

MANAGING JOINT PRODUCTION MOTIVATION: THE ROLE OF GOAL FRAMING AND GOVERNANCE MECHANISMS

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We contribute to the microfoundations of organizational performance by proffering the construct of joint production motivation. Under such motivational conditions individuals see themselves as part of a joint endeavor, each with his or her own roles and responsibilities; generate shared representations of actions and tasks; cognitively coordinate cooperation; and choose their own behaviors in terms of joint goals. Using goal-framing theory, we explain how motivation for joint production can be managed by cognitive/symbolic management and organizational design.

Human beings, and only human beings, are biologically adapted for participating in collaborative activities involving shared goals and socially coordinated action plans (Tomasello, Carpenter, Call, Behne, & Moll, 2005:, 676).

Across a number of macro-oriented management fields, interest is increasingly centering on understanding the microfoundations of organizational performance, such as firm-level competitive advantage and innovativeness (Abell, Felin, & Foss, 2008; Gottschalg & Zollo, 2007; Gupta, Tesluk, & Taylor, 2007; Teece, 2007; Wright & Nishii, in press). A concern with microfoundations naturally involves human resources—arguably, the “key ingredient to organizational success and failure” (Baron & Kreps, 1999: 4)—and their motivation (Gottschalg & Zollo, 2007). The questions then are “Is there a special kind of motivation that is particularly geared to the fact that organizational members need to engage in collaborative activities such that organizations that tap into it would gain a performance advantage—what may be termed *joint production motivation*? If such a motivation can be identified, what are the organizational pre-

requisites for mobilizing and sustaining it for the purpose of gaining superior performance?”

An important insight that has emerged from cognitive (social) psychology over the last twenty years is that cognitive and motivational processes are intertwined to such a degree that they must be considered simultaneously and in close interaction with each other (Kruglanski et al., 2002). Cues in the environment can drastically affect goals, thereby creating shifts in cognitions and motivations and the way they interact. Governance structures would have to be specifically constructed to deal with this interaction because it creates constraints on virtually all governance instruments. Does the extant literature bearing on collaborative activities already deal with this important insight? If not, how could one deal with it?

Several research streams explore the question of how collaborative activities can best be realized, but they generally fail to consider the interplay of cognitive and motivational processes. Some of them mainly focus on cognitive aspects of collaborative activities but bypass or downplay the motivational aspects, whereas others mainly capture part of the motivational aspects of joint production but then downplay the cognitive ones. Even if cognitive and motivational aspects are both considered, they are treated as separate and independent processes. Related to this issue is the importance of considering a group perspective and cognitions about tasks,

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interdependencies, and common goals, all aspects in which cognitions and motivations that are specific to collaborative activities interact.

Thus, work on collective mind (Weick & Roberts, 1993) and work on cross-understanding (Huber & Lewis, 2010) capture the importance of overlapping knowledge and the interaction of beliefs for the coordination of actions and tasks (see also Gavetti, 2005). However, they do not explicitly address the specific motivation that underpins these processes. Game theory in organizational research (e.g., Baker, Gibbons, & Murphy, 2002; Kreps, 1990) similarly pays attention to epistemic matters of interaction but does not allow motivation to be oriented toward group goals. Reviewing the evidence on game-theoretic studies of cooperation, Ledyard concluded that "it is possible to provide an environment in which almost all of the subjects contribute toward the group interest. . . . Why . . . this all works remains a mystery" (Ledyard, 1995: 172). It has also been said that organizational economics neglects the social embeddedness of actions inside firms (Granovetter, 1985). However, insisting on the recognition of embeddedness without specifying how joint production may come about does not lead very far.

Other work highlighting motivational constructs captures altruistic behavior but does not explicitly consider the role of group goals. For example, organizational citizenship research (Deckop, Mangel, & Cirka, 1999; LePine, Erez, & Johnson, 2002) takes into account other-oriented motivation (e.g., helping, sportsmanship, civil virtue) but pays little attention to the specific group perspective implied in collaborative activities. In a related fashion, work on prosocial behavior treats interpersonal "kindness" (Grant, 2008a) but does not consider it in the context of subservience to a common goal. Like all research on identification, *relational* identification analysis (Brewer & Gardner, 1996; Brickson, 2005, 2007) stresses the link between self-concept and motivation, and that is a very important insight. However, it specifically emphasizes the salience of mutual concern for the interest and outcomes of the significant other and of dyadic role relationships and reciprocity (Flynn, 2005). There is, thus, no particular attention to common goals and to the collaboration needed to reach them. Even if group goals are explicitly mentioned (Ellemers, de Gilder, & Haslam, 2004), research on collective identification (Brewer &

Gardner, 1996; Haslam, Powell, & Turner, 2000) stresses membership in a collective category, becoming interchangeable with others in that category. Thus, it does not focus on contexts specific to collaborative activities.

A number of research streams explicitly address common goals and argue that behaviors can be chosen in terms of such goals, but they pay little attention to all the other aspects of collaborative activities. Bacharach (2006) argues that individuals may act in what he calls a "we-frame," where they do not ask, "What should I do?" (i.e., the "I-frame") but, rather, "What should we do?" (cf. also Schwartz, 1992). In that frame individuals reason as though the group goals were their own (cf. Sugden, 2003; Tuomela & Tuomela, 2005). The notion of collectivistic work motivation (Shamir, 1990, 1991) casts such we-frames in motivational terms, explicitly recognizing that organizational members can be motivated in terms of what is beneficial to the collective. While this work implicitly recognizes the need to coordinate task and outcome interdependencies, it lacks attention to the integration of cognitive and motivational aspects of joint production and to the importance of adaptive, intelligent effort in the service of collaborative activities.

The vast literature on teams (e.g., Kozlowski & Ilgen, 2006; Mathieu, Maynard, Rapp, & Gilson, 2008) explicitly highlights cognitive constructs that capture task-relevant interactions among team members (e.g., team mental models and transactive memory), and it is rich in its description of team climate and team affective processes. However, it treats motivational processes as an issue (of cohesion, collective efficacy, positive affect, etc.) that is separate from the cognitive aspects. This also holds for the literature on transformational leadership and goal setting (Latham & Pinder, 2005). In sum, there has as yet been no attention paid to the special motivation for joint production, in which cognitive and motivational processes play into each other. However, understanding the intertwining of cognitive and motivational features is the key to addressing a number of issues currently unresolved in the extant literature. For example, if somebody has a collective work motivation, is this a stable state or does it have to be maintained by extra external supports? Can an individualistic motivation be a threat to the collectivistic motivation? Might it even support

it? Can employees hold a collective identity and not be motivated for joint production?

The remainder of this article is organized as follows. First, we clarify the central construct of joint production motivation. Second, we present and discuss goal-framing theory, which supplies the motivational and cognitive microfoundations needed in order to link the structural and governance features of organizations with joint production motivation. Third, we develop propositions about how goal frames can be managed by means of these features so that joint production motivation is generated and maintained, feeding positively into organizational performance.

JOINT PRODUCTION MOTIVATION

The construct, joint production motivation, that we proffer in this article captures the human capacity to actively engage in collaborative activities, and it is based on the insight that the motivation to engage in such joint endeavors is intricately related to cognitions about tasks, interdependencies, and common goals (e.g., Tomasello et al., 2005). These faculties created the adaptive advantages of human beings living in larger groups, and it seems that the most potent human brain power (the neocortex) evolved as a "social brain" to allow human beings to gain such adaptive advantages (Dunbar, 2003). Apparently, the brain contains a hard-wired ability to recognize a situation as one of joint production and to trigger the special motivational and cognitive faculties to participate in joint production (cf. Sebanz, Bekkering, & Knoblich, 2006). At the same time, these special faculties are precarious. They easily yield to self-serving motivations unless they receive strong, sustained support from the social environment (Lindenberg, 2008). From an evolutionary point of view, this precariousness makes sense because it is the group that is instrumental for individual adaptive advantages, rather than the other way around.

By "joint production" we mean any productive activity that involves heterogeneous but complementary resources and a high degree of task and outcome interdependence (thus, contexts in which work efforts are separable and autonomous fall outside the realm of our analyses). Joint production is akin to Alchian and Demsetz' (1972) concept of team production, but unlike

their view of team production, our conception implies that human beings are especially equipped with coordinated cognitive and motivational faculties that are geared to participating in joint production. Members of an organization perceive the environment differently than they do in independent action: they recognize a joint endeavor and see themselves as part of this endeavor, each with his or her own roles and responsibilities, involving a sharing of cognitions about the relevant tasks, interdependencies, timing, and possible obstacles to smooth coordination in terms of joint goals. They are able to mutually anticipate goal-related actions from others and to cognitively coordinate temporal and special aspects of cooperation (Higgins & Pittman, 2008; Sebanz et al., 2006). They exert intelligent and adaptive efforts—that is, engage in problem-solving and helping efforts that result in productivity gains and innovativeness. They are willing to supply inducement and assistance to others to make them do their bit (Tomasello et al., 2005), and to sanction them if they do not (Ostrom, Walker, & Gardner, 1992). In ambiguous situations group members will search for ways to serve the group goal(s), rather than waiting to be instructed (De Dreu, Nijstad, & van Knippenberg, 2008; Wrzesniewski & Dutton, 2001), and they are heedful of their and others' contribution to the collective goal(s) (Weick & Roberts, 1993). Under the right social and cultural circumstances (Henrich et al., 2001), a special kind of motivation is activated that contains all these ingredients—namely, joint production motivation. Because it is entirely devoted to the collaborative nature of organizations, joint production motivation provides an important motivational basis for a firm, and its management is therefore crucially important.

Extant research does not fully capture the specifically human capacity of actively engaging in collaborative activities. An important reason for this is that it does not deal with the interrelationship between the cognitive and motivational dimensions. This means that it does not treat the crucial interaction of these dimensions in bringing about joint production motivation, and it does not sufficiently identify the conditions under which joint production motivation can be initiated and sustained. In particular, extant research does not highlight the precariousness of the collective mode that supports joint production motivation and, thus, does not

recognize the need for integrated flanking arrangements girding such motivation, such as cognitive, motivational, and symbolic management *in combination with* organizational design features concerning tasks, teams, and rewards.

Even though joint production motivation has a downside because of its precariousness, when it is present, it is, by definition, optimally adapted to situations in which activities involve heterogeneous and complementary resources and in which the objective task and team structure are geared toward common goals. Of course, whether or not this also translates into actual superior performance depends on additional factors pertaining to resources and market conditions that are beyond the scope of this article (Barney, 1991; Porter, 1980).

However, given such additional factors, joint production motivation has beneficial organization-level consequences because it impacts the tasks that organizational members are willing to engage in, how much effort they will put into these tasks, and how they will coordinate their actions. It is also associated with prosocial behaviors (Grant, 2008a), such as spontaneous sharing of knowledge (De Dreu et al., 2008; Gagnè, 2009), which, in turn, may positively impact work productivity and innovation performance (Tsai, 2001). It involves the heedful interrelating that has been found to assist coordination in ambiguous situations (Weick & Roberts, 1993) and to promote innovative performance (Dougherty & Takacs, 2004). Because joint production motivation implies a partial suspension of moral hazard/opportunism, it reduces the need for costly control mechanisms (Podsakoff & MacKenzie, 1997). Coordination costs are reduced because joint production motivation implies that organizational members generate shared representations of actions and tasks in terms of joint goals, reducing the need for planning and formalization. Individual efforts are channeled toward the realization of common goals. Overall, organizational performance is improved because of increased innovativeness, increased productivity, and reduced motivation and coordination costs.

From a prescriptive point of view, it is therefore important to identify (1) what brings about and sustains joint production motivation, (2) the main obstacles to realizing such motivation, and (3) the main instruments with which these obstacles can be overcome or mitigated. For these

reasons our aim is not just to proffer the concept of joint production motivation but also to identify the necessary flanking arrangements. To this end, we need a theory that identifies the difference between individual and collective orientations, as well as the relevant cognitive and motivational differences within each of these orientations. Moreover, we need a theory that fully captures the interweaving of cognitive and motivational processes, such as motivated cognition and cognitively steered motivation.

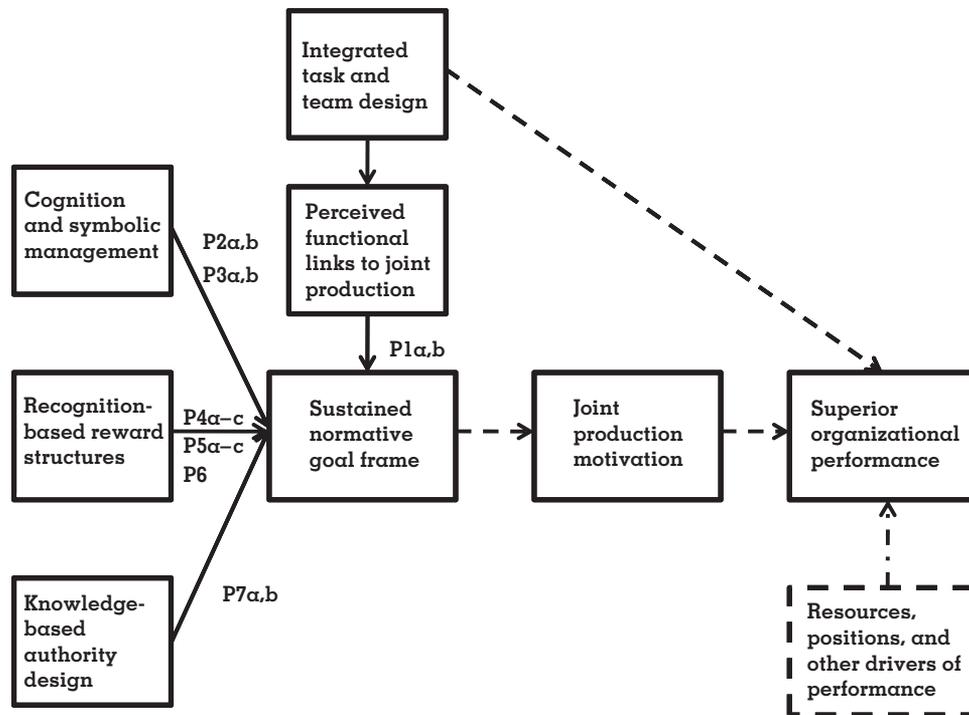
Goal-framing theory is well suited for these purposes (Lindenberg, 2006, 2008; Lindenberg & Steg, 2007). This theory allows us to (1) pinpoint what exactly needs to be mobilized and sustained in terms of motivation and why it might fail in these regards, (2) isolate the structural and governance features that are needed to mobilize and sustain the motivation for joint production, and (3) integrate important insights from, notably, the organizational behavior literature.

Figure 1 maps our strategy of argumentation for the remainder of this article. Note that our propositions only relate to the left-hand side of the figure, whereas the (dotted) relations in the right-hand side of the figure are analytical relations rather than (falsifiable) propositions. First, we assume that the firm makes the right choices with respect to traditional drivers of performance, such as product market positioning, the choice of a resource profile to back this position up, and so on (Barney, 1991; Porter, 1980). Second, if the objective structure of the organization (i.e., what we call the "integrated task and team design") is set up so that complementary inputs will lead to the realization of company goals that cannot be reached by noncomplementary inputs, and if there is joint production motivation to function in such a structure, organizational performance is higher than under other kinds of motivation.

GOAL-FRAMING THEORY

Goal-framing theory is concerned with the motivational force of a collective orientation and its direct competitors. It applies the insight from (social) cognition research that mental constructs have to be activated in order to affect behavior and that goals are particularly important mental constructs in which cognitions and motivations are intricately intertwined (e.g.,

FIGURE 1
Antecedents of Joint Production Motivation



Förster, Liberman, & Higgins, 2005; Gollwitzer & Bargh, 1996; Kruglanski & Köpetz, 2009; Shah, Friedman, & Kruglanski, 2002). In addition, the theory draws on a variety of other sources, such as evolutionary theory (e.g., Dunbar, 2003) and experimental economics (e.g., Andreoni, 1988; Fehr, Fischbacher, & Kosfeld, 2005; Fehr & Gächter, 2002), which help pinpoint the peculiar precariousness of joint production motivation.

Three Overarching Goals

A starting point for goal-framing theory is the distinction between an individual and a supra-individual mindset (Brewer, 2004; Caporael, 1997). Goal-framing theory elaborates three different overarching goals that can be seen as the active ingredients of such mindsets (Haslam et al., 2000). For example, "to act appropriately" is an overarching goal that relates to the supra-individual level. Overarching goals combine cognitive and motivational elements. When they are focal (i.e., when they are activated at the moment), such goals "frame" a situation by steering important cognitive processes in the service of the focal goal, a process in which

motivation expresses itself through cognitions. More concretely, goals (and especially overarching goals) govern what we attend to (Posner & Petersen, 1990), what concepts and chunks of knowledge are being activated, what alternatives we consider, what information we are most sensitive about, and how we process information (Förster et al., 2005; Gollwitzer & Bargh, 1996; Kruglanski & Köpetz, 2009). In turn, these cognitive processes have an impact on motivation by inhibiting other goals (Shah et al., 2002), by influencing what we like and dislike (Ferguson & Bargh, 2004), and by governing the criteria we use to judge goal realization or failure (Carver & Scheier, 2002). Thus, overarching goals activate a particular self by "setting" the mind and mobilizing concomitant energies.

A *goal frame* denotes an overarching goal when it is focal (i.e., when it is activated), together with the integrated cognitive/motivational processes that are driven by this goal. However, overarching goals compete for the privilege of being focal (i.e., for being a goal frame) and try to inhibit each other (Brewer, 2004; Fishbach & Dhar, 2008). For this reason we must also know something about these possible

competitors and how the goals relate to each other. Below we consider the three goal frames that are primarily relevant in the present context (see Table 1). There are other important overarching goals, such as approach/avoidance goals (Carver, 2006), and related constructs, such as gain and loss-avoidance goals (Kahneman & Tversky, 1984) or a promotion and prevention focus (Higgins, 1998). There are also goals concerning reflective/nonreflective mindsets, such as deliberative versus implemental goals (Gollwitzer & Bayer, 1999), reflective versus impulsive cognitive modes (Strack & Deutsch, 2004), epistemic goals (Ford & Kruglanski, 1995), and performance versus learning goals (Grant & Dweck, 2003). None of these goals refer to the collective goal orientation and its direct competitors (hedonic and gain goals) that are central to joint

production motivation. Of course, these other kinds of overarching goals may become important for collective or individual orientations, but their moderating role is beyond the scope of this article.

The overarching goal connected to a supra-individual orientation is the *normative* goal, and it can best be indicated by the desire to act appropriately in the service of the supra-individual entity. Such a goal can be inhibited (i.e., driven into the cognitive background) by one of two competing overarching goals connected to an individual orientation: the *gain* goal, which expresses the desire to improve (or preserve) one's resources, and the *hedonic* goal, which expresses the desire to improve (or preserve) the way one feels right now. Let us consider these three overarching goals in more detail.

TABLE 1
An Overview of Goal-Framing Theory

Elements of Goal-Framing Theory	Goal Frames		
	Normative	Hedonic	Gain
What overarching goals influence behavior?	"We": a collective self, oriented toward acting appropriately/in an exemplary fashion in terms of what is good for the collective goals. Difference between orientation toward the dyad or the collective and joint production	"I": the individual's personal self that is motivated toward improving how he or she feels right now	"I": the individual's personal self that is motivated toward improving his or her resources
Behavior examples	Following organizational rules and regulations; timeliness when others depend on this; organizational citizenship behaviors; basis for motivation for joint production	Various kinds of "fun in the workplace"; avoiding unpleasant but potentially necessary tasks	Any behavior that is motivated by potential improvement in income or status
What background goal may strengthen the goal frame? (examples)	Gain goal (when furthering common goals) enhances status; hedonic goal (when furthering common goals) is related to a warm glow and/or interesting tasks	Normative legitimacy of hedonic aspects of tasks and rewards	Normative legitimacy of gain improvement; hedonic goal when gain improvement reduces anxieties
What triggers/cues/supports the goal frame? (examples)	Transparent task and team structure, vision/mission for the collective, clear collective goals; rewards that emphasize common goals; contagion	Emphasis on enjoyable task rewards and hedonic bonuses like bigger offices and company cars; expense accounts	Strong contingent individual rewards; strong focus on personal career; strong competition
What is the a priori strength of the goal?	Weakest; needs strong flanking arrangements to avoid displacement by the two other goal frames	Strongest because of its direct links to need satisfaction	Strong; however, may be displaced by the hedonic goal frame

The normative goal frame. This goal frame is the all-important precondition for joint production motivation. Human beings can take the point of view of a supraindividual entity (Caporael, Dawes, Orbell, & van de Kragt, 1989; Hogg, 2001; Moorman & Blakely, 1995; van Knippenberg, 2000). In the normative goal frame the goal is to improve what is good for this supraindividual entity by focusing on what behavior is appropriate, whether in terms of contributing to a joint project or in terms of what is expected or exemplary. Thus, in such a goal frame individuals adhere to a "logic of appropriateness" (March & Olsen, 1989; Weber, Kopelman, & Messick, 2004). The criteria for goal fulfillment are linked to the realization of joint goals and to meeting joint appropriateness standards. Under a focal normative goal, competing individual goals are pushed into the cognitive background. This suspends opportunism to various degrees, as illustrated by the finding that people act very differently when they identify a situation as a "community game" or a "Wall Street game" (Lieberman, Samuels, & Ross, 2004; see also Pillutla & Chen, 1999).

How the normative goal frame actually works out depends on how the supraindividual entity is seen. A person can be oriented toward a dyad (e.g., a partnership) or toward a collective (e.g., an organization). In the dyad case the person will attend to the different role expectations pertaining to the dyad. In the collective case the person will be oriented toward what he or she has in common with the other members of the collective or what is prototypical for the collective (Brewer & Gardner, 1996). There is, however, a third possibility—namely, the context of joint production. This context is clearly collective, but the focus is on what people can differentially contribute to a common goal. Role expectations play an important role, as does intelligent effort in finding out what actions might be appropriate in a situation given the common goals (Frese, Kring, Soose, & Zempel, 1996). This also means that in joint production the dyadic orientation is important; however, it is embedded in the larger context of the common goals, which, in turn, are embedded in nested joint collective identifications. For example, in deciding to help a colleague, the issue is not primarily to be caring or to cater to the partner relationship but, rather, to help in terms of what is appropriate for the goals of the larger context.

The crucial ingredient in bringing about a normative goal frame directed at joint production orientation and its concomitant motivation (versus a purely dyadic or collective orientation) concerns how easily the involved individuals ascertain that they are part of a joint endeavor. Realizing that one is involved in a joint endeavor will mobilize norms about what kind of cooperation is appropriate in the joint endeavor (Wageman, 1995).

All three specifications of the normative goal can have strong competition from the gain and the hedonic goals, which can seriously weaken the normative goal by pushing it into the cognitive background.

The gain goal frame. When individuals are mindful of maintaining or improving their resources (e.g., status and money), the criteria for goal realization pertain to improvements in these resources. A gain goal frame makes individuals highly sensitive to opportunities for and threats to the improvement of their resources and, thus, particularly sensitive to incentive instruments. For example, in such a goal frame individuals will react strongly to advancement schemes, are willing to invest in education if returns are reasonably certain, will be competitive with regard to advancement, and may act opportunistically (Williamson, 1985). Since the normative goal is pushed into the background, group goals and norms are seen as constraints to be reckoned with when furthering individuals' own career, income, or status, rather than as guiding principles for appropriate action (see Lindenberg, 2003).

The hedonic goal frame. Enjoyment has long been considered a powerful source of motivation, including work motivation (Deci & Ryan, 1985). When individuals have a hedonic orientation, their major goal is to improve how they feel in a particular situation, such as seeking direct improvement in self-esteem, seeking excitement, and avoiding unpleasant effort, negative thoughts and events, and uncertainty. The criteria for having realized the goal relate to improvements in the way one feels.

The power of this goal frame vis-à-vis rival goal frames derives from its direct link to emotions (Ryan, Huta, & Deci, 2008). If a cue triggers a hedonic goal frame in a person, the fact that it is an overarching goal will also make that person hedonic with respect to many other things; there will be a cross-domain effect. A

hedonic goal frame makes individuals oriented toward instant gratification in different domains. A recent experiment (Van den Bergh, Dewitte, & Warlop, 2008) illustrates this point. One group of (male) subjects was exposed to photographs of young women in bikinis; the other was not. Subsequently, both groups were engaged in a completely different experimental task about impatience in monetary transactions. The exposure to the photographs of bikini-clad women made subjects (at least temporarily) much more impatient in monetary transactions, even though the two tasks were not directly related.

The Dynamics of Goal Frames

Goal-framing theory has two more important components that are crucial for understanding the conditions necessary for establishing and maintaining joint production motivation: the precariousness of the normative goal frame and the difference between foreground and background goals.

The precariousness of the normative goal frame. Relative goal strength matters for which goals will come to dominate cognitive processes. Importantly, without supporting arrangements, the normative goal frame is the weakest of the three goal frames. From an evolutionary point of view, it makes sense that hedonic goals and gain goals have a default priority, since basic needs are expressed by hedonic goals and caring for one's own resources is vital for adaptive advantages. However, this fact puts heavy constraints on what governance instruments can and cannot do. If the normative goal frame fails to get sufficient support, gain or hedonic goal frames will take over, or the hedonic and the gain goal frames might effectively prevent the normative goal from becoming focal.

The relative weakness of the normative goal can also be gleaned from the fact that even if the normative goal is focal at a given moment, it will tend to decay quite quickly unless it is strengthened by supporting arrangements, such as positive and negative sanctions (Andreoni, 1988; Fehr & Gächter, 2002; Ledyard, 1995). Thus, absent supporting arrangements, one of the two individualistic goals (hedonic and gain) is likely to displace the normative goal frame. Note that even the gain goal frame is by no means the

strongest. Because the hedonic goal is by definition directly related to need satisfaction (both physical and social), it is the most basic and will also win out when in competition with the gain goal frame, unless the latter is especially strengthened (Metcalf & Mischel, 1999). Thus, if the normative goal frame is not sustained, the entire organization may ultimately drift toward a culture of hedonic goal frames, with a preponderance of myopic behavior (cf. Lindenberg, 2004; Perlow, 1999).

Important direct support of the stability of a normative goal frame comes mainly from two sources. Because the normative goal frame is linked to a supra-individual entity, the first source is a special emphasis on what people have in common—what binds them—together with the creation and maintenance of positive affect connected to what people have in common (Bollen & Hoyle, 1990; Liberman et al., 2004; Zaccaro & McCoy, 1988). Second, a very strong factor influencing the stability of the normative goal frame is the behavior of others (Keizer, Lindenberg, & Steg, 2008), especially those of higher status (Moscovici & Faucheux, 1972). If higher-ups clearly signal that they are in a normative goal frame, this will greatly help to stabilize this goal frame in subordinates (Brown, Treviño, & Harrison 2005; Mühlau & Lindenberg, 2003). By the same token, signals that higher-ups are not in a normative goal frame will weaken this goal frame in subordinates. For example, in a vignette study Keizer, Lindenberg, and Steg (2011) showed that when higher-ups use company money for their private purposes, employees are less inclined to keep to their own work rules. Same-status colleagues also have such contagious effects, but these effects are weaker.

In short, such "goal contagion" effects (Aarts, Gollwitzer, & Hassin, 2004) can strongly influence the stability of the normative goal frame in both positive and negative directions. This also limits management's ability to use the language of cooperation, joint production, and solidarity as a means to get individuals to work for the company's goals, without believably signaling that they are in a normative goal frame.

The importance of background goals. It has often been observed that, at any given time, behavior is influenced not by one but by several motives. For example, Shamir (1990, 1991) observed that, in organizations, identity, value, and self-interest motives operate simultane-

ously. Yet it is important to realize that because of goal frames, these "mixed motives" do not operate as separate factors. Goal frames are strengthened or weakened by background goals. Overarching goals are in competition, and when one of them becomes focal (i.e., becomes the goal frame), the others do not vanish but are pushed into the cognitive background (Kruglanski et al., 2002; Lindenberg, 2001). From there they can still either increase or decrease the salience of the current goal frame. For example, fairness is a strong social norm. However, if the criterion for being fair is ambiguous (e.g., it could be either equality or equity), individuals will tend to choose the criterion that serves their gain goal best (Wade-Benzoni, Tenbrunsel, & Bazerman, 1996). Also, when norms can be complied with to various degrees, there will be less compliance when the cost of conforming goes up (Straub & Murnighan, 1995).

It makes a big difference which goal is in the foreground and which specific subgoals of the other two overarching goals are in the background. This is especially important for the possibility of *indirectly* strengthening the normative goal frame through supportive background goals (Lindenberg, 2001). For example, when individuals are in a normative goal frame, they focus on which actions are appropriate for the common goal. Still, support for this goal frame from the background may come from both a gain goal (e.g., related to individual financial rewards for promoting common goals) and a hedonic goal (e.g., related to enjoyable tasks), although the major focus is on acting appropriately rather than on money, status, or fun. When the gain or hedonic goal in the background becomes too strong, it will come to the foreground and push the normative goal into the background, in which case the employee is mainly oriented toward opportunities to improve his or her financial or social position or to have fun. While motives are mixed, the result is very different, depending on which goal is in the foreground. As detailed in Lindenberg (2001), this recognition of foreground and background goals, not the importance of intrinsic motivation per se, is the most important difference between goal-framing theory and Ryan and Deci's (2000) theory of intrinsic motivation.

The Major Challenges to Sustainable Joint Production Motivation

Because of its precariousness, a normative goal frame is difficult to establish and maintain. For joint production the organization must integrate collective and dyadic orientations. Organizational citizenship behavior itself is not embedded in common organizational goals, and collective identification by itself can lead to a dark side of identification, with symptoms of the "organization man" (Whyte, 1956), giving center stage to loyalty, submission, and impression management with loss of creativity and the possibility of "social loafing" (Karau & Williams, 1993; Sundaramurthy & Lewis 2003), rather than shared cognitions with individual intelligent effort on behalf of the common goal (Bernthal & Insko, 1993; Michel & Jehn, 2003; Raafat, Chater, & Frith, 2009). Collective identification can possibly also create a loss of efficacy by increasing resistance to abandoning failed projects (Haslam et al., 2006). In addition, there is a danger of subgroup egoism (De Dreu et al., 2010) that can fragment an organization. For example, Shamir, Zakay, Breinin, and Popper (1998) found that emphasizing collective identity in a lower level of the organization is likely to diminish the collective identification with the larger organization. Strengthening the loyalty to the subgroup jeopardizes cooperation with other parts of the firm (Richter, West, van Dick, & Dawson, 2006; Riketta & van Dick, 2005). Such "strong solidarity" (Lindenberg, 1998) is incompatible with the weak solidarity needed for the functional integration of subgroups for joint production in the service of higher-order goals in a firm.

MANAGING JOINT PRODUCTION MOTIVATION: GENERAL DESIGN PROPOSITIONS

Conditions for Establishing and Maintaining Joint Production Motivation

Below we discuss four groups of conditions that can be derived from goal-framing theory and that concern initiating and maintaining joint production motivation. The first group deals with the preconditions for activating a normative goal frame that is conducive to joint production motivation—namely, the fact that members of an organization perceive their interdependence in terms of joint production

(through the team and task structure). The second group deals with direct supports for the normative goal frame (through cognitive/symbolic management). The third group deals with indirect supports for the normative goal frame (through calibrating reward structures). Finally, the fourth group deals with conditions necessary for governing without letting competing gain and hedonic goals sideline the normative goal frame (through calibrating the authority structure; cf. Figure 1).

Perceived Interdependence in Terms of Joint Production: The Transparency of Task and Team Structures

Wageman found that "work design shapes individuals' preferences, their behavior, how they experience their rewards, and the impact of those rewards on their performance" (1995: 173). This is consistent with goal-framing theory, which predicts that even if employees are in a normative goal frame, their motivation for contributing to joint production cannot be sustained if they have difficulty seeing what their contribution could be and understanding what others are doing in terms of working toward the realization of common goals. For joint production motivation with individual intelligent effort, clearly perceptible interdependences within and across team boundaries must be part of the attention structure of the firm (Ocasio, 1997).

Thus, employees must understand that tasks and teams are designed for the achievement and maintenance of joint production. The clearer the common goals, the various roles in which individuals help to reach those goals, and the functional connections of tasks and goals between different levels of the firm, the easier it is for employees to develop and sustain a motivation for joint production. The same can be said regarding the question of how well plans for dealing collectively with problems that arise for reaching the common goals (such as delays, breakdowns of machines, conflicts, etc.) are worked out on the basis of aiding joint production rather than other goals (such as harmony or avoiding blame). This gives rise to the following proposition regarding structural design.

Proposition 1a: Task and team designs that make it easy for members of the organization to recognize the func-

tional links of roles and rules to joint production for common goals within and across units are necessary for establishing and maintaining a normative goal frame that is conducive to joint production motivation.

To make sure that the perception of joint production stretches beyond one's own team, it is also important that the structural design for joint production (within and between teams) be supported by understanding the workings of the larger wholes to which employees contribute. This understanding will help reduce subgroup egoism and guide intelligent effort in favor of joint production when problems arise (Rudolph, Morrison, & Carroll, 2009). It may be brought about by training schemes, such as educational job rotation.

Proposition 1b: Training schemes that increase the understanding of how subgoal achievement helps realize higher-order goals in the firm will foster the positive impact of task and team design on a normative goal frame that is conducive to joint production motivation.

Directly Supporting the Normative Goal Frame: Cognitive and Symbolic Management

Clear and consensual vision and mission statements. According to goal-framing theory, the normative goal frame tends to decay unless it receives strong support. Even if common goals are specified in the task and team design, they must still be embedded in a shared sense of common direction and affect at the level of the firm. This will also help prevent subunit egoism. A suitable means for achieving a common direction is a vision and mission statement, consensually supported by top management, that focuses on a common purpose (Ashforth & Johnson, 2001) rather than on operational goals that are appropriate for the task and team structure. Conflicting opinions (especially among the leadership) about the vision and mission of the organization will weaken the normative goal frame and, thus, endanger the embedding of common goals (Voss, Cable, & Voss, 2006).

Proposition 2a: A sustainable normative goal frame that is resistant to sub-

unit egoism among employees is fostered when common goals are embedded in clear consensual vision and mission statements for the organization as a whole.

Affective communality at the firm level can best be achieved by means that link the group level to group-related values—what Thompson and Bunderson (2003) call “ideological currency.” Causes help to mobilize emotional energy for concrete tasks. For example, IKEA’s mission statement contains “to create a better everyday life for the many,” and LEGO’s mission statement contains “to help children develop their creativity and learning skills through constructive play.” Because of the contagion effects on the stability of the normative goal frame, seeing that leaders, in special communal events, show affective and consensual commitment to a cause and the related vision/mission, along with seeing that many other employees experience this simultaneously, creates affective communality among employees (see Islam & Zyphur, 2009, and Trice & Beyer, 1984).

Proposition 2b: Establishing guiding causes for the firm is particularly effective in fostering a sustainable normative goal frame among employees when these causes are explicitly linked to the organizational vision/mission and this link is regularly reinforced by symbols and face-to-face rituals of the entire organization.

Signaling. According to goal-framing theory, goal frames are subject to contagion effects. The behavior of members of the organization is not just more or less functional or efficient but, in most cases, also betrays the goal frame that steered the behavior. Because one person’s goal frame has a contagion effect on that of another (especially if the latter is more precarious than the former), the behavior of one individual thus also affects the stability of the goal frame of others. Because the normative goal frame of employees is especially sensitive to the goal frame of their superiors, failing to credibly suspend opportunistic and blatantly controlling behavior vis-à-vis the employees reveals a gain or hedonic goal frame of the leadership that can undo the positive support for the normative goal frame of other governance instruments (Am-

brose, Seabright, & Schminke, 2002; Miller, 2001). This can happen in very subtle ways and pervades many spheres, including promotion, remuneration (see Mühlau & Lindenberg, 2003), and ways to measure performance (Townley, 2002).

Proposition 3a: Signals by the leadership to employees that it is in a stable normative goal frame will strengthen the normative goal frame of the employees, whereas signals that the leadership is not in such a goal frame will weaken the normative goal frame of employees.

Colleagues have a weaker contagion effect than higher-ups. For the stability of their normative goal frame, it is especially important that other colleagues do not clearly signal they are not in a normative goal frame (Keizer et al., 2008). Thus, colleagues who clearly show that they work for their own goals (gain or hedonic) rather than for company goals can drag many others to their side.

Proposition 3b: If employees clearly signal by their behavior that they are not in a normative goal frame, the normative goal frame of their colleagues will be weakened.

Indirectly Supporting the Normative Goal Frame: Calibrating Reward Structures

In the normative goal frame organizational members feel obliged to finish a project on time when others depend on it, without much thought about being recompensed for doing so (Echtelt, Glebbeek, & Lindenberg, 2006; Heyman & Ariely, 2004). Yet for such commitment to common goals to happen, goal-framing theory points to the importance of (gain and hedonic) background goals as possible indirect supports of the normative goal frame. While the precariousness of the normative goal frame makes it necessary to add the support of rewards, this must happen in such a way that the rewards do not become focal goals, making gain and hedonic aspects claim center stage at the expense of the precarious normative goal frame. We consider individual and group rewards separately.

Individual rewards. In addition to noncontingent rewards linked to position, employees also

need to be rewarded individually in a contingent manner so as to maintain their motivation to engage in certain activities. But contingent gain rewards, such as status advancement and money, can foster a gain goal frame, and contingent hedonic rewards, such as especially enjoyable tasks and better offices, can foster a hedonic goal frame. Both effects work against a sustainable normative goal frame, and intelligent effort will be selectively driven by what leads to personal rewards (hedonic or gain) rather than by what contributes to the realization of common goals (Frey & Oberholzer-Gee, 1997; Lindenberg, 2001). For example, focusing employees on pursuing their career will not be beneficial for their performance (Ellemers, de Gilder, & van den Heuvel, 1998; Noe, 1996).

What is needed is for gain and hedonic goals to strengthen a normative goal frame but also to remain in the background, where they not only support the normative goal frame but also help temper the danger of excessive group pressures and the closure of group boundaries. As mentioned above, foreground and background make a big difference in terms of the weight situational aspects acquire. Negative sanctions (financial or symbolic) for not contributing are likely to be legitimate in a context of joint production and will strengthen the normative goal frame, provided the behavior can be monitored correctly (Fehr & Rockenbach, 2003). However, in addition to legitimate sanctions, contingent rewards, particularly rewards that are modest enough to keep gain and hedonic goals in the background, are needed. Instruments such as financial (bonuses, extra pay), career (promotion), personal development (empowerment), symbolic (honors), or enjoyable task rewards; bigger offices; company cars; and expense accounts should remain modest (compared to noncontingent rewards) and should be explicitly given as recognition of one's contribution to joint production. Rewards couched as recognition are ideal for this purpose since recognition is mainly given as a side effect of other activities (Konow & Earley, 2008; Sheldon, 2004) and, thus, tends to remain in the background (Lindenberg, 2001).

Proposition 4a: Contingent individual rewards (both gain and hedonic) are needed to keep a normative goal frame from decaying.

Proposition 4b: Contingent individual rewards (both gain and hedonic) must be modest (compared to noncontingent rewards) so as not to displace the normative goal frame in favor of a gain or hedonic goal frame.

Proposition 4c: If contingent individual rewards do not signal recognition for contributions to joint production, the normative goal frame of members of an organization will decay in favor of a gain or hedonic goal frame.

Accountability. The other side of the coin of recognition for contributions to joint production must be accountability (De Dreu, Beersma, Stroebe, & Euwema, 2006; Lerner & Tetlock, 1999), which emphasizes the importance of using intelligent effort when contributing to joint production rather than blindly following rules and routines. However, accountability must be clearly related to those aspects an individual can influence by intelligent effort (Konow, 2000) and to the recognition of limitations in the assessment of individual cause, effort, and intention. This presupposes that those who judge the performance are not just interested in outcomes but also in processes (Lerner & Tetlock, 1999), all the more so since the way outcomes are achieved will have a strong impact on the sustainability of joint production, because process signals mindsets and possible obstacles. For example, an employee may have been called on to help at various times with the urgent projects of others and, as a consequence, may have been delayed on his or her own project (Lindenberg, 2004; Perlow, 1999). This outcome should not signal a noncooperative mindset; however, if process information is not available, it is likely to do just that. Attention to both process and outcomes also allows the smooth working of informal rewards from direct supervisors and colleagues. We formulate these effects into the following propositions.

Proposition 5a: Contingent individual rewards for contributions to joint production require individual accountability in order to foster sustainable intelligent effort in the service of joint production.

Proposition 5b: Accountability that contributes to intelligent effort in joint

production necessitates monitoring process in addition to outcomes.

Proposition 5c: Attention to both process and outcomes facilitates the smooth working of both formal and informal rewards.

Group-level rewards. Next to individual rewards, group rewards are important for stabilizing the normative goal frame, and they are also important for linking this goal frame to joint production. Pearsall, Christian, and Ellis found that the mixing of individual and group rewards in highly interdependent contexts focuses "team member motivation on working collaboratively while maintaining a sustained, directed effort toward their responsibilities" (2010: 188). Rewards for the performance of teams and other subgroups have the advantage that they promote a prosocial dimension: by doing their bit, members of a team will contribute to the rewards of all others members. Group rewards also emphasize the jointness of production and make team members even more likely to help other team members if necessary (De Dreu et al., 2008). However, group rewards may lead to intergroup competition within the same organization and, as a consequence, to subgroup egoism. A dynamic of "for us or against us" also reduces adaptive behavior because it strengthens categorical (either/or) orientations at the expense of recognizing gradual differences (Fritsche, Kessler, Mummendey, & Neumann, 2009; Kruglanski & Webster, 1996).

Proposition 6: Group rewards that emphasize the contribution to common goals at a higher organizational level than the group itself support a normative goal frame that is conducive to motivation for joint production.

Authority Structures

An organization needs an authority structure for adapting goals to contingent events in the environment, for coordinating the various parts, and for allocating resources. However, if authority is based on "fiat" or sheer power differences (Williamson, 1985), it stresses gain and hedonic aspects and will undermine the perception of both cognitive and affective communalities and joint production. For this reason, for sustainable

motivation for joint production, authority should not be legitimized on the basis of the right to control but, rather, on the basis of functional prerequisites for joint production. Authority should ideally be linked to superior insight on what is needed for the realization of common goals. The exercise of authority, then, is not just compatible with joint production motivation but is supportive of smooth joint production and, thus, of the motivation to contribute to it. In a functionally legitimated hierarchy, orders are directives—that is, legitimate requests on the basis of what is functionally necessary for the realization of common goals (Lindenberg, 1993).

Proposition 7a: Authority structures that stress fiat or control rights as the basis for the legitimacy of orders and instructions are likely to weaken the normative goal frame in favor of a gain or hedonic goal frame for all involved.

Proposition 7b: Authority structures that are clearly based on superior insight needed for the realization of common goals strengthen a normative goal frame that is conducive to joint production motivation for all involved.

DESIGNING AND GOVERNING FIRMS FOR JOINT PRODUCTION

The above propositions give rise to more specific implications for the design and governance of firms.

Transparency of Task and Team Design

Propositions 1a and 1b state that task and team designs must make it easy for members of the organization to recognize the functional links of rules to joint production within and across units. We begin by looking more concretely at task design.

Task design. Task interdependence and cooperative behavior are naturally linked: "when ever cooperative behavior is critical to excellent task performance, it is most essential to create real task interdependence and then support the task design with interdependent rewards" (Wageman, 1995: 73). Creating real task interdependencies means at least two things. First, if employees do their tasks well, the joint outcome

will be reasonably predictable (i.e., collective efficacy); second, employees are able to see themselves as truly involved in joint production. In terms of Hackman and Oldham's (1976) job characteristics model, the job must provide meaningfulness (in terms of the results for reaching a joint goal), one must know the results of one's work, and one must be individually responsible. We deal with the last point below, but the first two are clearly to the point right here: meaningfulness and knowledge of the results of one's work both depend on the transparency of job design in terms of joint production.

Much research deals with the functioning of teams (e.g., Cohen & Bailey, 1997; Mathieu et al., 2008; Stewart, 2006). For example, Mathieu and Rapp (2009) show that in order to perform well, teams need clearly outlined performance objectives, coordination of tasks, and contingent plans for the execution of tasks. Such research takes joint production for granted and, thus, does not specifically mention it, yet it is clear that the requirements for the task structure are all related to the requirements for joint production. Setting clear objectives has been identified as an important work motivator in goal-setting theory (Locke & Latham, 2002), which addresses the question of what specific ways of instruction work best for individual performance. When tasks are interdependent, it is also important to set clear group goals (O'Leary-Kelly, Martocchio, & Frick, 1994). Yet task design for joint production needs to go a step further. The performance objectives must not only be clear about the individual's or group's task but also clear with regard to how tasks fit into joint production with others to make sure that participants perceive they are engaged in joint production (see De Dreu, 2007, on "task reflexivity"; see also Latham & Locke, 2007: 296, and Mathieu, Rapp, Maynard, & Mangos, 2010). In addition, this will enhance the significance of tasks for the employees, thereby increasing their dedication to the job (Grant 2008b).

Team design. While task design regulates task-related interdependencies, team design regulates relational interdependencies. In his meta-analysis of research on team design and productivity, Stewart (2006) found that the strongest effect of all team design features was leadership that moves team members beyond self-interest to focus on the good of the larger whole (i.e., "transformational leadership"; Bass, 1999).

However, in order to do this, such leadership must also be accompanied by agreements that regulate joint production, especially styles of cooperation and coordination. For example, when is it necessary to consult others? How are binding decisions made? Who is responsible for completing certain activities? How often and when will individuals meet to discuss issues relating to joint production? Mathieu and Rapp (2009) point to role of clarification as one of the most important aspects of this kind of team design, but what is important is clearly not just the clarification of the individual roles but particularly of the interplay of roles for joint production. Given what we know about joint production, it is not surprising that these researchers found a strong interaction effect of team and task design for performance.

The resolution of conflict needs special attention, because virtually all kinds of conflict can be highly damaging for performance (De Dreu & Weingart, 2003). Joint production by itself does not prevent conflicts but, rather, promotes certain kinds of conflict. First, because employees are task and outcome interdependent, the malfunctioning of one can have serious consequences for many others. This may be a source of tension, anger, and open relational conflict. Second, solidarity in the service of "local" joint production in a subunit may become so strong that it fosters animosity and rivalry between groups (group conflict). Third, given low measurability of outputs, individual and/or group rewards may be seen as unjust, as failing to recognize important contributions, or as a sign of outright favoritism. This may bring about conflict over factual functioning and retaliatory interactions (injustice-related conflict). Fourth, task design for joint production requires authority based on knowledge, and, thus, conflicts may arise over differences of opinion on what is the best way to achieve a common goal (task conflict).

The general mode of conflict resolution should be functional in the sense that what is best for joint production should be used as the criteria for settling conflicts, and if both process and outcomes are monitored, the information for using the criteria should be available. If all involved anticipate the possibility that these kinds of conflicts might arise, and if they are convinced of the functionality for joint production as the basis for conflict resolution, conflicts

are less likely to emerge, and if they do, they are not likely to escalate and will be dealt with in a functional way. Research on conflict has shown highly compatible results (e.g., Alper, Tjosvold, & Law; 2000; Behfar, Peterson, Mannix, & Trochim, 2008; De Dreu & Weingart, 2003). A common orientation toward joint production increases trust and prevents spillovers from task into relational conflicts (Simons & Peterson, 2000). A functional approach to conflict resolution first diagnoses whether problems are related to failure in the allocation of tasks (lacking the right competencies), failure of time planning, temporary external shocks, or the lack of ability or willingness to be motivated by the requirements for joint production. Task conflicts are anticipated and dealt with *ex ante* by careful and transparent matching of tasks and expertise. If conflict arises nonetheless, it will be dealt with as a technical problem, reducing the chance that status competition about who knows best can play an important role (Wittek, 1999).

Mutual understanding. Task and team design have to shoulder the burden of shared cognitions (Gevers, Rutte, & van Eerde, 2006; Hirschfeld, Jordan, Feild, Giles, & Armenakis, 2006; Mathieu & Rapp, 2009). Sharing cognitions or mental models, however, is not enough. There must also be a mutual understanding of the differences in knowledge and perceptions (what Huber and Lewis [2010] aptly call "cross-understanding") and how these differences fit into the realization of common goals. This will also make it less likely that deviation from the strict letter of the rule in the service of common goals will be misinterpreted by others as disrespect for the rule. Such misinterpretation could trigger cascades of deviant behavior, spreading from one rule to many other rules (Keizer et al., 2008).

In addition to the design features already mentioned, there are a few instruments that will greatly help achieve the necessary understanding. First of all, there is the possibility of job rotation as a training program, at least in the initial phase of job occupancy, in order to familiarize employees with various parts of the firm and the ways in which these parts contribute to higher-level goals (Lindenberg, 1993). A variant of this method is cross-training. Here employees are trained in the duties of other employees. Within teams, instruction seems to suffice, and

actual rotation may not be necessary to achieve the desired understanding (Marks, Sabella, Burke, & Zaccaro, 2002).

Cognitive and Symbolic Management

As stated in Propositions 2a and 2b and 3a and 3b, the precarious normative goal frame can be directly supported by managing symbols and signals.

Symbols. Much has been written about identification with the organization (Ashforth, Harrison, & Corley, 2008). However, what is most relevant in the context of joint production is that identification processes provide direct support for the normative goal frame by embedding common goals (Van Knippenberg, 2000) and providing links to values (Thompson & Bunderson, 2003). Then dyadic orientations will be part of a collective orientation, which, in turn, will be supported by links to values. In this way identities will be both privately and publicly significant (Dutton, Roberts, & Bednar, 2010). Because of the precariousness of the normative goal frame, symbolic management should make emblems, logos, and slogans that represent the vision and mission of the organization chronically salient. On the basis of cognitive and affective contagion effects, periodic face-to-face rituals can provide support for the affective attachment to the vision and mission of the organization.

Signals. Because the normative goal frame is highly precarious and because power relations are highly asymmetric (i.e., top down), employees watch out for signals that reveal the goal frame of management (Mühlau & Lindenberg, 2003; Takeuchi, Chen, & Lepak, 2009). Strategic "as if" relational campaigns that actually only try to create the appearance of relational concern and concern for individual improvement will not be effective for long and will ultimately drive out normative goal frames in favor of gain or hedonic goal frames (Greenberg, 1990; Miller, 2001). The leadership's goal frame also shows up in how it goes about repairing relationships when something goes wrong (Dirks, Lewicki, & Zaheer, 2009). In turn, employees signal their normative commitment to the organization by how they exert intelligent effort for the realization of its goals. In sum, much of the governance in the daily interactions in an organization is equal to the exchange of signals concerning the

normative goal frame (cf. Grant, Dutton, & Rosso, 2008).

Contagion effects also occur among employees. The more employees see others committed to joint production, the stronger their own commitment becomes. For example, when employees see others as having positive feelings about their jobs, those employees will be more willing to use intelligent effort in terms of innovativeness (Shipton, West, Parkes, Dawson, & Patterson, 2006). Similarly, receiving positive relational signals from others in daily interaction on the shop floor fosters sending positive relational signals and increases overall performance (Colquitt, 2004; Tabibnia, Satpute, & Lieberman, 2008). For this to work, the authority structure and the structural design must leave little room for ambiguity. Otherwise, helping another employee can be interpreted as showing superiority and, thus, as a negative relational signal. The structural design must keep relational signals clear of possible status effects (Wittek, 1999). In sum, relational signals allow management and employees to communicate their commitment to common goals and to each of the individuals who contribute to them.

Recognition-Based Reward Design

Propositions 4a, 4b, and 4c suggest that rewards can provide indirect support for the normative goal frame when they are linked to joint outcomes (creating outcome interdependence) and to individual intelligent effort. However, reward design for joint production is particularly complex. First, outcome interdependence increases performance (De Dreu, 2007), but only if team members actively process information in terms of joint production (Van der Vegt, Emans, & van de Vliert, 2000).

Second, contingent individual rewards must be prevented from crowding out a normative goal frame. For this purpose, individuals must be held accountable (Proposition 5a), and rewards, even monetary rewards, ultimately will be more effective if given in the form of recognition (Proposition 4c; see also Mickel & Barron, 2008, and Stajkovic & Luthans, 2001). Recognition must still be linked to some kind of measurement, which is often difficult in team contexts (Alchian & Demsetz, 1972). Without "dual performance assessment"—that is, monitoring that is focused on both process and outcomes (Proposi-

tion 5b)—rewards and punishments may seem arbitrary. This is likely to undermine the credibility of the firm's commitments (Foss, Foss, & Vazquez, 2006; Mühlau, 2000) and to create feelings of unfairness, which push employees into destructive hedonic goals of revenge (Folger, 1998; Folger, Rosenfield, & Hays, 1978; Kim & Mauborgne, 1998; Miller 2001; Moorman, 1991). When task and team design are calibrated for joint production, additional intelligent effort for joint production will be more easily observable because the goal setting, the plans, and agreements will provide multiple information on individual performance, including how flexibly employees adapt to changed circumstances. This, again, links the reward design to task and team design, and it also allows the smooth working of both informal and formal rewards (Proposition 5c). Contingent rewards that are based on both process and outcomes generate feelings of being valued, with positive emotions and positive emotion regulation, rather than feelings of favoritism and unfairness (Ashforth & Humphrey, 1995). This, in turn, works out positively for performance (George & Brief, 1992; Seo, Barrett, & Bartunek, 2004; Sonnentag & Volmer, 2010).

Third, while recognition that is linked to formal rewards is also a strong motivator (Crowe & Marlowe, 1964), it can create problems, even if it is couched in terms of one's contribution to joint production. In order not to be interpreted as payment for performance, recognition must be loosely coupled to the level of individual intelligent effort, and because recognition does peg rewards to symbolic values that are governed by social comparison, its size and justification must be carefully calibrated. For example, paying a certain amount as a sign of recognition may have the opposite effect if it is less than what somebody else got for a similar effort (Niehoff & Moorman, 1993). This favors a design with small but responsive informal recognitions in the embedded team as a social context (Grant & Parker, 2009; Lindenberg, 1996; Willer, 2009), in combination with a formalized and transparent system for larger but still modest contingent individual rewards.

An important form of formal contingent rewards is promotion. However, career design in a system of joint production is particularly difficult, since task design for joint production creates a positional structure that is based on heterogeneous inputs. This may not be particularly

well suited for individual upward mobility: the competencies and learning experiences of somebody in position A may not be the best preparation for position B on a higher level. Even though there are various possibilities to deal with this problem (e.g., seniority, individual as opposed to positional promotion, partial internal careers), they all remain chronically problematic. The more the task structure is designed for joint production, the more challenging it will be to solve the problem of internal careers as part of the reward system. Possible solutions are creating personal advancement schemes (without positional change), as in the Japanese merit evaluation system (*satei*); training for possible advancement outside the organization; reducing tasks that are experienced as burdens (e.g., teaching load in some universities); or decoupling promotion from the formal positional structure and linking it to assignments in projects.

In sum, the reward design for joint production will be the most delicate and difficult aspect of governing firms. Contingent individual rewards are necessary to support the normative goal frame, but unless they are kept to a modest scale, they are in constant danger of displacing the normative goal frame rather than supporting it. The burden will be lighter if task and team design are clearly pegged to joint production and if dual performance assessment is common practice.

These conclusions also hold for sanctions and competition. Negative sanctions can be useful, but they may push individuals into a gain or hedonic goal frame. Sanctions can function in different ways. In the normative goal frame they can be interpreted in terms of protection of value, such as sanctions for willfully or negligently endangering joint production. In a gain goal frame sanctions will be seen as negative consequences that are to be avoided, and the probability of being caught will be the most important motivator (Calvo & Wellicz, 1978). Sanctions can also be a trigger for countersanctions or retaliation (hedonic goal frame). For example, if employees feel they have been blamed unfairly for a bad result, they may react in anger and try to get even (Ambrose et al., 2002). Countersanctions lower joint performance (Denant-Boemont, Masclet, & Noussair, 2007) and drive out the motivation for joint performance. Unless sanctions are functionally legitimated in

terms of protecting human values and joint production (and based on attention to both process and outcomes), they will push employees into a gain or a hedonic goal frame, jeopardizing joint production. For example, Fehr and Rockenbach (2003) showed that when sanctions are interpreted as supporting private gain, they reduce the willingness to cooperate if the punishment is not high enough (Mulder, van Dijk, De Cremer, & Wilke, 2006). In contrast, when they are interpreted as supporting the group, they promote cooperation for the common goal. This means that for sanctioning systems not to work counterproductively, the impression of private gain and of unfairness (of owner, manager, supervisor, colleague) must be avoided. Thus, dual performance assessment and clear justification of sanctions in terms of protecting human values (such as safety, privacy, individual dignity) and protecting the value of joint production are needed.

Competition within and between work units can foster either subgroup egoism or gain goal frames, or both. The more competition is related to gaining rewards, the more likely it will have negative effects (De Dreu, 2007; Rosenbaum et al., 1980; Stapel & Koomen, 2005). And, once competition is established, it is difficult to switch to cooperation that is compatible with joint production (Johnson et al., 2006). Friendly forms of competition encourage comparison of outcomes but do not peg expected rewards to that comparison. For this reason, friendly competition may be useful for joint production within and between teams, without jeopardizing weak solidarity across units.

Knowledge-Based Authority Structures

Team efforts at various levels of a firm must be coordinated and aligned with firm-level goals. This calls for an authority structure. However, the exercise of authority signals a particular goal frame of the higher-ups and can tip the balance against the normative goal frame. A command structure with fiat is legitimized by ownership rights or contractual agreements, not by joint production (Williamson, 1985). A "zone of indifference" within which an employee sells the right to be told what to do is necessarily tied to a gain goal frame (i.e., money for compliance). Everything else in terms of motivation must develop on top of and in addition to this gain-

related basis. This hampers the design of task and team structures in terms of joint production, and it directly undermines the motivation for joint production. In addition, it creates feelings of powerlessness in many members of the organization, with concomitant reductions in intelligent effort (Smith, Jostmann, Galinsky, & van Dijk, 2008).

One way to mitigate the negative aspects of fiat is to have flat organizations. However, in larger and more complex organizations, this cannot be done. The solution is to find a way to legitimize hierarchy so that it is compatible with joint production. This can be done in terms of the various functions that have to be fulfilled and in terms of the necessary information, knowledge, and responsibilities that cumulate in certain functions (Adler & Borys, 1996; Lindenberg, 1993). A directive is then not the order of a superior but, rather, the knowledge-based request of somebody higher up in the hierarchy, which is functional to follow because it represents a superior judgment of what best serves joint production in the particular case. Thus, if responsibility can be shifted to where the expertise is, this kind of authority structure can create much flexibility, because authority follows concentrations of expertise (say, in different local units), rather than being fixed by command structures with fiat.

CONCLUSION

Contribution to Theory

The purpose of this work has been to proffer and develop the concept of joint production motivation as a cornerstone for the motivational microfoundations of organizational performance. We began with the fundamentally collaborative nature of work in organizations and the fact that humans are biologically predisposed, under the right circumstances, to deal with such cooperation in terms of the sharing of cognitions about the relevant tasks, interdependencies, timing, and possible obstacles to smooth coordination, and in terms of motivation to contribute to joint effort.

Recent contributions to strategic management theory (Coff, 1997; Lippman & Rumelt, 2003; Wang & Barney, 2008) identify the synergies that may be obtained in teams of interdependent "resources" as a key driver of superior performance. Yet they do not deal with the specific

motivation that is needed to realize these synergistic effects. The concept of joint production motivation captures this specific kind of motivation and highlights the intricate interplay between cognitions and motivation that proves so important for identifying the governance instruments that can establish and maintain joint production motivation. While recent work has explored the motivational microfoundations of superior organizational performance, such work does not give special pride of place to the collaborative nature of work efforts in the context of interdependent resources and therefore misses out on the specific nature of joint production motivation. Moreover, its heavy reliance on self-determination theory (Deci & Ryan, 1985; notably, Gottschalg & Zollo, 2007, and Osterloh & Frey, 2000) or on organizational economics (Coff, 1997; Wang & Barney, 2008) fails to recognize the systematic link between the management of cognitions and the management of motivation, as explicated by goal-framing theory. The same holds true for the substantial body of work that deals with collective work orientation, identification, teams, and organizational citizenship.

Goal-framing theory shows that a normative goal frame is precarious in the sense that it is in constant danger of being displaced by gain or hedonic goals. It also shows that we always deal with multiple goals ("mixed motives") but that it is crucial to attend to which goal is in the foreground and which is in the background. It is especially these foreground/background differences that allow us to identify specific structural and governance features that can bring about and maintain the motivation for joint production. The broader import of our work lies in the ability to specify a whole range of interconnected governance instruments that are necessary to establish and maintain the kind of motivation that underlies superior performance in contexts with heterogeneous but complementary inputs.

Practice Implications

In organizational cultures with a strong emphasis on individualized incentives, managers and employees may have to get used to joint production conditions. Yet, as Wageman (1995: 173) argued, once they experience it, they will come to prefer it. Goal-framing theory provides concrete guidance for how task, team, reward, and authority structures can be geared for joint

production motivation. While joint production motivation is ideal in contexts of interdependent production, its downside is its precariousness and the difficulty of maintaining it. The dangers are obvious and have been described above: subgroup egoism, degeneration of the normative goal frame by incentive schemes and hierarchy, passive following of rules, and lack of intelligent effort and innovation. The problem here is one of calibration: solidarity is needed, but it must be sufficiently weak that subgroup egoism is prevented; individual rewards are needed, but they must be prevented from displacing the normative goal frame; and authority is needed, but it must not undermine the motivation for joint production. We have suggested concrete ways in which these balancing acts may be achieved.

A pertinent issue concerns which of the structural and governance features are the most important in the stabilization of the normative goal frame. While our theory suggests that all of the structural and governance features we have discussed are jointly necessary for sustaining joint production motivation, a manager may wish to know what he or she should do first to mobilize joint production motivation. The answer is that integrated task and team design must come first. This is the precondition for joint production motivation, and once it has been established, the manager can turn his or her attention to making sure that, for cognitive and symbolic management, rewards and authority structures are designed in such a manner that they do not bring the gain or hedonic frame to the cognitive foreground and that individual intelligent effort in the service of common goals is still maintained.

Future Research

Goal-framing theory and joint production motivation represent new perspectives in management research. Future research may perhaps most usefully extend the ideas in this work in the contexts of (1) economic organization, including the mode of sourcing and organizing human resources; (2) dynamic environments; and (3) identification and legitimization.

Joint production motivation and its organizational flanking arrangements are associated with organization-focused and "relational" (Rousseau, 1995) employment relationships. Our theory potentially adds to such work by adding

motivational detail to the understanding of HR management in the context of organization-focused employment relationships. Such relationships encourage employers and employees alike to undertake investments in firm-specific skills that may drive firm-level performance consequences. Future research may usefully explore how joint production motivation makes organizational members undertake such investments, a subject that so far has exclusively been addressed from the perspective of (labor and organizational) economics (e.g., Wang & Barney, 2008).

Firms also source the services of human resources (such as specialists of various kinds) that may all be highly valuable to the firm and yet are best served by a broad band of autonomy. There are also contexts in which work is carried out independently by human resources on a rather temporary basis and conforms to specific performance requirements. Research suggests that different HR approaches are called for in these different contexts, and some argue that firms can build "HR architectures" that include multiple HR approaches (Lepak & Snell, 1999). However, goal-framing theory suggests potential pitfalls of such an approach, calling for future research. Running an HR architecture that includes different employment modes, relationships, and HR configurations calls for the provision of different goal frames and different motivations. For example, gain goal frames may work in the case of human resources that are separate from the joint production activity. However, the need to economize on scarce managerial attention, the importance of unambiguous managerial signaling, and especially the presence of contagion effects across goal frames make it dubious whether complex HR architectures based on the provision of different goal frames can be successful. Future research should address these issues. For example, cognition and symbolic management may have to be different in the context of maintaining different goal frames for different kinds of human resources. Such problems of maintaining different goal frames may even contribute to our understanding of the conditions under which human resources services are procured internally or externally from the market.

Although many have predicted a decreasing role for firm organization in the context of the emerging knowledge-based economy (e.g., Adler, 2001), the latter also makes managing motivation for joint production increasingly rel-

evant. Thus, the knowledge economy has prompted an increased reliance on adaptive, intelligent, and yet interdependent work efforts. To the extent that firms have an advantage in providing motivation for such efforts, predictions of the vanishing role of firm organization may be exaggerated. Relatedly, current and more dynamic environments also serve to make joint production motivation increasingly relevant (see also Gottschalg & Zollo, 2007), because such motivation directly relates to the need for adaptability and intelligent effort in the context of interdependent work efforts. Many scholars have noted the difficulties that this need poses for management and governance (Adler, 2001; Child & McGrath, 2001; Garicano, 2000; Kim & Mauborgne, 1998; Mendelsson & Pillai, 1999; Osterloh & Frey, 2000). Our approach is explicitly designed to deal with intelligent, adaptive efforts in the context of joint production, and it shows that attention to such key issues as "trust," "justice," and "community" (cf. Adler, 2001) should be viewed in light of the necessity for calibrated mixed motivation. We therefore encourage more research on understanding the antecedents and consequences of joint production motivation.

In particular, future research should deal with the possibilities that processes of collective identification can be used to embed relational identifications and commitment to common goals. Not all ways of bringing about a collective orientation are conducive to a stable motivation for joint production, and some may be counterproductive. We have offered concrete suggestions regarding which instruments may work and which may not, but future research should address these issues empirically. Related to this issue is research on the difference between prosocial behavior that is meant to contribute to joint production and prosocial behavior that is motivated by sportsmanship and civil virtue. How do they differ in daily interactions in organizations? We also need more research on the different effects of legitimizing authority structures. We suggest that they need to be legitimized in terms of differences in expertise rather than fiat or power. Yet we know little about the barriers to such a form of legitimization. What are the dynamic forces that drive an authority structure in the direction of fiat, even if legitimization by expertise is desired? Another pressing issue in light of a culture of

bonuses and other large contingent rewards is our proposition that contingent individual rewards should be modest in comparison to noncontingent rewards if one wants to foster motivation for joint production. Empirical research is needed to calibrate the ratio of contingent and noncontingent rewards when motivation for joint production is desired. Last, we need to explore under what conditions joint production is better served by leaving pockets of individual independence (Oldham & Hackman, 2010). In sum, we are confident that the focus on joint production motivation proffered in this article will be able to generate fruitful research agendas in the future.

REFERENCES

- Aarts, H., Gollwitzer, P. M., & Hassin, R. R. 2004. Goal contagion: Perceiving is for pursuing. *Journal of Personality and Social Psychology*, 87: 23–37.
- Abell, P., Felin, T., & Foss, N. J. 2008. Building microfoundations for the routines, capabilities and performance link. *Managerial and Decision Economics*, 29: 489–502.
- Adler, P. S. 2001. Market, hierarchy, and trust: The knowledge economy and the future of capitalism. *Organization Science*, 12: 215–234.
- Adler, P. S., & Borys, B. 1996. Two types of bureaucracy: Enabling and coercive. *Administrative Science Quarterly*, 41: 61–89.
- Alchian, A. A., & Demsetz, H. 1972. Production, information costs, and economic organization. *American Economic Review*, 62: 772–795.
- Alper, S., Tjosvold, D., & Law, K. S. 2000. Conflict management, efficacy, and performance in organizational teams. *Personnel Psychology*, 53: 625–642.
- Ambrose, M. L., Seabright, M. A., & Schminke, M. 2002. Sabotage in the workplace: The role of organizational injustice. *Organizational Behavior and Human Decision Processes*, 89: 947–965.
- Andreoni, J. 1988. Why free ride? Strategies and learning in public goods experiments. *Journal of Public Economics*, 37: 291–304.
- Ashforth, B. E., Harrison, S. H., & Corley, K. G. 2008. Identification in organizations: An examination of four fundamental questions. *Journal of Management*, 34: 325–374.
- Ashforth, B. E., & Humphrey, R. H. 1995. Emotion in the workplace: A reappraisal. *Human Relations*, 48: 97–125.
- Ashforth, B. E., & Johnson, S. A. 2001. Which hat to wear? The relative salience of multiple identities in organizational contexts. In M. A. Hogg & D. J. Terry (Eds.), *Social identity processes in organizational contexts*: 31–48. Philadelphia: Taylor & Francis.
- Bacharach, M. 2006. *Beyond individual choice: Teams and frames in game theory*. (Edited by N. Gold & R. Sugden.) Princeton, NJ: Princeton University Press.

- Baker, G., Gibbons, R., & Murphy, K. J. 2002. Relational contracts and the theory of the firm. *Quarterly Journal of Economics*, 117: 39–84.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99–120.
- Baron, J. N., & Kreps, D. M. 1999. *Strategic human resources: Frameworks for general managers*. New York: Wiley.
- Bass, B. M. 1999. Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology*, 8: 9–32.
- Behfar, K. J., Peterson, R. S., Mannix, E. A., & Trochim, W. M. K. 2008. The critical role of conflict resolution in teams: A close look at the links between conflict type, conflict management strategies, and team outcomes. *Journal of Applied Psychology*, 93: 170–188.
- Bernthal, P. R., & Insko, C. A. 1993. Cohesiveness without groupthink. *Group & Organization Management*, 18: 66–87.
- Bollen, K. A., & Hoyle, R. H. 1990. Perceived cohesion: A conceptual and empirical examination. *Social Forces*, 69: 479–504.
- Brewer, M. B. 2004. Taking the origins of human nature seriously: Toward a more imperialist social psychology. *Personality and Social Psychology Review*, 8: 107–113.
- Brewer, M. B., & Gardner, W. 1996. Who is this “we”? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71: 83–93.
- Brickson, S. L. 2005. Organizational identity orientation: Forging a link between organizational identity and organizations’ relations with stakeholders. *Administrative Science Quarterly*, 50: 576–609.
- Brickson, S. L. 2007. Organizational identity orientation: The genesis of the role of the firm and distinct forms of social value. *Academy of Management Review*, 32: 864–888.
- Brown, M. E., Treviño, L. K., & Harrison, D. A. 2005. Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97: 117–134.
- Calvo, G., & Wellicz, S. 1978. Supervision, loss of control and the optimal size of the firm. *Journal of Political Economy*, 86: 943–952.
- Caporael, L. R. 1997. The evolution of truly social cognition: The core configurations model. *Personality and Social Psychology Review*, 1: 276–298.
- Caporael, L. R., Dawes, R. M., Orbell, J. M., & van de Kragt, A. J. C. 1989. Selfishness examined: Cooperation in the absence of egoistic incentives. *Behavioral and Brain Sciences*, 4: 683–698.
- Carver, C. S. 2006. Approach, avoidance, and the self-regulation of affect and action. *Motivation and Emotion*, 30: 105–110.
- Carver, C. S., & Scheier, M. F. 2002. Control processes and self-organization as complementary principles underlying behavior. *Personality and Social Psychology Review*, 6: 304–315.
- Child, J., & McGrath, R. G. 2001. Organizations unfettered: Organizational form in a knowledge-intensive economy. *Academy of Management Journal*, 44: 1135–1148.
- Coff, R. W. 1997. Human assets and management dilemmas: Coping with hazards on the road to resource-based theory. *Academy of Management Review*, 22: 374–402.
- Cohen, S. G., & Bailey, D. E. 1997. What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management*, 3: 239–290.
- Colquitt, J. A. 2004. Does the justice of the one interact with the justice of the many? Reactions to procedural justice in teams. *Journal of Applied Psychology*, 9: 633–646.
- Crowe, D., & Marlowe, D. 1964. *The approval motive*. New York: Wiley.
- Deci, E. L., & Ryan, R. M. 1985. *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deckop, J. R., Mangel, R., & Cirka, C. C. 1999. Getting more than you pay for: Organizational citizenship behavior and pay-for-performance plans. *Academy of Management Journal*, 42: 420–428.
- De Dreu, C. K. W. 2007. Cooperative outcome interdependence, task reflexivity, and team effectiveness: A motivated information processing perspective. *Journal of Applied Psychology*, 92: 628–638.
- De Dreu, C. K. W., Beersma, B., Stroebe, K., & Euwema, M. C. 2006. Motivated information processing, strategic choice, and the quality of negotiated agreement. *Journal of Personality and Social Psychology*, 90: 927–943.
- De Dreu, C. K. W., Greer, L. L., Handgraaf, M. J. J., Shalvi, S., van Kleef, G. A., Baas, M., Ten Velden, F. S., van Dijk, E., & Feith, S. W. W. 2010. The neuropeptide oxytocin regulates parochial altruism in intergroup conflict among humans. *Science*, 328: 1408–1411.
- De Dreu, C. K. W., Nijstad, B. A., & van Knippenberg, D. 2008. Motivated information processing in group judgment and decision making. *Personality and Social Psychology Review*, 12: 22–49.
- De Dreu, C. K. W., & Weingart, L. R. 2003. Task versus relationship conflict, team performance, and team member satisfaction: A meta-analysis. *Journal of Applied Psychology*, 88: 741–749.
- Denant-Boemont, L., Masclat, D., & Noussair, C. N. 2007. Punishment, counterpunishment and sanction enforcement in a social dilemma experiment. *Economic Theory*, 33: 145–167.
- Dirks, K. T., Lewicki, R. J., & Zaheer, A. 2009. Repairing relationships within and between organizations: Building a conceptual foundation. *Academy of Management Review*, 34: 68–84.
- Dougherty, D., & Takacs, H. 2004. Team play: Heedful interrelating as the boundary for innovation. *Long Range Planning*, 37: 569–590.
- Dunbar, R. I. M. 2003. The social brain: Mind, language, and society in evolutionary perspective. *Annual Review of Psychology*, 32: 163–181.
- Dutton, J. E., Roberts, L. M., & Bednar, J. 2010. Pathways for positive identity construction at work: Four types of pos-

- itive identity and the building of social resources. *Academy of Management Review*, 35: 285–293.
- Echtelt, E. P., Glebbeek, A. C., & Lindenberg, S. 2006. The new lumpiness of work: Explaining the mismatch between actual and preferred working hours. *Work, Employment and Society*, 20: 493–512.
- Ellemers, N., de Gilder, D., & Haslam, S. A. 2004. Motivating individuals and groups at work: A social identity perspective on leadership and group performance. *Academy of Management Review*, 29: 459–478.
- Ellemers, N., de Gilder, D., & van den Heuvel, H. 1998. Career-oriented versus team-oriented commitment and behavior at work. *Journal of Applied Psychology*, 83: 717–730.
- Fehr, E., Fischbacher, U., & Kosfeld, M. 2005. Neuroeconomic foundations of trust and social preferences: Initial evidence. *American Economic Review*, 95: 346–351.
- Fehr, E., & Gächter, S. 2002. Altruistic punishment in humans. *Nature*, 415: 137–140.
- Fehr, E., & Rockenbach, B. 2003. Detrimental effects of sanctions on human altruism. *Nature*, 422: 137–140.
- Ferguson, M. J., & Bargh, J. A. 2004. Liking is for doing: The effects of goal pursuit on automatic evaluation. *Journal of Personality and Social Psychology*, 87: 557–572.
- Fishbach, A., & Dhar, R. 2009. Dynamics of goal-based choice. In C. P. Haugtvedt, P. M. Herr, & F. R. Kardes (Eds.), *Handbook of consumer psychology*: 611–637. New York and Sussex: Psychology Press.
- Flynn, F. J. 2005. Identity orientations and forms of social exchange in organizations. *Academy of Management Review*, 30: 737–750.
- Folger, R. 1998. Fairness as moral virtue. In M. Schminke (Ed.), *Managerial ethics: Moral management of individuals and processes*: 13–34. Mahwah, NJ: Lawrence Erlbaum Associates.
- Folger, R., Rosenfield, D., & Hays, R. 1978. Equity and intrinsic motivation: The role of choice. *Journal of Personality and Social Psychology*, 36: 557–564.
- Ford, T. E., & Kruglanski, A. W. 1995. Effects of epistemic motivations on the use of accessible constructs in social judgment. *Personality and Social Psychology Bulletin*, 21: 950–962.
- Förster, J., Liberman, N., & Higgins, E. T. 2005. Accessibility from active and fulfilled goals. *Journal of Experimental Social Psychology*, 41: 220–239.
- Foss, N. J., Foss, K., & Vazquez, J. 2006. Tying the manager's hands: Credible commitment and firm organization. *Cambridge Journal of Economics*, 30: 797–818.
- Frese, M., Kring, W., Soose, A., & Zempel, J. 1996. Personal initiative at work: Differences between East and West Germany. *Academy of Management Journal*, 39: 37–63.
- Frey, B. S., & Oberholzer-Gee, F. 1997. The cost of price incentives: An empirical analysis of motivation crowding-out. *American Economic Review*, 87: 746–755.
- Fritsche, I., Kessler, T., Mummendey, A. & Neumann, J. 2009. Minimal and maximal goal orientation and reactions to norm violations. *European Journal of Social Psychology*, 39: 3–21.
- Gagné, M. 2009. A model of knowledge-sharing motivation. *Human Resource Management*, 48: 571–589.
- Garicano, L. 2000. Hierarchies and the organization of knowledge in production. *Journal of Political Economy*, 108: 874–904.
- Gavetti, G. 2005. Cognition and hierarchy: Rethinking the microfoundations of capabilities' development. *Organization Science*, 16: 599–617.
- George, J. M., & Brief, A. P. 1992. Feeling good-doing good: A conceptual analysis of the mood at work-organizational spontaneity relationship. *Psychological Bulletin*, 112: 310–329.
- Gevers, J. M. P., Rutte, C. G., & van Eerde, W. 2006. Meeting deadlines in work groups: Implicit and explicit mechanisms. *Applied Psychology: An International Review*, 55: 52–72.
- Gollwitzer, P. M., & Bargh, J. A. (Eds.). 1996. *The psychology of action: Linking cognition and motivation to behavior*. New York: Guilford Press.
- Gollwitzer, P. M., & Bayer, U. 1999. Deliberative versus implemental mindsets in the control of action. In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology*: 403–422. New York: Guilford Press.
- Gottschalg, O., & Zollo, M. 2007. Interest alignment and competitive advantage. *Academy of Management Review*, 32: 418–437.
- Granovetter, M. 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91: 481–510.
- Grant, A. 2008a. Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93: 48–58.
- Grant, A. M. 2008b. The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, 93: 108–124.
- Grant, A. M., Dutton, J. E., & Rosso, B. D. 2008. Giving commitment: Employee support programs and the prosocial sensemaking process. *Academy of Management Journal*, 51: 898–918.
- Grant, A. M., & Parker, S. K. 2009. Redesigning work design theories: The rise of relational and proactive perspectives. *Academy of Management Annals*, 3: 317–375.
- Grant, H., & Dweck, C. S. 2003. Clarifying achievement goals and their impact. *Journal of Personality and Social Psychology*, 85: 541–553.
- Greenberg, J. 1990. Employee theft as a reaction to underpayment inequity: The hidden cost of pay cuts. *Journal of Applied Psychology*, 75: 561–568.
- Gupta, A. K., Tesluk, P. E., & Taylor, M. S. 2007. Innovation at and across multiple levels of analysis. *Organization Science*, 18: 885–897.
- Hackman, J. R., & Oldham, G. R. 1976. Motivating through

- design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16: 250–279.
- Haslam, S. A., Powell, C., & Turner, J. C. 2000. Social identity, self-categorization, and work motivation: Rethinking the contribution of the group to positive and sustainable organizational outcomes. *Applied Psychology: An International Review*, 49: 319–339.
- Haslam, S. A., Ryan, M. K., Postmes, T., Spears, R., Jetten, J., & Webley, P. 2006. Sticking to our guns: Social identity as a basis for the maintenance of commitment to faltering organizational projects. *Journal of Organizational Behavior*, 27: 607–628.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. 2001. Cooperation, reciprocity and punishment in fifteen small-scale societies. *American Economic Review*, 91: 73–78.
- Heyman, J., & Ariely, D. 2004. Effort for payment: A tale of two markets. *Psychological Science*, 15: 787–793.
- Higgins, E. T. 1998. Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30: 1–46.
- Higgins, E. T., & Pittman, T. S. 2008. Motives of the human animal: Comprehending, managing, and sharing inner states. *Annual Review of Psychology*, 59: 361–385.
- Hirschfeld, R. R., Jordan, M. H., Feild, H. S., Giles, W. F., & Armenakis, A. A. 2006. Becoming team players: Team members' mastery of teamwork: Knowledge as a predictor of team task proficiency and observed teamwork effectiveness. *Journal of Applied Psychology*, 91: 467–474.
- Hogg, M., 2001. Self-categorization and subjective uncertainty resolution: Cognitive and motivational facets of social identity and group membership. In J. P. Forgas, K. D. Williams, & L. Wheeler (Eds.), *The social mind: Cognitive and motivational aspects of interpersonal behavior*: 323–349. Cambridge: Cambridge University Press.
- Huber, G. P., & Lewis, K. 2010. Cross-understanding: Implications for group cognition and performance. *Academy of Management Review*, 35: 6–26.
- Islam, G., & Zyphur, M. J. 2009. Rituals in organizations: A review and expansion of current theory. *Group Organization Management*, 34: 114–139.
- Johnson, M. D., Hollenbeck, J. R., Humphrey, S. E., Ilgen, D. R., Jundt, D., & Meyer, C. J. 2006. Cutthroat cooperation: Asymmetrical adaptation to changes in team reward structures. *Academy of Management Journal*, 49: 103–119.
- Kahneman, D., & Tversky, A. 1984. Choices, values, and frames. *American Psychologist*, 39: 341–350.
- Karau, S. J., & Williams, K. D. 1993. Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology*, 65: 681–706.
- Keizer, K., Lindenberg, S., & Steg, L. 2008. The spreading of disorder. *Science*, 322: 1681–1685.
- Keizer, K., Lindenberg, S., & Steg, L. 2011. *Higher-ups make especially influential norm violators*. Working paper, University of Groningen.
- Kim, W. C., & Mauborgne, R. 1998. Procedural justice, strategic decision making, and the knowledge economy. *Strategic Management Journal*, 19: 323–338.
- Konow, J. 2000. Fair shares: Accountability and cognitive dissonance in allocation decisions. *American Economic Review*, 90: 1072–1092.
- Konow, J., & Earley, J. 2008. The hedonistic paradox: Is homo economicus happier? *Journal of Public Economics*, 92: 1–33.
- Kozlowski, S. W. J., & Ilgen, D. R. 2006. Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, 7: 77–124.
- Kreps, D. M. 1990. Corporate culture and economic theory. In J. Alt & K. Shepsle (Eds.), *Perspectives on positive political economy*: 90–143. Cambridge: Cambridge University Press.
- Kruglanski, A. W., & Köpetz, C. 2009. What is so special (and non-special) about goals? A view from the cognitive perspective. In G. B. Moskowitz & H. Grant (Eds.), *The psychology of goals*: 27–55. New York: Guilford Press.
- Kruglanski, A. W., Shah, J. Y., Friedman, R., Fishbach, A., Chun, W. Y., & Sleeth-Keppler, D. 2002. A theory of goal systems. *Advances in Experimental Social Psychology*, 34: 331–378.
- Kruglanski, A. W., & Webster, D. 1996. Motivated closing of the mind: "Seizing" and "freezing." *Psychological Review*, 103: 263–283.
- Latham, G. P., & Locke, E. A. 2007. New developments in and directions for goal-setting research. *European Psychologist*, 12: 290–300.
- Latham, G. P., & Pinder, C. 2005. Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology*, 56: 485–516.
- Ledyard, J. O. 1995. Public goods: A survey of experimental research. In J. H. Kagel & A. E. Roth (Eds.), *The handbook of experimental economics*: 111–194. Princeton, NJ: Princeton University Press.
- Lepak, D. P., & Snell, S. A. 1999. The human resource architecture: Toward a theory of human capital allocation and development. *Academy of Management Review*, 24: 31–48.
- LePine, J. A., Erez, A., & Johnson, D. E. 2002. The nature and dimensionality of organizational citizenship behavior: A critical review & meta-analysis. *Journal of Applied Psychology*, 87: 52–65.
- Lerner, J. S., & Tetlock, P. E. 1999. Accounting for the effects of accountability. *Psychological Bulletin*, 125: 255–275.
- Liberman, V., Samuels, S. M., & Ross, L. 2004. The name of the game: Predictive power of reputations versus situational labels in determining prisoner's dilemma game moves. *Personality and Social Psychology Bulletin*, 30: 1175–1185.
- Lindenberg, S. 1993. Club hierarchy, social metering and context instruction: Governance structures in response to varying self-command capital. In S. Lindenberg & H.

- Schreuder (Eds.), *Interdisciplinary perspectives on organization studies*: 195–220. Oxford: Pergamon Press.
- Lindenberg, S. 1996. Short-term prevalence, social approval and the governance of employment relations. In J. Groenewegen (Ed.), *Transaction cost economics and beyond*: 130–146. Boston/Dordrecht/London: Kluwer.
- Lindenberg, S. 1998. Solidarity: Its microfoundations and macro-dependence: A framing approach. In P. Doreian & T. J. Fararo (Eds.), *The problem of solidarity: Theories and models*: 61–112. Amsterdam: Gordon and Breach.
- Lindenberg, S. 2001. Intrinsic motivation in a new light. *Kyklos*, 54: 317–342.
- Lindenberg, S. 2003. The cognitive side of governance. *Research in the Sociology of Organizations*, 20: 47–76.
- Lindenberg, S., 2004. Myopia's price: Inefficiencies in organizations. In A. Diekmann & T. Voss (Eds.), *Rational-choice-theorie in den Sozialwissenschaften*: 217–229. Munich: Oldenbourg.
- Lindenberg, S. 2006. Prosocial behavior, solidarity, and framing processes. In D. Fetchenhauer, A. Flache, A. P. Buunk, & S. Lindenberg (Eds.), *Solidarity and prosocial behavior: An integration of sociological and psychological perspectives*: 23–44. New York: Springer.
- Lindenberg, S. 2008. Social rationality, semi-modularity and goal-framing: What is it all about? *Analyse und Kritik*, 30: 669–687.
- Lindenberg, S., & Steg, L. 2007. Normative, gain and hedonic goal frames guiding environmental behavior. *Journal of Social Issues*, 65: 117–137.
- Lippman, S. A., & Rumelt, R. P. 2003. A bargaining perspective on resource advantage. *Strategic Management Journal*, 24: 1069–1086.
- Locke, E. A., & Latham, G. P. 2002. Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57: 705–717.
- March, J. G., & Olsen, J. 1989. *Rediscovering institutions: The organizational basis of politics*. New York: Free Press.
- Marks, M. A., Sabella, M. J., Burke, C. S., & Zaccaro, S. J. 2002. The impact of cross-training on team effectiveness. *Journal of Applied Psychology*, 87: 3–13.
- Mathieu, J. E., Maynard, T. M., Rapp, T., & Gilson, L. 2008. Team effectiveness 1997–2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, 34: 410–476.
- Mathieu, J. E., & Rapp, T. L. 2009. Laying the foundation for successful team performance trajectories: The roles of team charters and performance strategies. *Journal of Applied Psychology*, 94: 90–103.
- Mathieu, J. E., Rapp, T. L., Maynard, M. T., & Mangos, P. M. 2010. Interactive effects of team and task shared mental models as related to air traffic controllers' collective efficacy and effectiveness. *Human Performance*, 23: 22–40.
- Mendelsson, H., & Pillai, R. R. 1999. Information age organizations, dynamics, and performance. *Journal of Economic Behavior and Organization*, 38: 253–281.
- Metcalfe, J., & Mischel, W. 1999. A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 106: 3–19.
- Michel, A. A., & Jehn, K. E. 2003. The dark side of identification: Overcoming identification-induced performance impediments. *Research on Managing Groups and Teams*, 5: 189–219.
- Mickel, A. E., & Barron, L. A. 2008. Getting "more bang for the buck": Symbolic value of monetary rewards in organizations. *Journal of Management Inquiry*, 17: 329–338.
- Miller, D. 2001. Disrespect and the experience of injustice. *Annual Review of Psychology*, 52: 527–553.
- Moorman, R. H. 1991. Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76: 845–855.
- Moorman, R. H., & Blakely, G. L. 1995. Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior*, 17: 127–142.
- Moscovici, S., & Faucheux, C. 1972. Social influence, conformity bias, and the study of active minorities. *Advances in Experimental Social Psychology*, 6: 149–202.
- Mühlau, P. 2000. *The governance of the employment relation: A relational signaling perspective*. Amsterdam: Thela Thesis.
- Mühlau, P., & Lindenberg, S. 2003. Efficiency wages: Signals or incentives? An empirical study of the relationship between wage and commitment. *Journal of Management and Governance*, 7: 385–400.
- Mulder, L. B., van Dijk, E., De Cremer, D., & Wilke, H. A. M. 2006. Undermining trust and cooperation: The paradox of sanctioning systems in social dilemmas. *Journal of Experimental Social Psychology*, 42: 147–162.
- Niehoff, B. P., & Moorman, R. H. 1993. Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal*, 36: 527–556.
- Noe, R. A. 1996. Is career management related to employee development and performance? *Journal of Organizational Behavior*, 17: 119–133.
- Ocasio, W. 1997. Towards an attention-based theory of the firm. *Strategic Management Journal*, 18: 187–207.
- Oldham, G. R., & Hackman, J. R. 2010. Not what it was and not what it will be: The future of job design research. *Journal of Organizational Behavior*, 31: 463–479.
- O'Leary-Kelly, A. M., Martocchio, J., & Frick, D. D. 1994. A review of the influence of group goals on group performance. *Academy of Management Journal*, 5: 1285–1301.
- Osterloh, M., & Frey, B. 2000. Motivation, knowledge transfer and organizational form. *Organization Science*, 11: 538–550.
- Ostrom, E., Walker, J., & Gardner, R. 1992. Covenants with and without a sword: Self-governance is possible. *American Political Science Review*, 86: 404–417.
- Pearsall, M. J., Christian, M. S., & Ellis, A. P. J. 2010. Motivat-

- ing interdependent teams: Individual rewards, shared rewards, or something in between? *Journal of Applied Psychology*, 95: 183–191.
- Perlow, L. A. 1999. The time famine: Toward a sociology of work time. *Administrative Science Quarterly*, 44: 57–81.
- Pillutla, M. M., & Chen, X. P. 1999. Social norms and cooperation in social dilemmas: The effects of context and feedback. *Organizational Behavior and Human Decision Processes*, 78: 81–103.
- Podsakoff, P. M., & MacKenzie, S. B. 1997. Impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance*, 10: 133–151.
- Porter, M. E. 1980. *Competitive strategy*. New York: Free Press.
- Posner, M. I., & Petersen, S. E. 1990. The attention system of the human brain. *Annual Review of Neuroscience*, 13: 25–42.
- Raafat, R. M., Chater, N., & Frith, C. 2009. Herding in humans. *Trends in Cognitive Sciences*, 13: 420–428.
- Richter, A. W., West, M. A., van Dick, R., & Dawson, J. F. 2006. Boundary spanners: Identification, intergroup contact and effective intergroup relations. *Academy of Management Journal*, 49: 1252–1269.
- Ricketta, M., & van Dick, R. 2005. Foci of attachment in organizations: A meta-analytic comparison of the strength and correlates of workgroup versus organizational identification and commitment. *Journal of Vocational Behavior*, 67: 490–510.
- Rosenbaum, M. E., Moore, D. L., Cotton, J. L., Cook, M. S., Hieser, R. A., Shovar, M. N., & Gray, M. J. 1980. Group productivity and process: Pure and mixed reward structures and task interdependence. *Journal of Personality and Social Psychology*, 39: 626–642.
- Rousseau, D. M. 1995. *Psychological contracts in organizations: Understanding written and unwritten agreements*. London: Sage.
- Rudolph, J. W., Morrison, I. B., & Carroll, J. S. 2009. The dynamics of action-oriented problem solving: Linking interpretation and choice. *Academy of Management Review*, 34: 733–756.
- Ryan, R. M., & Deci, E. L. 2000. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55: 68–78.
- Ryan, R. M., Huta, V., & Deci, E. L. 2008. Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, 9: 139–170.
- Schwartz, S. H. 1992. Universals in the content and structure of values: Theory and empirical tests in 20 countries. *Advances in Experimental Social Psychology*, 25: 1–65.
- Sebanz, N., Bekkering, H., & Knoblich, G. 2006. Joint action: Bodies and minds moving together. *Trends in Cognitive Sciences*, 10: 70–76.
- Seo, M., Barrett, L. F., & Bartunek, J. M. 2004. The role of affective experience in work motivation. *Academy of Management Review*, 29: 423–439.
- Shah, J. Y., Friedman, R., & Kruglanski, A. W. 2002. Forgetting all else: On the antecedents and consequences of goal shielding. *Journal of Personality and Social Psychology*, 83: 1261–1280.
- Shamir, B. 1990. Calculations, values, and identities: The sources of collectivistic work motivation. *Human Relations*, 43: 313–332.
- Shamir, B. 1991. Meaning, self and motivation in organizations. *Organization Studies*, 12: 405–424.
- Shamir, B., Zakay, E., Breinin, E., & Popper, M. 1998. Correlates of charismatic leader behavior in military units: Subordinates' attitudes, unit characteristics, and superiors' appraisals of leader performance. *Academy of Management Journal*, 41: 387–409.
- Sheldon, K. M. 2004. The benefits of a "sidelong" approach to self-esteem need satisfaction: Comment on Crocker and Par (2004). *Psychological Bulletin*, 130: 421–424.
- Shipton, H. J., West, M. A., Parkes, C. L., Dawson, J. F., & Patterson, M. G. 2006. When promoting positive feelings pays: Aggregate job satisfaction, work design features, and innovation in manufacturing organizations. *European Journal of Work and Organizational Psychology*, 15: 404–430.
- Simons, T. L., & Peterson, R. S. 2000. Task conflict and relationship conflict in top management teams: The pivotal role of intragroup trust. *Journal of Applied Psychology*, 85: 102–111.
- Smith, P. K., Jostmann, N. B., Galinsky, A. D., & van Dijk, W. W. 2008. Lacking power impairs executive functions. *Psychological Science*, 19: 441–447.
- Sonnentag, S., & Volmer, J. 2010. What you do for your team comes back to you: A cross-level investigation of individual goal specification, team-goal clarity, and individual performance. *Human Performance*, 23: 116–130.
- Stajkovic, A. D., & Luthans, F. 2001. Differential effects of incentive motivators on work performance. *Academy of Management Journal*, 44: 580–590.
- Stapel, D. A., & Koomen, W. 2005. Competition, cooperation, and the effects of others on me. *Journal of Personality and Social Psychology*, 88: 1029–1038.
- Stewart, G. L. 2006. A meta-analytic review of relationships between team design features and team performance. *Journal of Management*, 32: 29–54.
- Strack, F., & Deutsch, R. 2004. Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review*, 8: 220–247.
- Straub, P. G., & Murnighan, J. K. 1995. An experimental investigation of ultimatum games: Information, fairness, expectations, and lowest acceptable offers. *Journal of Economic Behavior and Organization*, 27: 345–364.
- Sugden, R. 2003. The logic of team reasoning. *Philosophical Explorations*, 6: 165–181.
- Sundaramurthy, C., & Lewis, M. 2003. Control and collaboration: Paradoxes of governance. *Academy of Management Review*, 28: 397–415.
- Tabibnia, G., Satpute, A. B., & Lieberman, M. D. 2008. The sunny side of fairness: Preference for fairness activates

- reward circuitry (and disregarding unfairness activates self-control circuitry). *Psychological Science*, 19: 339–347.
- Takeuchi, R., Chen, G., & Lepak, D. 2009. Through the looking glass of a social system: Cross-level effects of high-performance work systems on employees' attitudes. *Personnel Psychology*, 62: 1–29.
- Teece, D. J. 2007. Explicating dynamic capabilities: The nature and micro-foundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28: 1319–1330.
- Thompson, J. A., & Bunderson, J. S. 2003. Violation of principle: Ideological currency in the psychological contract. *Academy of Management Review*, 28: 571–586.
- Tomasello, M., Carpenter, M., Call, J., Behne, T., & Moll, H. 2005. Understanding and sharing intentions: The origin of cultural cognition. *Behavioral and Brain Sciences*, 28: 675–735.
- Townley, B. 2002. The role of competing rationalities in institutional change. *Academy of Management Journal*, 45: 163–179.
- Tuomela, R., & Tuomela, M. 2005. Cooperation and trust in group context. *Mind & Society*, 4: 49–84.
- Trice, H. M., & Beyer, J. 1984. Studying organizational cultures through rites and ceremonials. *Academy of Management Review*, 9: 653–669.
- Tsai, W. 2001. Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal*, 44: 996–1004.
- Van den Bergh, B., Dewitte, S., & Warlop, L. 2008. Bikinis instigate generalized impatience in intertemporal choice. *Journal of Consumer Research*, 35: 85–97.
- Van der Vegt, G. S., Emans, B. J. M., & van de Vliert, E. 2000. Affective responses to intragroup interdependence and job complexity. *Journal of Management*, 26: 633–655.
- Van Knippenberg, D. 2000. Work motivation and performance: A social identity perspective. *Applied Psychology: An International Review*, 49: 357–371.
- Voss, Z. G., Cable, D. M., & Voss, G. B. 2006. Organizational identity and firm performance: What happens when leaders disagree about "who we are"? *Organization Science*, 17: 741–755.
- Wade-Benzoni, K. A., Tenbrunsel, A. E., & Bazerman, M. H. 1996. Egocentric interpretations of fairness in asymmetric, environmental social dilemmas: Explaining harvesting behavior and the role of communication. *Organizational Behavior and Human Decision Processes*, 67: 111–126.
- Wageman, R. 1995. Interdependence and group effectiveness. *Administrative Science Quarterly*, 40: 145–180.
- Wang, H., & Barney, J. B. 2008. Employee incentives to make firm-specific investments: Implications for resource-based theories of corporate diversification. *Academy of Management Review*, 31: 466–476.
- Weber, J., Kopelman, S., & Messick, D. 2004. A conceptual review of decision making in social dilemmas: Applying a logic of appropriateness. *Personality and Social Psychology Review*, 8: 281–207.
- Weick, K. E., & Roberts, K. 1993. Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38: 357–381.
- Whyte, W. F. 1956. *The organization man*. New York: Simon and Schuster.
- Willer, R. 2009. Groups reward individual sacrifice: The status solution to collective action problems. *American Sociological Review*, 74: 23–43.
- Williamson, O. E. 1985. *The economic institutions of capitalism*. New York: Free Press.
- Witteck, R. 1999. *Interdependence and informal control in organizations*. Amsterdam: Thela Thesis.
- Wright, P., & Nishii, L. In press. Strategic HRM and organizational behavior: Integrating multiple levels of analysis. In D. Guest, J. Paauwe, & P. Wright (Eds.), *Human resource management and performance: Progress and prospects*. Oxford: Blackwell.
- Wrzesniewski, A., & Dutton, J. E. 2001. Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26: 179–201.
- Zaccaro, S. J., & McCoy, M. C. 1988. The effects of task and interpersonal cohesiveness on performance of a disjunctive group task. *Journal of Applied Social Psychology*, 18: 837–851.

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