member has joined a relatively powerless team, with the aim of empowering both the team and its other members—both upward and downward power identity transfers. A sense of greater belonging to the group would tend to facilitate the difficult downward transfer of the new power identity, but that same sense of belonging would make it more difficult for upward power identity to transfer to the new team. Instead of focusing on team members' sense of belonging (direct facilitator), one might focus on indirect facilitators. First, the team would carry out the relatively easy transfer of upward power identity from its new, powerful team member to the team as a whole. Second, based on extensive contacts with outsiders, the team might then convince outsiders of its enhanced power as a team. Finally, to the extent that these enhanced reputational beliefs were effectively communicated back to individual group members, they could help members alter their own individual self-perceptions. In such a case, enhancing the linkages between insiders and outsiders (indirect facilitator) might be more effective in facilitating the power identity transfer than creating closer ties among the team members (direct facilitator).

Another implication of the opposite effects of the direct facilitators and inhibitors is that the simultaneous application of numerous management techniques might be necessary for power transfers to occur. Initial positive results may be a necessary but not sufficient condition for power to transfer in many cases, because people selectively interpret the results to be consistent with prior beliefs (Swann, 1996). For identity and reputation changes to be sustainable over time, people need feedback that supports the new self-view (Swann, 1996). But feedback, too, is necessary and not sufficient (Lindsley et al., 1995), because people hear what they want to

hear. Most important, our model suggests the need for managers to establish closer links between power identities and reputations so that the more easily transferred identity PMMs can facilitate the hard-to-transfer reputation PMMs, and vice versa.

Returning to our General Hospital example, it seems evident that powerful individuals can enhance the power of their team over time, and their capacity as a team can transfer back to empower each individual. We have argued, however, that such transfers do not happen automatically. The General Hospital team, with the powerful physician member, produced results that made the whole team feel powerful. Yet, individual members initially were not likely to attribute power to themselves as a result, and outsiders were likely to continue to see the team as relatively powerless, despite the powerful physician membership. Our model suggests that to facilitate the transfers, the team must communicate insiders' excitement about the team and its capacity to produce results to outsiders in order to encourage new base-rate category associations, leading to a powerful new external image. That powerful new image of the team will then cause outsiders to see individual members as more powerful, creating a virtuous cycle of power transfers.

APPENDIX
MULTILEVEL ISOMORPHISM

For a discussion of cross-level power transfers to be meaningful, we must demonstrate that the constructs of our model can be applied across levels of analysis. The following is an assessment of the functional, structural, and process isomorphism of our constructs across individual and group levels.

Functional Isomorphism

In this section we examine whether the functions (i.e., what they do) of power antecedents, PMMs, and reinforcing behaviors and results/outcomes are similar across levels of analysis. We have argued in this article that the function of power antecedents at both individual and group levels is to trigger attention to aspects of power. Whether an individual's structural position of authority or a group's position in its or-

ganization, formal and informal positions provide the antecedent cues that lead to the formation of PMMs. The function of these antecedents is also similar for mental models about one's own and others' power. Although researchers have tended to address self-perceptions (identity PMM) and others' perceptions (reputation PMM) separately, similar antecedents influence both mental models. For example, unit A's understanding of its own power and unit B's understanding of unit A's power similarly derive from a combination of A's structural position, network centrality, and unit characteristics.

PMMs also appear to be functionally isomorphic across levels. Individual PMMs refer to individual cognitive representations and are manifested in organized and predictable patterns of beliefs about the ability of self and others to exert influence. At the group level, PMMs refer to more or less shared cognitive representations and are manifested in equivalent beliefs about power. Functionally speaking, we view groups as social entities capable of acting as wholes, with PMMs that have functions similar to those of individuals (Lindsley et al., 1995). Across individual and group levels, mental models function to reduce uncertainty and to make sense of one's world (Klimoski & Mohammed, 1994). Thus, we consider PMMs as functionally isomorphic.

Finally, the reinforcing role of behaviors and results/outcomes of power is also functionally isomorphic across levels. Individuals and groups alike tend to seek confirmatory feedback (Hinsz et al., 1997). At both levels the typical function of the feedback is to maintain current conceptions of self and others and to reinforce current antecedents of power.

We conclude that the constructs of our model are *functionally isomorphic* across individual and group levels of analysis.

Structural Isomorphism

Structural isomorphism refers to similarities in the fundamental nature of the constructs (i.e., what they are) across levels. This is relatively straightforward with regard to the antecedents and behavioral consequences and outcomes of PMMs across levels. As we have already noted, at both the individual and the group level, antecedents consist of structural position, network centrality, and/or individual and group characteristics. And at both levels the behaviors, re-

sults, and outcomes of PMMs are visible manifestations that may serve as confirmation or disconfirmation of the individual's or group's perceptions regarding power.

Determining structural isomorphism of the PMM construct is not as straightforward. Group-level PMMs may be identical to individual-level PMMs, or they may merely be compatible, depending on the degree to which the group members share common power prototypes. Sometimes, fully shared cognitive structures do exist at the level of the collective (Aguinis & Adams, 1998; Staw, 1991). Often, they do not. Mutual interactions in the past and a desire to continue interactions in the future facilitate the conversion of individual experience into shared—or at least "equivalent"—knowledge (Weick, 1995). Equivalent mental models are not fully shared but are similar enough to enable collective coordinated action. One would expect such shared or equivalent mental representations to change over time, beginning with abstract and general models and gaining increasing specificity over time through continued interactions (Klimoski & Mohammed, 1994). In the General Hospital case, for example, after a long period of time, one would expect widespread sharing of team members' beliefs about their own and others' power.

Even when scholars agree that group-level PMMs are shared, they may still disagree about their structural similarity. For example, researchers have addressed the level of complexity or the number of dimensions of mental models. Some have argued that the structure of the information for a group is less complex and has fewer dimensions or features than that of individuals (Hinsz, Vollrath, Nagao, & Davis, 1988). That is, collectives tend toward more restricted representations of their world. Others have argued the opposite, suggesting that the collective mental maps of groups are more complex than those of individuals (Whyte, 1993).

In addition to these debates about the structure of mental models, researchers have also disagreed about what exactly is shared in the case of group-level mental models. Orasanu and Salas (1993) have argued that the content of organizational knowledge is shared. In contrast, Cannon-Bowers, Salas, and Converse (1993) have suggested that sharing exists around group-level expectations—not knowledge. Moving even farther from shared mental model content, Weick and Roberts (1993) have noted that

groups share common interactions and social activities. Very little empirical evidence exists to support any of these views (Klimoski & Mohammed, 1994).

We conclude that antecedents and behavioral results and outcomes of power are *structurally isomorphic* across the two levels of analysis. *Individual-level and group-level PMMs, however, may reflect varying degrees of structural similarity.*

Process Isomorphism

In the text we introduced process isomorphism, subsumed within assessments of structural isomorphism in prior research, to specifically assess the similarity of the processes by which the components of our model develop (i.e., how they work) at the individual and group levels. The cognitive processes by which antecedents lead to PMMs appear to be similar across the two levels of analysis. The organized and patterned mental representations of both individuals and groups similarly arise out of social interactions. Collectives "can and should be studied as systems of interaction" (Giddens, 1993: 128). The elementary unit of analysis in such social systems is the individual behavioral act. But individuals do not think and act in a vacuum. Interaction is the basic building block on which collective structure is built. The interactions lead to individual-level beliefs—for example, individual PMMs—and can sometimes bring about a jointly produced pattern of beliefs—for example, group-level PMMs (Morgeson & Hofmann, 1999).

Research evidence suggests, however, that collectives display more homogeneous cognitive processes than their members and that these more reliable, similar processes accentuate the cognitive biases of their members. If individual members tend to process information with particular errors or biases, then, as a collective, they will accentuate this tendency (Hinsz et al., 1997; Tindale, 1993; Tindale, Smith, Thomas, & Filkins, 1996). Individual biases, thus, are exaggerated in groups.

Similarly, the processes by which PMMs lead to self-confirming behaviors are similar in individuals and groups. In the case of individuals, PMMs are mental shortcuts that lead to behavioral scripts and routines (Aguinis et al., 1994; Lord & Maher, 1991). The resulting behaviors,

therefore, are usually highly congruent with the mental representations. In the case of groups, equivalent or shared mental models similarly lead to more or less coordinated behavioral scripts and routines (Klimoski & Mohammed, 1994).

Finally, selective attention guides the process by which behaviors and outcomes serve as reinforcement of antecedents. Individuals tend to not pay attention to disconfirming feedback but, rather, look for confirmatory behavioral evidence (Hinsz et al., 1997). Members of a group use feedback in much the same way when making attributions. So, the self-attributional focus actually shifts from the self to the group, consistent with social categorization theories (Sherman et al., 1999; Turner & Oakes, 1989). Similar to cognitive biases, the process is exaggerated in groups, in that they are better able to use feedback than individuals and they use it more consistently (Hinsz et al., 1997).

Our conclusion is that the *processes* by which the components of our model emerge at the two levels are essentially *isomorphic*, with groups exaggerating individual-level processes.

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