



A different perspective: The multiple effects of deep level diversity on group creativity



Sarah Harvey

Department of Management Science & Innovation, University College London, Gower Street, London WC1E 6BT, UK

HIGHLIGHTS

- The assumption that deep diversity improves creativity in groups is rarely tested.
- I demonstrate that groups with deep diversity fail to build on and integrate one another's ideas.
- This leads to products with less creatively elaborated and integrated ideas.
- Deep diversity can create both benefits and challenges to group creativity.

ARTICLE INFO

Article history:

Received 26 May 2012

Revised 25 March 2013

Available online 24 April 2013

Keywords:

Creativity

Group

Diversity

ABSTRACT

Although generally accepted in the literature on group diversity, the view that groups can improve their creativity by drawing on the diverse perspectives of group members has received surprisingly limited examination or empirical support. This paper considers the role of deep level diversity in group creativity, highlighting that while deep diversity may improve divergent processes in groups, it may also hamper groups' ability to converge around creative ideas. Two experimental studies demonstrate that deep level diversity leads to less creatively elaborated and integrated ideas. In addition, the studies revealed that when groups must converge around a single output, the challenges of deep level diversity outweigh the benefits of divergent idea generation. A detailed analysis of the interactions of 27 groups finds that this effect occurs because deep diversity changes a group's creative process. This study contributes to our understanding of the creative process in groups with detailed analysis of video-taped group interactions. It challenges the assumed advantages of deep level diversity to group creativity, and suggests that the brainstorming process that groups are typically advised to use to promote creativity may not be the best way to develop creative final output.

© 2013 Elsevier Inc. All rights reserved.

Introduction

Researchers traditionally advocate that to be creative, teams should be composed of members with different knowledge, experiences, and therefore perspectives on the group task (e.g., [Bantel & Jackson, 1989](#); [Brophy, 1998](#); [Cox & Blake, 1991](#)). Evidence suggests that diversity in underlying perspectives (that is, deep level diversity; [Harrison, Price, & Bell, 1998](#); [Phillips & Loyd, 2006](#)), creates individual and group processes associated with divergent thinking ([Milliken, Bartel, & Kurtzberg, 2003](#); [Nemeth, 1986](#); [Pelled, 1996](#)).

Specifically, diverse groups have an advantage over homogeneous groups or individuals at divergent thinking because novel ideas can result when one group members' idea stimulates a novel connection in another's associative hierarchy ([Collins & Loftus, 1975](#); [Guilford, 1950](#); [Nemeth, 1986](#); [Paulus & Yang, 2000](#)). An associative

hierarchy is a mental representation of relationships between concepts ([Mednick, 1962](#)). The more diverse a group in terms of the variety of underlying perspectives, the more diverse the associative network of the group, so the more novel the responses that can be made to a particular stimulus ([Mednick, 1962](#); [Simonton, 1999](#)). These deep level differences in underlying perspective may come from, for example, group members' educational background, extensive functional experience in an organization, or other factors that are relevant to the group task. This idea underlies much research on group creativity and group diversity (see [Harrison & Klein, 2007](#); [Mannix & Neale, 2005](#); [Milliken & Martins, 1996](#); [Van Knippenberg & Schippers, 2007](#); [Williams & O'Reilly, 1998](#); for reviews).

Although deep diversity is expected to benefit group creativity in this way, empirical research provides inconsistent results (e.g., [Ancona & Caldwell, 1992](#); [Muir & Hida, 2004](#); [Watson, Kumar, & Michaelsen, 1993](#)). For example, groups whose members have diverse knowledge categories can produce more original ideas ([Rietzschel, Nijstad, & Stroebe, 2007](#)) and groups with members from different

E-mail address: sarah.r.harvey@ucl.ac.uk.

ethnic backgrounds can produce higher quality ideas (McLeod, Lobel, & Cox, 1996). In contrast, the creativity of organizational groups has been found to be lower when members have different functional perspectives on the task (Ancona & Caldwell, 1992; Bercovitz & Feldman, 2008; Lovelace, Shapiro, & Weingart, 2001). One explanation for these mixed results is that groups can benefit from a variety of perspectives as long as members' views are not in opposition (Harrison & Klein, 2007). However, as noted above, even diversity in functional background, which is expected to create variety rather than opposition in underlying perspectives (Harrison & Klein, 2007), does not always lead to higher levels of creativity.

An alternative explanation for the effect of deep diversity on group creativity is that, while it leads to improved divergent thinking in group members and therefore more creative divergent output, it impairs the ability of groups to build on and combine ideas, which also requires some convergence between group members. To date, limited research has examined how convergent processes help groups to generate creative output by building on and combining one another's ideas (for an exception, see Kohn, Paulus, & Choi, 2011). This is surprising because these processes are recognized as essential for creativity (Finke, Ward, & Smith, 1992; Mumford & Gustafson, 1988; Osborn, 1953; Rietzschel, De Dreu, & Nijstad, 2007; Rietzschel, Nijstad, et al., 2007) and emerging research suggests that groups have difficulty identifying and converging around their most creative ideas (Putman & Paulus, 2009; Rietzschel, Nijstad, & Stroebe, 2006, 2010).

In the present paper, I introduce the term *convergent creativity* to describe a creative process in groups that involves both generating and elaborating new ideas, which are traditionally described as divergent thinking, and the ability and willingness of group members to recognize, appreciate, and therefore build on and combine one another's ideas. I suggest that although deep diversity may improve divergent thinking, it can also interfere with a group's ability to engage in convergent creativity; that is, to build on and combine ideas.

Defining divergent and convergent creative processes in groups

Divergent processes are those that lead to quantity, variety, and originality in ideas (Guilford, 1950). Divergent creativity is therefore measured as the number of ideas generated (fluency), the number of categories of ideas generated (flexibility), and the novelty of ideas (originality). In contrast, convergent processes narrow the set of ideas generated towards a solution (Cropley, 2006; Guilford, 1950; Torrance, 1988). Traditionally, creativity research conceptualizes convergence as the decision making task of selecting between generated ideas (e.g., Amabile, 1988; Rietzschel et al., 2006). As a result, convergence is typically associated with the quality rather than novelty of an idea (Paletz & Schunn, 2010).

Two ways of producing creative output can be considered to require both divergent and convergent processes in groups – building on ideas and combining ideas. Building on an idea within a single category or theme leads to more creative output (Condoor, Brock, & Burgur, 1993; Rietzschel, De Dreu, et al., 2007; Rietzschel, Nijstad, et al., 2007), and combining ideas involves the mental transformation of an existing knowledge structure into a new pattern or configuration (Guilford, 1968; Wisniewski, 1996). The limited research attention devoted to building on and combining ideas to date follows the individual creativity literature in treating these activities as divergent. However, because they focus the group's attention on a subset of group ideas, they also require some narrowing of the idea set, i.e., convergence. For example, building on another group member's idea involves elaborating an idea, which is a divergent process (Paletz & Schunn, 2010; Torrance, 1988), but also recognizing the originator's idea as promising and selecting it for elaboration, which are convergent processes (Cropley, 2006; Kohn et al., 2011). Similarly, combining ideas involves recognizing the similarity between apparently disparate ideas, abstracting a broader concept from them, and integrating the ideas into a new

conceptualization (Mumford & Gustafson, 1988). Combining ideas therefore creates something new, which is divergent (Finke et al., 1992; Wilkenfeld & Ward, 2001), but also involves exploring the attributes of the component ideas and recognizing similarity between them, which are convergent (Cropley, 2006; Kohn et al., 2011). Convergent processes are therefore also important for producing novel output in groups through building on and combining ideas.

I distinguish between *divergent creativity*, or the generation of a variety of ideas, in which divergent processes may be isolated, and what I call *convergent creativity*, or building on and combining ideas, which also requires convergent processes. The convergent processes involved in convergent creativity reflect social agreement between group members that an idea has value. This kind of agreement can improve idea generation (Baruah & Paulus, 2011) by, for example, improving the flow of ideas between group members around a focal idea. Convergent creativity is therefore still fundamentally generative. This further implies that convergent creativity is also distinct from convergent thinking, which focuses on identifying and deciding on a single best solution to a well-defined problem (Cropley, 2006), and from consensus-based decision making in groups, which involves evaluating and choosing between alternatives (Stasser & Birchmeier, 2003).

Effect of deep diversity on divergent creativity in groups

When group members are diverse on characteristics relevant to the group task, diversity is expected to improve divergent creativity. In particular, deep level differences in group members' underlying perspectives (i.e., deep level diversity) are expected to be most closely task-related, and therefore to promote creativity. The benefits of deep diversity to creativity are supported by research that conceptualizes and measures creativity as a product of divergent thinking, reflected in the number, flexibility, and originality of ideas (Diehl & Stroebe, 1991; Guilford, 1950). Characteristics such as educational and functional background, which are closely linked to underlying differences in perspective (Mannix & Neale, 2005; Milliken & Martins, 1996), have been associated with more innovations (Bantel & Jackson, 1989) and higher self-reported innovation (Hülshager, Anderson, & Salgado, 2009) which is likely to account for all group output rather than the innovativeness of one innovation. Diversity in team tenure, so that new joiners bring fresh perspectives, has also been linked to the generation of more ideas (Choi & Thompson, 2005; Ziller, Behringer, & Goodchilds, 1962). Where ethnic or cultural diversity are relevant dimensions for a task, they have also enabled groups to produce a set of higher quality ideas (McLeod et al., 1996) and identify more problems and perspectives (Watson et al., 1993). Finally, diversity in the knowledge categories of different group members has been found to improve the originality of a list of ideas (Muir & Hida, 2004; Rietzschel, De Dreu, et al., 2007; Rietzschel, Nijstad, et al., 2007). These findings support the idea that deep diversity improves divergent processes in groups, which results in more divergently creative output.

Effect of deep diversity on convergent creativity in groups

When creativity is conceptualized and measured as a single creative output, so that group members must build on and combine ideas, the effects of deep diversity on creativity are less clear. For example, functional diversity has been found to negatively affect performance in product development teams (Ancona & Caldwell, 1992; Lovelace et al., 2001) and to have no effect on the creativity of collectively generated words (Stone, 1971). Similarly, ethnic diversity has been found to have no effect on the creativity of collectively developed story endings (Paletz, Peng, Erez, & Maslach, 2004). These tasks require groups to focus on a single idea, build on that idea, and combine ideas from multiple members into a single solution. This should provide the maximum benefit

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات