

## Knowledge transfer between groups via personnel rotation: Effects of social identity and knowledge quality<sup>☆</sup>

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### Abstract

The study examines the effects of social identity and knowledge quality on knowledge transfer across groups. One hundred and forty-four students performed a production task in three-person groups. Midway through the task, a member from a different group rotated into each group. The primary dependent variable was whether the group adopted the production routine of the rotating member. Analyses revealed the predicted main and interactive effects. Groups were more likely to adopt the routine of a rotator when they shared a superordinate social identity with that member than when they did not. Groups were also more likely to adopt a routine from a rotator when it was superior than when it was inferior to their own. Further, superordinate groups adopted the production routine of the rotator when it was superior but not inferior to their own, whereas groups that did not share a superordinate identity with the rotator generally did not adopt the rotator's production routine, even when it was superior to their own and would have improved their performance.

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Knowledge transfer is the process by which one unit of an organization, such as a group or department, is affected by the experience of another (Argote & Ingram, 2000). Organizations adept at knowledge transfer have been found to be more productive and more apt to sur-

vive than counterparts less adept at knowledge transfer (Argote, Beckman, & Epple, 1990; Baum & Ingram, 1998; Darr, Argote, & Epple, 1995). Knowledge transfer is particularly important for organizations as they become global in order to capitalize on differential labor costs, expertise, and access to world markets. Other current business trends that point to the importance of knowledge transfer include the increased use of joint ventures and strategic alliances (Powell, Koput, & SmithDoerr, 1996), the increased frequency of mergers and acquisitions (Haunschild & Miner, 1997), and the greater prevalence of the multiunit organizational form (Greve & Baum, 2001; Ingram & Baum, 1997).

Knowledge transfer, however, can be difficult to achieve (Argote, 1999; Szulanski, 2000). For example, a study found that 10 of 32 attempts to transfer knowledge from one manufacturing unit to another within the same organization failed and were terminated

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(Galbraith, 1990). Even when an organization supports the transfer of performance-enhancing knowledge, the transfer may fail for reasons ranging from the quality of the relationship between donor and recipient groups to characteristics of knowledge being transferred (Szulanski, 2000).

Research has shown that transferring knowledge via personnel movement can be effective (Almeida & Kogut, 1999; Boeker, 1997; Galbraith, 1990). For example, Galbraith (1990) found that technologies transferred more readily between manufacturing establishments within the same organization when personnel from the donor site worked temporarily at the recipient site. Personnel movement between organizations also facilitates knowledge transfer. Almeida and Kogut (1999) found an association between the interfirm transfer of knowledge about patents and the movement of engineers from one firm to another in the semiconductor industry. Along related lines, research that investigated semiconductor firms' new product market decisions found evidence of an association between personnel movement and knowledge transfer (Boeker, 1997). Firms were more likely to enter new product markets when they had recently hired a top manager from a firm that had been in that market.

Transferring knowledge through personnel movement enables organizations to alter knowledge to better fit new contexts (Allen, 1977) and to transfer tacit as well as explicit knowledge. Tacit knowledge is difficult to convey in explicit mechanisms such as presentations and documents (Nonaka & Takeuchi, 1995). Cognitive research has found that individuals can transfer tacit knowledge to a similar task, even when they are unable to explicitly articulate the knowledge (Berry & Broadbent, 1987). Thus, personnel movement can transfer knowledge that is difficult to convey through other mechanisms. For example, other methods of knowledge transfer such as memos, descriptions, diagrams, manuals, and hired consultants failed to transfer knowledge of an innovative drilling process from a New Zealand tunnel project to a similar Boston Harbor project: "They had to fly tunnelers from Wellington to Boston to let the two groups of workers spend time together because nothing else worked" (Davenport & Prusak, 1998, p. 99). For these reasons, many researchers have endorsed personnel rotation as a mechanism of knowledge transfer (Almeida & Kogut, 1999; Argote, 1999; Davenport & Prusak, 1998; Nonaka & Takeuchi, 1995).

Other research, however, has found that rotating members between groups did not result in knowledge transfer from one group to another (Gruenfeld, Martorana, & Fan, 2000). Rotating members did, however, exert indirect influence on their original groups upon their return. Groups generated more unique ideas after the rotating members' return than before their departure. These findings might have resulted from recipient

groups viewing rotating members as outsiders, whereas their original groups shared a social identity with rotators and might have viewed them as insiders.

In this study, we bring the phenomenon of knowledge transfer into the laboratory and empirically investigate a critical source of the difficulty in transferring knowledge across groups—the extent to which the groups share a social identity. More specifically, we compare knowledge transfer through personnel rotation when a rotating member shares a superordinate social identity with a recipient group and when a rotating member does not share such an identity. Further, we examine how the social identity of a rotating member interacts with knowledge quality to affect knowledge transfer between groups.

### Social identity

An important factor likely to affect the transfer of knowledge between groups is the degree to which the groups share a superordinate social identity. Social identity theory (Tajfel & Turner, 1979, 1986) posits that individuals gain social identity, a part of their personal identity, from the groups to which they belong. Social identity can be defined as a sense of belonging to a social aggregate. When individuals identify with or are categorized as members of a social aggregate, they are more likely to define themselves in terms of their membership in that group. Researchers continue to debate and investigate individuals' motivations for social identification, which include self-esteem enhancement, cognitive heuristics, uncertainty reduction, evolutionary adaptation, and a desire to be both the same as and different from others (Brewer & Brown, 1998; Hewstone, Rubin, & Willis, 2002).

Regardless of the motivation(s) underlying social identity, there is substantial evidence that group members view their group and its members more positively than other groups and their members (Brewer & Brown, 1998; Brown, 2000; Hewstone et al., 2002). People evaluate ingroup members as more trustworthy, honest, loyal, cooperative, and valuable to the group than outgroup members. As a result of these evaluations, individuals may feel more comfortable sharing knowledge with groups with whom they share a social identity than with groups with whom they do not share a social identity. Consistent with this reasoning, Phillips, Neale, and Liljenquist (2003) found that group members felt more comfortable and accepted expressing their opinions when working with an ingroup rather than an outgroup newcomer. Ingroup favoritism also manifests itself in other pro-ingroup behaviors such as reward allocations, product evaluations, and cooperation in resource dilemmas (Blake & Mouton, 1961; Brewer, 1979; Brewer & Brown, 1998; Hewstone et al., 2002; Kramer & Brewer, 1984).

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