Research Report

Loafing in the digital age: The role of computer mediated communication in the relation between perceived loafing and group affective outcomes

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ABSTRACT

Virtual work has become an increasingly central practice for the organization of the 21st century. While effective virtual workgroups can create synergies that boost innovation and performance, ineffective workgroups become a great burden for organizations. Empirical research has shown that some negative behaviors, such as social loafing, negatively influence a group's affective outcomes, in both collocated (face-to-face) and virtual workgroups. In this study, we explore if working through low fidelity computer mediated communication (CMC) increases the negative impact of perceived loafing over cohesion and work satisfaction. On this rationale, we conducted a laboratory study with 44 groups of four members each, who worked on a project in four sessions over a one-month period, in either face-to-face or low fidelity CMC conditions. Results show that the communication media condition moderates the effect of perceived loafing in the expected direction, meaning that, in the low fidelity CMC condition perceived loafing had an increased negative effect on group cohesion and satisfaction with the work process and its results.

1. Introduction

Technological innovation is re-shaping the way people work in organizations, *virtual work*, understood as working through some type of computer-mediated communication (CMC) is now a commonplace among corporate work-groups (Powell, Piccoli, & Ives, 2004). In other words, groups are nowadays relying more on intranets, cloud computing, video-conferencing or instant messaging (e.g. Skype © or similar) for their day-to-day activities.

Enthusiasts of virtual work claim that it has numerous benefits (Snow, Lipnack, & Stamps, 1999). For example, it enables group members to work remotely (reducing travel expenses) and asynchronically, meaning that members do not need to be working simultaneously. Furthermore, it allows for more flexible work schedules; it increases job autonomy for workgroups; and it fosters innovations, especially in brainstorming tasks (Wegge, Bipp, & Kleinbeck, 2007). Most importantly, it centers the workgroup focus on task-related concerns (Zornoza, Ripoll, & Peiró, 2002) and ideally increasing overall productivity ratios of the workgroup.

Empirical research indicates that there may be also some drawbacks to virtual work as well. For example, an increased task-oriented focus reduces the quality of social interactions within the workgroup, which are critical for developing and strengthening a shared sense of group identity. Hence, virtual workgroups should then be particularly susceptible to the emergence of motivational group losses, especially those in which individuals put his or her personal interests before those of the group (e.g. in instances of social loafing where someone might withold effort when working in a group; Alnuaimi, Robert, & Maruping, 2009). Furthermore, if group members perceive other members to loaf, they will in turn reduce their individual contributions to their collective effort, harming not only their collective performance, but also the group's affective work outcomes (Kerr, 1983), understood as the shared perception of how well the group worked together (work process satisfaction), the result of their work (result satisfaction), or their willingness to belong to the group and work again in the future (group cohesion).

We know that the aforementioned negative effects of perceived loafing also occur in virtual workgroups (Mulvey & Klein, 1998). Unfortunately, to our knowledge, no study has explored whether the negative relation between perceived loafing and affective outcomes is stronger under computer mediated communications, or in

face-to-face communications. Addressing this research gap would be particularly useful for managers who would like to have additional information about the pros and cons of implementing virtual work in their companies. In this study, we used a contingent approach to explore if the communication media moderates the relation between perceive loafing and group affective outcomes such as work results, process satisfaction and cohesion.

1.1. Theoretical background

Initial theoretical approaches to virtual work, such as *media richness theory*, explored how the quality of the communication media affected group processes and outcomes (Dennis & Kinney, 1998; Zornoza Abad, Orengo, Gosalvez, & González-Navarro, 2002). A communication media is any device or method used by individuals to communicate while they work in a group. In the media richness continuum, collocated or *face-to-face* (F-t-F) work has the highest level of media richness, while *text-based work* such as instant messaging (synchronic) or e-mail (asynchronic) is at the lower end. The main rationale of this theory was that no communication media could yet replicate the high quality (fidelity) of collocated human interaction; and so as media richness decreases, so does the quality of group interaction and its related affective outcomes. In time, other frameworks emerged, such as social dynamic media theories (for a review see Rhoads, 2010), namely adaptive structuration theory (AST; DeSanctis & Poole, 1994) or media naturalness perspective (MNP; Kock, 2002). These frameworks propose that, as virtual work-groups gain experience working together, they (1) will learn and develop strategies on how to work more effectively with as a team and (2) will adapt to compensate for the effects of low levels of media richness over group outcomes (Andriessen & Van der Velden, 1993; McGrath & Berdhal, 1998 in Zornoza et al., 2002). In short, while technology development is essential in media richness theory in order to overcome the negative impact of technology over group processes and results, the enhancement of the social nature of the workgroup achieves the same results in AST and MNO frameworks. In this line of thought, social identification/des-individuation theory (SIDE) extends both social identity and self-categorization theories to virtual work (Postmes, Spears, & Lea, 1999). According to this theory, certain features of CMC, such as anonymity, create greater closeness and intimacy between group members. The main rationale is that individuation of group members undermine the salience of possible social identities, while anonymity shifts focus from individuals' differences to group similarities, facilitating the development of a social identity, and its associated positive group outcomes (Michinov, Michinov, & Toczek-Capelle, 2004).

Research on virtual work has developed a consistent body of knowledge about how CMC's affect group dynamics and outcomes. Systematic comparisons to traditional face-to-face groups used experimental or quasi-experimental designs to explore differences between two or more types of virtual work (e.g. face-to-face vs. low fidelity CMC such as text-based work). Studies in this field, include e-leadership (Bell & Kozlowski, 2002; Kayworth & Leidner, 2002), virtual teams management (Carte, Chidambaram, & Becker, 2006; Hertel, Geister, & Konradt, 2005), motivational gains (Hertel, Deter, & Konradt, 2003) and losses (Beenen et al., 2004; McKinlay, Procter, & Dunnett, 1999). In most of these studies, researchers operationalized outcome variables such as group effectiveness, by measuring task performance or work satisfaction (Fjermestad & Hiltz, 1998 , 2000; Ripoll, González-Navarro, Zornonza Abad, & Orengo, 2004). In this line, there is some empirical evidence that the communication media has a direct effect on work affective outcomes. For example, Furumo and Pearson (2006) found that groups working with low fidelity CMC report lower levels of work process, result satisfaction and group cohesion compared to groups working face-to-face.

1.2. Loafing in the digital era

Working in groups may have many benefits (see West, Brodbeck, & Richter, 2004) yet group also suffer from a number of problems, such as coordination deficiencies or motivational losses, which negatively affects their performance and affective work outcomes (Allen & Hecht, 2004; LePine, Piccolo, Jackson, Mathieu, & Saul, 2008). For example, social loafing (the tendency to withhold effort when working in a group) was found in a variety of tasks such as brainstorming, shouting, or rope pulling; and meta-analyses have confirmed that social loafing is a widespread phenomenon which not only affects performance but affective outcomes as well (see Karau & Williams, 1993). Empirical research suggests that individuals tend to loaf when they feel anonymous (either due to larger group size or because they perceive that their contributions are not salient) or when they perceive their co-workers to loaf (Kidwell & Bennett, 1993; George, 1992; Huguet, Charbonnier, & Monteil, 1999; Kerr, 1983). Hence, in line with this previous group research we expect perceived co-worker loafing to negatively predict affective outcomes, such as work satisfaction or group cohesion, which leads us to our first hypothesis:

Hypothesis 1. Perceived loafing will negatively predict group cohesion, and the group's work process and results satisfaction.

In this study, we advance loafing research by suggesting that perceived loafing would have a more negative effect over these three affective outcomes in low fidelity CMC than in traditional face-to-face workgroups. From a media richness perspective, in CMC teams working through a low fidelity communication media (e.g. instant messaging), there are many constraints that limit our ability to effectively monitor co-worker's loafing. For example, because these work-groups have at least some degree of geographical dispersion, monitoring co-workers' actual behaviors through direct observation is impractical, or not even possible in most cases. Therefore, "perceptions" of co-worker loafing are in fact *attitudes* towards co-worker's contributions and loafing. Furthermore, because of the decrease in low fidelity CMC workgroups, determining the extent of *actual* co-worker loafing is more difficult to measure (or determine or discern) than it is in face-to-face teams, and so is the damage that it generates in the group's task accomplishment. This uncertainty, on the other hand, should strengthen the collective belief that the group could have achieved an output of higher quality if all members of the group had exerted equal effort. Consequently, if members perceive co-workers to loaf, their satisfaction with both the work process and outcomes should be lower in this type of CMC workgroups than in face-to-face workgroups.

On the other hand, drawing from SIDE theory, we propose that in low fidelity CMC workgroups, task-related variables will be more important for constructing a group identity than similarity or interpersonal attraction, "because these factors are less salient in groups which do not interact in person" (González, Burke, Santuzzi, & Bradley, 2003, p. 632). For example, an experimental study found that computer mediated groups focused more on task-related concerns than face-to-face groups, and allocated less time to establish bonds between members (Zornoza et al., 2002). Hence, for these workgroups, any behavior that harms the chances of performing effectively should be perceived as a more severe transgression of the group norms than in face-to-face teams. Loafing behaviors not only threaten the group's task accomplishment and affective outcomes (such as satisfaction with the work process and its results) but also their collective identity, and in turn the stability and continuance of the group as whole. The latter seems especially true when organizations use CMC to perform a specific task or solve a certain problem. For these groups, the task at hand does not only define their mission but also, to some extent, their