STICKING TOGETHER: THE GLUE ROLE AND GROUP CREATIVITY

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ABSTRACT

In this paper, we introduce the concept of the “glue role” in groups engaged in creative tasks. An individual crafts a glue role by seeking out and taking on otherwise neglected tasks that have the potential to facilitate a creative group’s performance. We adopt a negotiated order perspective on roles in groups to examine how a group’s emerging social structure provides opportunities for crafting the glue role. We then suggest two mechanisms through which the glue role can facilitate performance in creative groups: the coordination of group members’ contributions and the management of group conflict.

In a pharmaceutical research and development group, a technical analyst offers to help with an obscure statistical methodology that facilitates a breakthrough drug production process. This individual works vigorously with the scientists to interpret and write up the results, but is only mentioned in a small footnote when the group’s lead scientists pitch the innovation to the company’s top management.

An academic committee has a member who customarily takes assiduous notes at each meeting. At first, the other members of the committee think that this person is a little obsessive. However, as the time comes for the committee to begin to put together its final
Collaborative creativity in work groups is increasingly acknowledged as a critical element to the success of organizations in a rapidly changing world (Paulus & Nijstad, 2003). However, the success of groups engaged in creative endeavors hinges, in part, on their ability to manage the paradoxes and dilemmas that often accompany group interactions (Smith & Berg, 1987). A situation that leads to a dilemma frequently associated with working in creative groups is that group members may be selected primarily for their expertise in functional areas or for the specialized skills that they can contribute to the group rather than their knowledge and skill in enacting teamwork (Marks, Sabella, Burke, & Zaccaro, 2002). The creative group, then, is positioned on the horns of a dilemma. On the one hand, creative task performance is thought to benefit from selecting talented group members with a diverse set of skills and abilities (Milliken, Bartel, & Kurtzberg, 2003). On the other hand, even the most talented collection of group members requires effective means of coordinating individual efforts to ensure that the group works together in pursuit of its goals (Van de Ven, Delbecq, & Koenig, 1976). To the extent that group members focus on individual pursuits to the exclusion of teamwork, group members may encounter difficulties in working as an interdependent entity (Ellis, Bell, Ployhart, Hollenbeck, & Ilgen, 2005; Hollenbeck, DeRue, & Guzzo, 2004).

In this paper, we seek to identify and better understand the phenomenon of the glue role in small groups engaged in creative tasks. An individual enacts a glue role by seeking out and taking on otherwise neglected tasks that have the potential to facilitate group effectiveness, but which often do not receive much recognition or attention. The glue role is contextually defined, driven by individuals’ ability to adapt their behaviors to meet the needs of the group. Individuals are able to craft the glue role through their ongoing ability to recognize “windows of opportunity” (Tyre & Orlikowski, 1994) for adopting otherwise neglected tasks with the potential to facilitate the integration and coordination of group members’ efforts. We suggest that this ability to take on neglected tasks that integrate group members’ contributions can facilitate a creative group’s performance by enabling better group coordination and by cultivating intragroup relationships built on trust that can facilitate the management of group conflict.

We seek to contribute to theory and research on group creativity by examining the glue role as a mechanism through which collective forms of creativity are accomplished in groups. We begin by introducing and defining...
the concept of the glue role as an example of how individuals can enact specific roles to influence group performance (Stewart, Fulmer, & Barrick, 2005). Drawing on the negotiated order of roles perspective (Bechky, 2006; Strauss, 1978), we then provide a theoretical account of how individuals craft the glue role in response to a group’s emerging social structures. Levine and Moreland (1990) point out how researchers know relatively little about the ways in which individual roles form in groups and this paper begins to examine that question. Finally, we discuss the ways in which the glue role may facilitate coordination and conflict management in groups.

GROUP CREATIVITY AND THE INDIVIDUAL

We define group creativity as a collective process whereby the diverse skills, knowledge, and perceptions of group members are coordinated to produce a product or performance that is both novel and appropriate for its intended purposes. Our definition can be unpacked into two key components. First, we view group creativity as a collective process (Sawyer, 2003), which requires the coordination of members’ diverse abilities and perceptions to facilitate group effectiveness (Taggar, 2002). We follow Hargadon and Bechky (2006) in suggesting that much of a collective’s creative activity occurs in the interactions of individuals with diverse perspectives and frames of reference. A creative group can enable individuals with diverse perspectives to come together and to interact, but it also requires means of integrating those efforts to be successful (Van de Ven et al., 1976). Second, we draw on Amabile’s (1996) definition of creativity as producing a product or performance that is both novel and appropriate to the purposes for which it is intended.

Although researchers have pointed out that a good deal of creative activity is now accomplished in groups (Sutton & Hargadon, 1996; Sawyer, 2003), creativity is still popularly viewed largely as an individual phenomenon (Paulus & Nijstad, 2003). Recognition for great innovations often accrues to individuals like Thomas Edison, even though “Edison [was] in reality a collective noun and refers to the work of many men” (Conot, 1979, p. 469). This suggests that individuals who are able to take on visible, prominent group roles have the potential to receive individual recognition for some of the creative achievements of the group.

In the context of group creativity, individual group members’ desire for individual recognition can play out in ways that have material consequences for group effectiveness. The desire of group members to seek visible,
prominent group roles in which they will be personally recognized for
their individual performance may conflict with their willingness to take
on whatever role is necessary to integrate and coordinate group
members’ efforts. Without individuals willing to take on a variety of roles
that perform different functions, groups struggle to function optimally
(Overbeck, Correll, & Park, 2005). Group members who are seeking
to advance their careers may not view performing behind-the-scenes, low-
visibility tasks that facilitate group coordination as being in their best
personal interests.

The failure of the heavily favored 2004 US men’s Olympic basketball
team to capture the gold medal represents a classic example of the perils of
not having an individual able and willing to integrate the contributions
of others to facilitate the performance of the group. This team consisted of
some of the best individual basketball talent in the world, including former
National Basketball Association Most Valuable Players Tim Duncan and
Allen Iverson and emerging stars like LeBron James and Carmelo Anthony.
Unfortunately, team members were selected for their ability to shoot the
basketball and score points rather than their willingness to play defense or
pass the ball to open teammates (Wise, 2004). The results were very
disappointing: in its first game, the heavily favored US team lost to Puerto
Rico by 22 points. Kerr said that in basketball, “scoring baskets … [is] more
readily observable than feeding [passing the ball to] open teammates”
(p. 780). However, without a team member willing to integrate individual
contributions to the group effort, the United States finished the tournament
in a stunning third place.

The willingness of individuals to integrate and coordinate the diverse
contributions and perspectives of other group members is equally valuable
in facilitating creativity in groups. Consider the example of ideational
creativity in groups. A long line of research on brainstorming has sought
to understand why groups suffer process losses relative to a comparable
number of individuals working alone in generating ideas (for reviews, see
Diehl & Stroebe, 1987; Litchfield, 2008; Mullen, Johnson, & Salas, 1991).
Alex Osborn (1957), who first developed brainstorming as an intervention,
suggested that the true value of generating ideas in groups comes from
opportunities to build on and integrate the ideas suggested by others.
However, group members are often so focused on thinking up their own
ideas while waiting to speak that they fail to listen to and build on the
ideas of others (Diehl & Stroebe, 1991). Without an individual who seeks
opportunities to coordinate and build on the ideas of others, ideational
groups are unlikely to realize their potential.
In this paper, we suggest that the performance of creative groups can be facilitated by an individual in the glue role. An individual enacts a glue role by seeking out and taking on coordinating tasks in the group that would otherwise be neglected. We begin by defining the glue role and distinguishing it from related constructs. We then examine how individuals craft and enact glue roles in creative groups. Finally, we discuss the potential effects of an individual in the glue role on the performance of creative groups.

DEFINING THE GLUE ROLE

An individual enacts a glue role by seeking out and taking on tasks that would otherwise be neglected but which have the potential to facilitate group effectiveness. Our definition of the glue role highlights two key points. On the one hand, the glue role is contextually defined. It is an adaptive individual behavior and reactive in the sense that arises in response to the specific needs of the group. On the other hand, an individual enacts the glue role by actively seeking out opportunities to coordinate the efforts of the group. This individual is likely to be especially sensitive to the coordinating needs of the group and attentive to gaps in the group’s process – neglected tasks that, although not essential to group functioning, have the potential to facilitate a creative group’s effectiveness through coordinating group members’ contributions.

An individual in the glue role engages in behaviors that are valuable to creative groups but which do not receive much attention or recognition. The need for an individual to adopt the glue role arises because creative tasks require group members to engage in a variety of activities, some of which are more vivid – that is, visible and easily identifiable (Nisbett & Ross, 1980) – than others. The most vivid behaviors in idea-generating groups, for example, involve coming up with novel, original ideas. As Sutton and Hargadon (1996) observed in their in-depth study of product design firm IDEO, modified brainstorming (i.e., “deep dive”) sessions serve as “status auctions,” in which individuals who come up with creative ideas gain status in the organization and prestige in the eyes of their colleagues. However, if group members focus exclusively on engaging in the vivid activity of generating their own ideas and fail to build on the ideas of others, they miss out on what Osborn (1957) believed to be the true value of working together in a group. Group members may fail to attend to the ideas of others, however, because building on the ideas of others is less vivid than getting credit for coming up with a creative idea. As a result, an individual willing to
build on and integrate the ideas of others can facilitate creativity in ideational groups.

In defining the glue role, we also seek to delimit the boundaries of the construct and our discussion of it. The concept of the glue role draws on and incorporates elements from a number of conceptual traditions in the study of behavior in groups. Although the glue role builds on other concepts, it describes a construct that captures a phenomenon that is distinct. We have also chosen to discuss the glue role in terms of the interactive phases of groups in which creative work is being accomplished. Although we acknowledge that many creative groups are also responsible for implementing the ideas that they generate – and that an individual in the glue role has the potential for facilitating group performance outside of creative interactive phases – the current discussion is confined to examining the glue role during the creative interaction phases of groups.

The glue role is related to concepts such as organizational citizenship behaviors (OCBs), which describe employee efforts that go beyond the boundaries of formal role requirements to help other group members in completing their tasks (Bateman & Organ, 1983; Organ, 1988). The behaviors associated with the glue role are similar to some OCBs to the extent that both types of behavior help others in groups. However, the glue role is distinct from OCBs in two ways. First, by definition, a role involves engaging in integrating behaviors repeatedly over time. Different members might engage in helping behaviors that integrate the activities of the group at different times, but an individual enacts the glue role only by taking on the same “glue” activities repeatedly. Second, whereas OCBs can refer to any one-on-one helping behaviors which may or may not directly facilitate the efforts of the group, the glue role consists of a more specific set of tasks that enable the coordination and integration of the diverse contributions of multiple group members.

The glue role is also related to theories of leadership that emphasize the influence of group members beyond the group’s formal leader. The constructs of shared (Carson, Tesluk, & Marrone, 2007), emergent (Schneier & Goktepe, 1983), and functional (Adair, 1983) leadership all reflect dissatisfaction with traditional views of leadership as something that inheres in a single individual with formal authority. They are similar to the construct of the glue role in the sense that they seek to shift the focus away from the characteristics and behaviors of a group’s formal leader to the activities of other members of the group. However, the activities of an individual in the glue role transcend leadership because an individual can facilitate group creativity without engaging in attempts to influence the
motives or actions (Yukl, 1989) of others. An individual in the glue role coordinates and integrates the efforts of others, but these activities may not necessarily be the best route toward exerting influence over others.

Finally, the glue role is related to but distinct from the construct of social roles (Eagly, 1987; Slater, 1955). According to Bales (1970), social roles involve behaviors focused specifically on maintaining the cohesion and solidarity of a group. A social role is distinct from a task role in that the behaviors an individual in a social role engages do not contribute directly to completing the group’s task. Examples of social role behaviors might include verbally encouraging others, stepping in to mediate interpersonal conflicts, and otherwise seeking to help satisfy the emotional needs of other group members (Gladstein, 1984). As we will later argue, a glue role may have many of the same effects as a social role in that the willingness of an individual to adopt a glue role may enable intragroup trust (Jones & George, 1998) that facilitates conflict management. However, an individual in a glue role facilitates these effects through engaging in activities that directly contribute toward accomplishing the group’s task. As a result, an individual who crafts a glue role engages in activities consistent with a task role, yet these activities may have many of the same effects that researchers have theorized should result from the adoption of social roles.

HOW INDIVIDUALS CRAFT AND ENACT THE GLUE ROLE

So far we have defined the glue role, provided examples of how it manifests in the context of creative groups, and described its relationship to related constructs. In this section, we draw on the negotiated order perspective (Strauss, 1978) as a means of better understanding how the glue role is crafted and enacted by individuals in creative groups. The negotiated order perspective on roles suggests that roles are negotiated in and through interaction and in relation to the constraining and enabling effects of social structures (Bechky, 2006). The negotiated order perspective draws our attention to the ways in which individual activities are constrained (and enabled) by social structures such as small groups.

The negotiated order perspective has often been applied in the context of organizations with hierarchical structures and relatively rigid role definitions (Stelling & Bucher, 1972), but our interest in group creativity brings the negotiated order perspective into a more emergent structural environment.
Groups engaged in creative tasks frequently operate in an emergent social context characterized by a dynamic structure created in and through ongoing interaction (Sawyer, 2003). The negotiated order perspective of roles provides a mechanism for accounting for the ways in which the structure of a collective is constrained and enabled as well as reenacted (reproduced and altered) in and through these interactions (Bechky, 2006; Strauss, 1978).

From a negotiated order perspective, individual agency and emergent social structure are mutual influences in the development of roles in groups. We view the construction of roles as neither a function of the person or the situation alone, because individuals are neither completely autonomous in their ability to construct roles in groups nor completely constrained by the social structures they encounter. Instead, our purpose is to theorize how individuals seek out and craft roles in the windows of opportunity enabled by the emerging structure of the groups in which they participate. In this section, we will provide two examples of how a creative group’s emerging social structure can constrain individual activity while simultaneously providing windows of opportunity for an individual to take on the glue role. In our first example, the social structure that emerges is a function of the configuration of group members’ personalities. In our second example, the social structure is a function of the emerging interdependence of the creative task.

Group Composition

The composition of a group is one element of an emerging social structure that might constrain the agency of individuals in crafting roles in creative groups. One element of group composition is the configuration of personalities in a group, which is likely to influence a group’s emerging structure through its influence on social and interaction dynamics (Moynihan & Peterson, 2001). For example, Barry and Stewart (1997) conduct an experimental study of self-managed groups engaged in an open-ended, creative problem-solving task to examine the influence of the configuration of group members’ personalities on group performance. They found a curvilinear effect in relation to extroversion. Groups with a moderate number of extroverts performed best, whereas group performance tended to suffer in groups with a high proportion of extroverts. According to the authors, a lack of task focus was the underlying mechanism driving the poor performance of groups with a high proportion of extroverts. Perhaps, those groups lost sight of the task at hand as group members focused on saying their ideas out loud and neglected to integrate and build on the ideas that had already been suggested.
In Barry and Stewart’s study, there were no rules dictating that every group member needed to speak their ideas, nor was a reward structure in place that would reward individual contributions to solving the problem. The social and interactional dynamics that ultimately hindered group creativity emerged from the configuration of group members’ personalities. Furthermore, the high proportion of extroverts in this example constrained the development of certain roles. There would be little use in a group with a high proportion of extroverts for yet another group member who would try to dominate the conversation.

However, this emerging context would also provide a window of opportunity for an individual to contribute to group effectiveness through adopting a complementary glue role (Muchinsky & Monahan, 1987). In groups with a high proportion of extroverts, many members are eager to contribute ideas, but there may be no one to listen to and integrate the ideas being suggested. Such situations create a window of opportunity for an individual who is sensitive to the integrating needs of the group to assume a glue role.

What are the characteristics of individuals who choose to seek out and enact otherwise neglected coordinating and integrating tasks rather than engaging in other, more vivid behaviors? Put another way, what leads some group members to focus on the integration and coordination needs of the collective rather than behaviors that would seem to benefit them as individuals? A full account of the possible attributes characterizing individuals in the glue role is beyond the scope of this project; however, we suggest that individuals who enact the glue role can be driven by a desire to facilitate both collective and individual outcomes. Consider an individual who takes on a glue role in an idea-generating group. This individual’s integrating activities, which are intended to facilitate group effectiveness, may appear to some as an exercise in irrational self-denial – taking one for the team, as it were. However, if the organization’s compensation is at least partially based on group outcomes, the individual in the glue role also stands to benefit personally from the group’s success. We will return to the issue later in discussing the implications of compensation systems on the potential for “glue” activity in groups.

Task Interdependence

In addition to group composition, the structure of a creative group’s task can also influence its emergent social structure. One facet of task structure is level of interdependence, the degree to which the task requires that multiple
individuals work together (Wageman, 2001). Interdependence has often been conceptualized as a property of the group’s task, a structure that is imposed on the group by management or other external forces (Thompson, 1967). However, work by Wageman and Gordon (2005) suggests that interdependence can also emerge as a function of group members’ values and preferences. The latter view of interdependence is especially valuable to understanding the dynamic nature of many creative groups, in which structure emerges as group members interact over time (Sawyer, 2003).

Academic research groups are an example of creative groups in which group members’ preferences may dictate the interdependence of the task. Suppose that a group of four researchers decide to work together on a research project. The task could be completed in different ways with varying levels of interdependence. The group could choose to structure the task with a high degree of interdependence by having all four participants meet together each day and sit around the computer to write the paper together. Alternately, the group could choose to structure the task by dividing the paper into four sections, having each group member write one section of the paper, and then meeting to combine the sections into a single paper at a later time. A third method for structuring the task would be to have the lead author write a first draft and then circulate that draft to each of the other three group members, who take turns providing their comments and feedback.

The integrating behaviors associated with the glue role may look different, depending on the degree of interdependence embedded in the academic research group’s task structure. In the most highly interdependent task structure, where all four members sit down at the computer each day to jointly compose the paper, the glue role may be adopted by the individual who interprets and paraphrases other members’ ideas and who assures that every person’s views are heard. If the group opts to divide the paper into sections and then combine each individual’s section into a final paper at a later time, an individual may take on the glue role by taking the time to write transition paragraphs between sections that improve the paper’s flow to make it sound like it was written by one person instead of four. If the group chooses to have the lead author write a draft of the paper and then circulate the draft to each of the other group members for comments, an individual may take on a glue role by clarifying the issues underlying differences in opinion and making suggestions about how conflicting suggestions for revising the paper can be reconciled. In each case, individuals who take on the glue role adapt their behaviors to the specific needs of the group that flow from the degree of task interdependence and emerges from the preferences of a creative group’s members.
Negotiating Other Group Members’ Perceptions

As the metaphor of a negotiated order implies, an individual not only acts to craft the glue role in relation to an emerging social context, but also in relation to other group members who are actively perceiving and reacting to the activities of that individual. From a negotiated order perspective, group members’ perceptions of the actions of an individual in the glue role are embedded in broader macrosocial norms and assumptions about what motives govern others’ behavior (Svensson, 1996). Self-interest, for example, is widely viewed as a cardinal motive for human behavior (Miller, 1999; Schwartz, 1986). By engaging in behaviors that enable the coordination of a creative group at the expense of behaviors that might facilitate recognition of individual achievement, an individual in a glue role might appear to others to be acting for reasons other than self-interest. Drawing on work by Saparito, Chen, and Sapienza (2004), we suggest that the ways in which individuals in the glue role represent their motives to other group members have implications for the negotiation of the glue role and the development of trust.

Saparito and his colleagues suggest that self-interest is often the default motive attributed to other parties. This assumption of self-interest arises both from macrosocial, collectively shared cultural ideologies (Miller & Ratner, 1996), and from more local contextual assumptions, such as expectations that business relationships are instrumental and both parties will act in their rational self-interest (Petersen & Rajan, 1994). The macrosocial norm of self-interest is supported in creative groups by the widespread view of creativity as an individual phenomenon (Paulus & Nijstad, 2003) and reinforced by selection practices that emphasize specialized skills and knowledge rather than group members’ ability to work well together (Marks et al., 2002). However, it should also be noted that group members’ perceptions of task interdependence – which typically follow more interdependent structural arrangements (Wageman, 2001) – should moderate the degree of self-interest in the group. Specifically, groups whose members perceive their tasks as more interdependent may have weaker norms of self-interest, at least within the context of that group.

When called to account for their behaviors in the course of ongoing interactions with other group members, individuals enacting the glue role may gain credibility by framing their motives in terms that are congruent with the macrosocial norm of self-interest. For example, an individual taking assiduous notes in committee meetings may frame his actions in terms of having a poor memory and needing to take careful notes to
remember what was said for his portion of the committee’s final report. By representing their actions in terms consistent with the norm of self-interest, individuals in the glue role provide an account that is likely to be congruent with other group members’ expectations of what motivates rational behavior. This perceived congruence is likely to facilitate initial trust that, over time, may develop into a deeper level of trust built on a sense of common fate and shared values (Jones & George, 1998; Lewicki & Bunker, 1996).

The negotiated order perspective on the development of roles offers insight into the dynamic interplay between the structural context of a social setting and the individual’s ability to seek out, craft, and enact a glue role in a creative group. It provides a framework for a more balanced examination of the mutual influence of individual agency and emergent social structure on one another as well as a mechanism for linking the negotiation of individual behaviors to broader macrosocial norms. We have presented an account of the glue role in creative groups as a situated phenomenon, negotiated in relation to a particular emergent social structure, responsive to other group members’ perceptions, and embedded in macrosocial norms and assumptions. In the next section, we consider how an individual’s willingness to enact a glue role may facilitate creative group effectiveness.

THE EFFECTS OF THE GLUE ROLE

So far, we have defined the glue role, provided examples of its manifestation in a variety of creative group contexts, and discussed its relationship to related constructs. We have also examined how individuals seek out and craft glue roles by capitalizing on windows of opportunity that are enabled by the social structures that emerge in creative groups over time. We will now articulate and discuss potential mechanisms through which the willingness and ability of an individual to seek out and enact the glue role can facilitate the effectiveness of groups engaged in creative tasks. We suggest that the glue role is likely to facilitate group effectiveness through its influence on coordination and conflict management.

The Glue Role and Coordination

Coordination in work groups involves aligning and integrating the activities and objectives of group members toward a common collective goal.
Coordination is viewed as a critical process in facilitating group success, particularly the success of groups engaged in creative tasks (Brophy, 1998). Without adequate coordination, a group risks process losses (Steiner, 1972) that waste group members’ efforts and other resources while jeopardizing the group’s ability to meet its goals. Researchers have suggested that coordination can occur in groups through explicit coordination, in the form of intentional planning and programming (March & Simon, 1958), or through interpersonal communication (Van de Ven et al., 1976). Recently, researchers have pointed out that much of the coordination that occurs in groups is implicit, whereby group members adjust their behavior in relation to the behaviors of others in the group without formally communicating or planning in advance (Rico, Sanchez-Manzanares, Gil, & Gibson, 2008). Shared mental models (Klimoski & Mohammed, 1994), trust (Jones & George, 1998), habitual routines (Gersick & Hackman, 1990), and teamwork knowledge (Marks et al., 2002) are just a few of the proposed mechanisms through which group members are thought to implicitly coordinate their efforts.

The centrality of coordination to the effectiveness of creative groups is especially visible in idea-generating groups. Researchers have consistently found that face-to-face groups working together typically generate fewer ideas than nominal groups, in which individuals generate ideas on their own and later combine them (Diehl & Stroebe, 1987; McGrath, 1984; Taylor, Berry, & Block, 1958; Van de Ven & Delbecq, 1971). That is, brainstorming groups that interact with one another perform at a deficit relative to those that do not. Diehl and Stroebe (1991) suggest that a primary source of process losses in ideational groups results from deficits in coordination. Specifically, Diehl and Stroebe identify production blocking, whereby group members are so focused on trying to generate their own ideas while waiting for their turn to speak that they miss out on opportunities to build on existing ideas suggested by other group members. To the extent that groups can coordinate the diverse contributions of multiple members to build on suggested ideas rather than generating each new idea from scratch, they should be able to generate a higher quantity and quality of ideas and engage in a more efficient process.

Although it could be useful for a group engaged in a creative task to coordinate its efforts through distributed mechanisms like generic group member teamwork skills (Ellis et al., 2005), the reality is that these forms of coordination may not always work well for creative groups. As a result, members of these types of groups are often selected primarily for their specialized knowledge and abilities rather than for their skill at working well
in a group (Marks et al., 2002). The result is that members may be very
good at what they do individually but, absent some other mechanism for
coordinating each member’s individual inputs, the group’s performance as a
collective suffers (Hollenbeck et al., 2004).

An alternative possibility for integrating creative group members’ efforts
is illustrated by the notion of coordination through roles (Bechky, 2006).
A role is a set of behaviors that characterize a particular group member in a
particular setting in relation to the activities of other group members
(Biddle, 1979; Katz & Kahn, 1978). An individual who seeks out and enacts
a glue role may facilitate group effectiveness by sensing what group-oriented
coordinating tasks are being neglected and taking them on. This individual
can become a focus point for coordinating the efforts of other group
members, allowing other members to do what they do best. The technical
analyst who helps the lead scientists in a research and development group by
providing interpretation and support of an obscure statistical process frees
the lead scientists to focus on their presentation to top management. The
“assiduous note taker” enables the other members of the committee to focus
on contributing ideas and debating issues. In both cases, the other members
of the group have greater freedom to focus on their own contributions
because the individual in the glue role repeatedly engages in integrating
behaviors. Over time, group members come to recognize that the individual
has adopted the glue role through consistently taking on tasks that
coordinate their efforts and facilitate the group’s performance. As other
group members recognize the coordinating activities of the individual in the
glue role over time, this results in the development of trust that facilitates
group effectiveness.

Proposition 1. Individuals facilitate coordination in creative groups by
enacting the glue role.

Proposition 2. The coordinating behaviors of individuals in the glue role
facilitate the effectiveness of creative groups.

The Glue Role and Conflict Management

In addition to facilitating creative group performance through the
coordination of diverse group members’ efforts, an individual in the glue
role can also facilitate group creativity through conflict management.
Effective conflict management works parallel to coordination in that it has
the potential to remove barriers to the integration of group members’ efforts. In this section, we follow the distinction in the literature between conflict that is task based and relationship based (Guetzkow & Gyr, 1954; Pinkley, 1990; Jehn, 1995; Jehn & Mannix, 2001) and discuss how an individual in the glue role can facilitate conflict management that encourages a moderate level of task conflict but prevents task conflict from degenerating into relationship conflict.

Task conflict refers to differing viewpoints, ideas, and opinions related to the group’s task, whereas relationship conflict refers to disagreements over interpersonal issues and other concerns not directly related to the task (Jehn, 1995, 1997; Jehn & Bendersky, 2003). Moderate levels of task conflict have been found to benefit group performance by encouraging discussion and debate that enables a better understanding of the issues at hand (Fiol, 1994; Janssen, Van de Vliert, & Veenstra, 1999) and provide group members the opportunity to voice their ideas and perspectives (Amason, 1996; Peterson, 1997). Relationship conflict, on the other hand, has been consistently associated with negative group outcomes (Gladstein, 1984; Jehn & Bendersky, 2003) that are driven, in part, by less information sharing and perceptions that other group members are not supportive (Shalley, Zhou, & Oldham, 2004).

Creative groups walk a tightrope in managing conflict. On the one hand, some degree of task conflict is likely to benefit group creativity because it encourages a more robust debate that involves hearing minority viewpoints and ideas, which should ultimately lead to better idea generation and more creative solutions (Nemeth & Nemeth-Brown, 2003; Nemeth, Personnaz, Personnaz, & Goncalo, 2004). On the other hand, high levels of task conflict can easily turn into relationship conflict, which has the potential to reduce information sharing and limit group members’ cognitive functioning (Jehn & Mannix, 2001).

We suggest that an individual in the glue role can enable group creativity by (1) encouraging a moderate level of task conflict and (2) facilitating conflict management that prevents task conflict from escalating into relationship conflict. First, an individual in the glue role may engage in behaviors that encourage and integrate the contributions of every group member, including those whose voices may not otherwise be heard. Group members whose points of view are very different from the perspectives of the rest of the group can be valuable to creative groups by encouraging further discussion (Fiol, 1994) and by introducing unique frames of reference that spark creative insights for recombining existing ideas in a new way (Hargadon & Bechky, 2006). However, groups may fail to utilize
the contributions of some group members by discounting certain members’ expertise based on social role expectations (Thomas-Hunt & Phillips, 2004) or by over weighting the contributions of individuals who are extroverted (Bonner, 2000) or whose ideas are more consistent with the majority of group members’ perspectives (Bonner, Gonzalez, & Sommer, 2004). An individual in the glue role can ensure that potentially marginalized ideas are heard by reminding group members that they have not heard from certain individuals for a while. An individual in the glue role can then return to minority ideas, paraphrase them, and link them in a way that interfaces with the group’s discussion. For example, in an architectural design group charged with designing an environmentally sustainable housing complex, an individual in the glue role might say, “I remember that Tony said something about designing low-wattage light fixtures in his last job. Tony, do you mind telling us more about what you did before?”

**Proposition 3.** Individuals in the glue role facilitate group creativity by enabling the group to incorporate and capitalize on the diverse perspectives of multiple group members.

Second, an individual in a glue role can facilitate conflict management that prevents task conflict from evolving into relationship conflict through the development of intragroup trust. Managers are seeking ways to promote trust as a means for facilitating collective performance (Kramer & Tyler, 1996) and trust is especially important in groups that ask their members to take creative risks to come up with innovative solutions (Edmondson, 1999). The ability of an individual in the glue role to foster trust is valuable to conflict management because researchers have found that intragroup trust moderates the relationship between task and relationship conflict by preventing task conflict from turning into relationship conflict (Peterson & Behfar, 2003; Simons & Peterson, 2000). Trust is negotiated in and through ongoing interactions among group members (Jones & George, 1998) and develops over time when individuals demonstrate consistent, trustworthy behaviors (Kelley, 1967). By consistently taking on tasks that integrate group members’ efforts, an individual in the glue role demonstrates a commitment to facilitating the goals of the group. This demonstration of commitment to the group objective has the potential to foster broader intragroup trust over time that enables group members to give one another the benefit of the doubt in conflict situations (Zaheer, McEvily, & Perrone, 1998). Simons and Peterson (2000) find that task conflict can evolve into relationship conflict through a process of misattribution, whereby individuals make antagonistic or sinister
attributions for other group members’ behavior. The presence of intragroup trust can prevent task conflict from escalating into relationship conflict by increasing the likelihood that group members will attribute conflict to a simple misunderstanding (Jehn & Mannix, 2001) or to other group members’ sincere desire to push for a more creative product or performance. By taking the initiative to act consistently in terms of group-focused objectives, individuals in the glue role can enable trust built on shared values and interests (Lewicki & Bunker, 1996) that facilitates group conflict management.

**Proposition 4.** Individuals in the glue role should enable conflict management through the facilitation of intragroup trust.

**DISCUSSION AND FUTURE DIRECTIONS**

Creative groups have the potential to benefit from the unique insights and contributions of specialists with different skills and expertise. As researchers, we still have much to learn about how creative groups can effectively integrate specialists’ diverse efforts into a single creative performance or product. Understanding how specialist contributions are integrated is especially difficult in cognitive tasks in which there is little visible evidence of the coordination of diverse efforts. In examining the glue role, we hope to shed light on a mechanism through which diverse efforts are integrated in creative groups.

In this paper, we offer three primary contributions to research on group creativity. First, we introduce and define the concept of the glue role as an example of how individuals can enact specific roles to influence group performance (Stewart et al., 2005). This addresses a call that researchers more carefully consider how individuals impact group effectiveness through characteristic behaviors and the adoption of roles (Levine & Moreland, 1990).

Second, this research applies the negotiated order perspective on roles to examine how individuals can craft and enact specific roles in creative groups, embedded in dynamic social contexts, whose task structures are emergent rather than externally imposed. This perspective provides an account of the interplay between a group’s emerging social structure in conjunction with the activities of individual group members. The negotiated order perspective also offers a process-based account of individual role...
crafting as a situated and negotiated phenomenon in the context of creative groups.

Finally, this project suggests a different approach to facilitating the effectiveness of creative groups, of which ideational groups are an example. Beginning with Osborn (1957), researchers have examined brainstorming as an intervention for reducing process losses and enabling productivity gains in idea-generating groups. Brainstorming is an example of a group-level, instructions-based intervention – that is, every member of the group receives the same written and verbal instructions. The glue role, however, suggests a possible intervention that is different in kind from brainstorming. Managers could assign an individual to the glue role in an idea-generating group by instructing only that individual to seek out opportunities to build on and integrate the ideas of others. Such individuals would not be responsible for coming up with new ideas from scratch; rather, they would be evaluated only on the degree to which they facilitated the group’s ability to integrate the contributions of multiple members by building on the ideas of others.

Examining the glue role as an individual-level, role-based intervention for facilitating group creativity is an important direction for future research that would enable researchers to examine the nature and properties of the glue role in a more concrete way. Experimentally assigning individuals to the glue role in both lab and field studies should enable researchers to explore the potential efficacy of the glue role as an intervention for creative groups. It would also provide further insight into the degree to which potential moderating variables, such as individual differences in characteristics, may affect the effectiveness of an individual in the glue role. Ideally, this research would initially be grounded in a specific creative context, such as ideational groups, and then expanded to examine other types of creative groups.

Research on the glue role may also offer insights into strategies for compensation practices that facilitate the performance of creative groups. Although organizations often pay lip service to the importance of teamwork in groups, they frequently compensate individual performance using metrics that only end up measuring individual performance (Fletcher, 1999). Wageman (1995) found that this type of compensation system – offering independent (i.e., individually-based) rewards to groups engaged structurally interdependent tasks – undermines teamwork and diminishes group effectiveness. Even more damaging, a compensation system that only rewards individuals who engage in behaviors more vivid than integrating and coordinating the contributions of group members may discourage individuals from taking on the glue role. To the extent that an individual in the glue role can facilitate group creativity, poorly designed compensation...
systems that discourage “glue” behaviors may create yet another barrier to
creative group effectiveness.

Finally, future research should also examine the extent to which the
benefits associated with the glue role may extend beyond the context of
creative groups. In fact, we would suggest that an individual in the glue role
can emerge and potentially benefit almost any group in which (a) group
members are selected primarily for their skills and expertise; (b) coordinat-
ing and integrating activities have the potential to facilitate group
effectiveness; and (c) certain activities and behaviors in the group are more
vivid and likely to be rewarded than others, leading to the neglect of other,
less vivid activities. As Kerr (1975) argued, many groups and organizations
in contexts ranging from business to the military, to sports, and to politics,
fail to perform to their potential because members attend to vivid, individual activities and fail to attend to activities that would integrate the
contributions of others and enable the group to work well together.

It is our sincere desire that this line of research will encourage further
examination of how individuals adopt roles in creative groups and how
those roles can influence group creativity. Researchers know a good deal
about both the formal and informal roles of leadership, but relatively little
about the enactment of other roles in small groups (Levine & Moreland,
1990). We hope that this project will facilitate further inquiry into the
individual activities that can influence group creativity.

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