Affect Convergence in Groups: The Role of Group Composition

Amy L Collins

Griffith Business School
Griffith University,
Nathan, Australia

Email: A.Collins@griffith.edu.au

Peter J Jordan

Griffith Business School
Griffith University,
Nathan, Australia

Email: Peter.Jordan@griffith.edu.au

Ashlea C Troth

Griffith Business School
Griffith University,
Nathan, Australia

Email: A.Troth@griffith.edu.au

Sandra A Lawrence

Griffith Business School
Griffith University,
Nathan, Australia

Email: S.Lawrence@griffith.edu.au
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ABSTRACT

The study of emotions is an important area to consider within a workplace context, as the experience of emotions has been linked to employees’ psychological outcomes and performance. This is especially important in a group context, as individuals working within a group can converge emotionally, producing a group affective tone. Models describing the emergence of group affective tone have generally ignored the role of group diversity. We develop a model which considers how the diversity of a group (in terms of personality) influences the development of groups’ affective tone, through its impact on group identification, and also specify the impact of group affective tone on group performance. Practical applications of the model for a workplace context are discussed.

Keywords: emotions, group processes, interpersonal behaviour, communication

INTRODUCTION

Research into emotion in the workplace has been identified as an important area for research (Ashforth & Humphrey 1995). Researchers have found that understanding the role of emotion in the workplace provides managers with important information enabling individuals, groups, and organisations to better manage their changing work environments (Ashkanasy 2003; Ashkanasy, Härtel & Zerbe 2000). In contrast to the developing profile of emotions research in the workplace, extensive team research has been conducted over a substantial period (Belbin 1981; Beyerlein, Johnson & Beyerlein 1997; De Dreu & Weingart 2003), primarily in terms of improving team performance. One area gaining more attention is research regarding the role of emotions in teams (Druskat & Wolff 2001; Garcia-Prieto, Bellard & Schneider 2003).

Research reveals that emotions impact on team performance (Jordan & Troth 2004; Kelly & Barsade 2001; Pirola-Merlo, Härtel, Mann & Hirst 2002), and also that the emotions of group members can coalesce or converge after prolonged interaction of members (e.g., George 1990), through mechanisms such as primitive emotional contagion (Hatfield, Cacioppo & Rapson 1992, 1994), to produce a group affective tone (George, 1990). As group affective tone has been shown to impact on group functioning (e.g., group cooperation and coordination; Barsade 2002; Sy, Côté & Saavedra 2005) and group performance (e.g., Totterdell 2000) it is important to investigate when and how group members’ affect will converge, so that measures can be utilised to prevent the detrimental
influence of a negative affective tone in workgroups. A number of variables which influence the likelihood of an individual converging with another individual or group have been identified (e.g., expressivity; Sullins 1991), however, the possible role of group composition in terms of diversity has yet to be explored (Kelly 2002), despite the fact that group diversity has consistently been linked to group performance (van Knippenberg & Schippers 2007), often through affective group processes such as conflict (e.g., Pelled, Eisenhardt & Xin 1999). In line with researchers who have suggested that a greater comprehension of diversity may be gained through a consideration of the role of emotions (e.g., Ashkanasy, Härtel & Daus 2002), we suggest that the relationship between diversity and group outcomes will be further clarified by considering the mediating role of groups’ affective tone. In this paper we review models on both affective convergence and diversity within teams and present a model in which group composition (in terms of personality heterogeneity) contributes to the emergence of groups’ affective tone through its impact on group identification, and affective tone, in turn, then influences the contextual performance of the group.

Models of Affect Convergence in Groups

Models of affect convergence in groups have been developed to understand how emotions are passed between group members, such that collective group affect becomes more similar (affect convergence) and produces a group affective tone (George 1990, 1996), defined as ‘consistent or homogeneous affective reactions within a group. The term consistent is key; if affective reactions are not consistent within groups, then it is meaningless to speak of an affective tone of the groups’ (George 1990: 108). For example, groups with a high positive affective tone may be characterised by happiness and enthusiasm, whereas groups with a high negative affective tone may display extreme levels of anger (George 1990). Research has demonstrated that groups often develop a consistent affective tone (e.g., Bartel & Saavedra 2000; George 1990; Totterdell, Kellett, Briner & Teuchmann 1998). However, in some circumstances, groups may be less likely to develop an affective tone, such as when groups are formed for a short amount of time, or when there is limited interaction between members (George 1996).
Current conceptualisations of group affective tone generally acknowledge that a number of different mechanisms may work separately, or in tandem, to influence affect convergence. One mechanism which is frequently considered is primitive emotional contagion, which has been defined as ‘a tendency to automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another person's and, consequently, to converge emotionally’ (Hatfield et al. 1994: 5). While this conceptualisation involves the transfer of emotions, the idea has also been extended to include the transfer of mood states from one individual to another (Neumann & Strack 2000). The mechanism by which both primitive emotional and mood contagion operate is termed the Facial Feedback Hypothesis, where people spontaneously and unconsciously mimic the non-verbal behaviour of the people they are exposed to or interact with (e.g. in terms of facial expressions; Dimberg 1982; Fujimura, Sato & Suzuki 2010; Hess, Philippot & Blairy 1998; Moody, McIntosh, Mann & Weisser 2007), and afferent feedback processes (Adelman & Zajonc 1989; Zajonc 1985) lead them to feel the emotion they are displaying (e.g., Hess, Kappas, McHugo, Lanzetta & Kleck 1992; Levenson, Ekman & Friesen 1990).

While primitive emotional contagion is frequently considered a primary explanation for affect convergence (e.g., Barsade & Gibson 2007; Cole, Walter & Bruch 2008), other mechanisms may also account for the occurrence of similar affect. For example, George (1990) applied the attraction-selection-attrition (ASA) model (Schneider 1987), which proposes that organisations will be composed of people with similar personality traits because (1) people are attracted to, and will actively seek out, similar others, (2) organisational recruitment processes are designed to select people with certain attributes, and (3) people are more likely to leave if obliged to work with dissimilar others, all of which work to produce organisations composed of people with comparable personality and behavioural patterns. George (1990) extended this theory to specific groups, suggesting that groups may come to be similar in their affective reactions to workplace events via ASA processes, leading to consistency in group affect. George (1990) also suggested that the socialization of new group members will also lead to consistency in groups’ affective reactions, as when a person joins a group, they look to others in the group for cues to appropriate behaviour, including appropriate
emotional reactions (Morrison 1993), an idea which has further been advocated by Bartel and Saavedra (2000) and Barsade (2002), who suggest that conscious emotional comparison processes may work in conjunction with unconscious primitive contagion, resulting in consistent affect.

Additionally, there are a number of individual and group variables which may influence the affective convergence process within groups. For example, George and Brief (1992) suggested that affect convergence via ASA and socialization processes is likely to depend on aspects of the group in question (including group size, and proximity of group members).

Other researchers, such as Kelly and Barsade (2001) have applied the input-process-output model of group effectiveness to the development of group affect, where input factors impact on group outputs through the mechanism of group processes (Hackman 1987). Input factors can be considered at the individual level (member attitudes, personality), the group level (group size), and in terms of the environment (group task characteristics). These input factors are then expressed through process factors (e.g., group interaction processes), which lead to group outputs, such as performance outcomes (Hackman 1987). Marks, Mathieu and Zaccaro (2001) acknowledge that team processes can also lead to emergent states, ‘cognitive, motivational, and affective states of teams’. Group affect is one construct that has been identified as an emergent state by Kozlowski and Bell (2003).

Kelly and Barsade (2001) theorised that input variables including individuals’ dispositional affect, emotions, mood, sentiments, and emotional intelligence, contribute to shaping groups’ affective tone (via processes such as primitive emotional contagion, empathy, and intentional affective influence). They also suggested that aspects of the group itself are likely to play a role in this process, including groups’ display norms, the emotional history of the group, as well as intergroup factors (e.g., intergroup conflict).

Previous research investigating affect convergence in the group context has focused on how attributes of individuals influence their likelihood of converging with the group’s collective affect, while aspects of the group’s composition as a whole (i.e. the configuration of individual team member characteristics) has remained largely untested (Kelly 2002). However, in a group context, it is important to examine the interplay of individual member characteristics, as individuals within groups are not isolated; they are aware of and interact with other group members. Thus it is argued that a
greater understanding of the development of group affective tone will come from an examination of how individual group member attributes combine to influence the group as a whole. In the following section, we will outline how the variance of the group as reflected in group diversity has the ability to influence both group processes and group outcomes.

**Models of Diversity in Groups**

Focusing on research considering the variance of the group, a number of models have investigated how groups’ performance is determined, in part, by the diversity of a group, which has been defined as ‘the distribution of differences among members of a unit with respect to a common attribute’ (Harrison & Klein 2007: 1200). The rationale for these different group performance effects is that the similarities and differences between group members can influence the way they interact with and relate to one another (Milliken & Martins 1996; Northcraft, Polzer, Neale & Gamer 1995). Diversity has commonly been conceptualised in terms of observable individual differences (e.g., ethnicity, nationality, gender and age), known as demographic diversity or surface-level diversity (Harrison, Price & Bell 1998). However, diversity can also refer to underlying personality characteristics or values (e.g., personality, attitudes), sometimes termed deep-level diversity (Harrison et al. 1998). While there has been a great deal of research investigating the direct relationship between diversity and group performance, the mediating processes through which diversity produces group outcomes is still being investigated (Bell, Villado, Lukasik, Belau & Briggs 2011).

Milliken and Martins (1996) developed a model in which diversity in observable attributes (race, nationality, gender, and age) as well as diversity in underlying attributes (personality, cultural values, socioeconomic background) influences short term affective group processes (e.g. decreased group identification, increased group conflict). They suggest that in the long term, diversity will lead to increased turnover, and have a detrimental effect on individual and group performance.

A similar model was proposed by Harrison, Price, Gavin and Florey (2002) concerning the effects of group diversity on group functioning, which proposed that actual diversity in terms of surface variables (gender, age, ethnicity) and deep-level variables (personality, values, attitudes, beliefs) influence the perceived diversity of the group, which negatively impacts on the social
integration of the group (which includes group cohesion, satisfaction with group members, and positive interactions with group members), which in turn, negatively influences the group’s performance.

The models of group composition outlined above emphasise the role of various group processes (e.g., group cohesion, group conflict) in explaining how team composition diversity indirectly impacts on the performance of the group. Affect and emotions also play a crucial role in the functioning of teams (e.g., Jordan & Troth 2004). We therefore suggest that models linking groups’ composition of attributes to their performance should consider how group diversity impacts on affective convergence processes to produce a group affective tone. As interpersonal behaviour is affected by personality variables (Barry & Stewart 1997) and the composition of a team in terms of personality variables has consistently been linked to group processes and group outcomes (e.g., Barrick, Stewart, Neubert & Mount 1998; Bell 2007; Mohammed & Angell 2004), we will focus on the diversity of groups in terms of personality. In line with previous researchers (e.g., Stewart 2006), and to avoid confusion with demographic diversity, we will use the term personality heterogeneity to refer to groups’ diversity in specific personality variables.

**PROPOSED MODEL**

In this section, we extend prior research on the effects of group diversity on group processes and group performance by proposing a model that considers the mediating role that emotions play in a group context. Through the inclusion of group affective tone, our aim is to provide a greater understanding of how diversity impacts on group performance (see Figure 1). Specifically, we propose that the deep-level diversity of the group (in terms of personality heterogeneity) will negatively impact on the level of group identification. We further suggest that the level of group identification will then influence the group’s affect convergence, such that greater group identification will lead to greater consistency in affective tone, and that this will in turn impact on the group’s contextual performance.
Personality Heterogeneity and Group Identification

Social identity theory suggests that individuals who share certain attributes (e.g., perceived interpersonal similarity) tend to categorise themselves as members of the same social group: ‘two or more people who share a common social identification of themselves, or, which is nearly the same thing, perceive themselves to be members of the same social category’ (Turner 1982: 15). Therefore, perceived differences between individuals may hinder their identification as a member of a collective group with those individuals (van Knippenberg & Schippers 2007). In line with this theory, both surface- and deep-level diversity variables have been found to influence group processes and attitudes toward the group, including group identification (e.g., Chattopadhyay, George & Lawrence 2004).

Consistent with social identity theory, we propose that:

Proposition 1. Greater personality heterogeneity in groups will lead to decreased group identification.

Group Identification and Group Affective Tone

We suggest that identification will increase the likelihood of affective convergence mechanisms operating to produce a group affective tone. Many of the proposed mechanisms of affect convergence are dependent on attendance to others’ emotions, and willingness to be influenced by others’ emotions, including primitive emotional contagion (Hatfield et al. 1992, 1994), empathy (Decety & Jackson 2004), and socialization (Morrison 1993). Self-categorisation theory (an elaboration of social identity theory) suggests that people who identify themselves as part of a certain group will be ‘guided by the distinctive, emergent, irreducible properties of their group’ (Oakes,
Haslam & Turner 1998: 81), and thus will be more likely to attend to, and be influenced by the characteristics of their group.

Research supports these propositions at the dyadic level, as affect convergence is more likely if individuals categorise the sender as an ingroup member (Bourgeois & Hess 2008; Epstude & Mussweiler 2009; McHugo, Lanzetta & Bush 1991; Platow et al. 2005; van der Schalk et al. 2011; Weisbuch & Ambady 2008). In a group context, individuals with more collectivistic orientations are more likely to converge with the affect of their groups (Ilies, Wagner & Morgeson 2007), and furthermore Tanghe, Wisse and Van Der Flier (2010) demonstrated in both field and laboratory settings, that group identification was linked with affect convergence, such that groups with higher levels of identification were more likely to develop a consistent affective tone (for both positive and negative affect). Based on these results, we expect that:

*Proposition 2a: The degree of group identification will influence the likelihood of positive affect convergence, such that groups with higher identification will be more likely to develop a consistent positive affective tone.*

*Proposition 2b: The degree of group identification will influence the likelihood of negative affect convergence, such that groups with higher identification will be more likely to develop a consistent negative affective tone.*

**Group Affective Tone and Group Performance**

Researchers have questioned whether heterogeneity in affect could assist group performance in certain types of tasks (e.g., in complex tasks; George & King 2007), while some studies have demonstrated that group heterogeneity in affect may have a negative effect on group functioning (e.g., Barsade, Ward, Turner & Sonnenfeld 2000). However, focusing on groups that do converge to develop a consistent affective tone, George (1990, 1996) theorised that groups with a higher positive affective tone would provide a pleasant and enjoyable work environment, so members would be more likely to exert extra effort for their group (engaging in contextual performance behaviours such as organisational citizenship behaviours and prosocial organisational behaviours; Borman & Motowidlo...
In line with this theory, positive affective tone has been linked to willingness to engage in organisational citizenship behaviours (e.g., Tanghe et al. 2010). George (1990, 1996) further suggested that groups with a high negative affective tone would provide highly unpleasant work environments, such that members would be less likely to exert extra effort for their group, and research has demonstrated a link between negative affective tone and a decrease in prosocial behaviours (George 1990). In line with these findings, we predict:

**Proposition 3a.** Positive affective tone will influence the contextual performance of the group, such that positive affective tone will be positively associated with performance.

**Proposition 3b.** Negative affective tone will influence the contextual performance of the group, such that negative affective tone will be negatively associated with performance.

**Overall Indirect Mediation**

So far, we have argued for particular links in the diversity-group performance chain. At a broad level, we propose that group personality heterogeneity will indirectly influence group contextual performance via group identification processes and subsequently group affective tone. Specifically, we suggest that groups’ personality heterogeneity will have a negative relationship with the level of group identification, and greater group identification will facilitate affect convergence mechanisms, leading to greater consistency in groups’ positive and negative affective tone. It is suggested that it is through these links that personality heterogeneity influences group performance.

**Proposition 4a.** There will be a net positive influence of lower group personality heterogeneity on group contextual performance via increased group identification and positive affective tone.

**Proposition 4b.** There will be a net negative influence of low group personality heterogeneity on group contextual performance via increased group identification and negative affective tone.
CONCLUSION

The model we have proposed has integrated past research on the effects of diversity in groups, as well as the role of group affective tone, in an attempt to further unpack the complex relationship between diversity and group performance. We suggest that groups which are more heterogeneous in terms of personality will be less likely to develop a consistent affective tone (in terms of both positive and negative tone) because they will experience less group identification. We further suggest that groups’ affective tone will go on to influence their contextual performance. However, the proposed model may not be applicable for all types of teams, as many of the suggested processes of affect convergence (e.g., emotional contagion) depend on dynamic interactions which may not occur in virtual teams (Bell & Kozlowski 2002). The proposed model suggests that, in a workplace context, considerable attention should be given to those factors which facilitate and hinder the processes of affect convergence, as the development of an affective tone has substantial implications for the performance of the group. Managers may need to consider the possible consequences of diversity when forming workgroups, for example, in groups which are highly diverse, individuals may be less likely to spread their emotions to their group members, resulting in less chance of a negative affective tone developing, which could be detrimental to the performance of the group. Future research will be required to test the associations suggested by the model.
REFERENCES


Figure 1: Model of the Effects of Personality Heterogeneity in Groups