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The effects of COVID-19 on virtual working within online groups

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Abstract

Employees may continue to work remotely for a substantial amount of time, even after the end of the pandemic. Our established theories of group processes and intergroup relations can help us understand these new ways of working and online group experiences. However, there are key differences in computer-mediated and face-to-face (FtF) groups. In this essay, I present some of the extant robust theories and findings from computer communication research to understand virtual working within online groups. These perspectives include that group processes develop over a longer period of time as compared to FtF, informal communication is neglected, computer-mediated groups have some advantages over FtF groups, sociomateriality is a useful theoretical lens, and dispersion affects group member cognitions about each other. I use my own lab's work on entitativity as an example of how moving from FtF to online group research can deepen our understanding of both FtF and online groups. The essay concludes with recommendations for future research.

Keywords

entitativity, FtF groups, online groups, organization science, pandemic research, remote work, social psychology, video conferencing, virtual groups, virtual teams

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Employees' use of video conferencing and other advanced computer communication tools within their work groups has dramatically increased since the beginning of the pandemic. While groups and teams have communicated at some level of virtuality (e.g., phone, email, text) for years, the vast number of employees who now work outside of the office has led to fundamental changes in working and the work group. Video conferencing is no longer limited to a subset of employees in highly technical or international organizations. We now have a critical mass of "normal" employees working remotely who must use advanced computer communication to work.

Furthermore, it is not clear when and if employees will return to the prepandemic experiences of long commutes into an office to be colocated with their teammates. Many large

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North American organizations are keeping their employees home until at least the summer of 2021 (Friedman & Browning, 2020). Other organizations expect their employees to permanently work from home (Dwoskin, 2020; Pilon, 2020), and nearly 65% of employees report wanting to stay remote in the long term (Brenan, 2020). We are quite possibly at an inflection point in the structure of work and the work group. We need to prepare for a future of working where most employees remain dispersed.

The goal of this essay is to provide insights from past computer communication theory and research and show links to important social psychology and organizational group theories. The subset of researchers who are well versed in both computer communication and social psychology theories continues to grow, but the opportunity for advancement in understanding behavior in online groups remains large. For example, video conferencing has been widely available for years if not decades. However, only after the pandemic started has it become adopted en masse. Why? One possibility is that during this incredibly stressful time, employees flocked to video conferencing to help fulfill their need for belonging (cf. Baumeister & Leary, 1995) to one of their most important sources of identity, their work groups.

This is clearly an American-centric view of the importance of work in employees' lives. Nonetheless, video conferencing was quickly adopted by many employees, students, and social groups when they could no longer meet face-to-face (FtF). What is it about seeing and being seen by one's important groups that made it crucial to move from audio to video interactions? It is certainly plausible—and worth further study—that (virtual) corporeal presence with others in their important groups is a key to meeting this human need to belong (see Templeton, 2021, for discussion of social connectedness during COVID-19).

Theoretical Perspectives on Online Group Interactions

In this section, I discuss important theoretical perspectives that can help ground researchers who seek to apply FtF theories to online groups. First, online interpersonal relationship processes develop similarly to FtF ones, but they take longer (Walther, 1995). Decision-making processes, identification with others and with the group, and basic employee attitude development all take longer online than FtF. The general processes are similar, but they are extended over time. Walther's original research compared text communication (e.g., emails, chats) to FtF communication and found the delays came from the fewer nonverbal communication cues exchanged. For example, humor and sarcasm are much easier to detect from FtF communication than text.

With the widespread adoption of video interactions, we now have many more nonverbal communication and identity cues exchanged online. Nonetheless, it is still not the same as FtF interactions. We have new theoretical explanations to explore, including the limited time people spend online together, the curated view of video communication partners, and the disparate physical environments of online communication partners. Nonetheless, intragroup processes still appear to take longer to develop in online groups.

Second, remote workers have very little opportunity for informal communication and social interactions with their work colleagues. Unplanned social interactions at the office help develop shared cognitions about work problems as well as shared understandings of coworkers (Leonardi, 2018). Online group interactions are likely to be planned and formal (Blanchard & McBride, 2019). Internal organizational social media like Slack or Microsoft Teams allow short, informal text-message exchanges between team members (cf. Leonardi, 2018), but they are no replacement for naturally occurring conversations in the break room. The lack of informal communication compounds the difficulty in creating intragroup relationships, especially for new employees. While established employees have the advantage of knowing their coworkers, new employees do not, which makes new employee socialization extremely difficult (see Hales et al., 2021, for discussion of virtual ostracism during COVID-19). All employees, however, miss the benefits of informal interactions.

Third, researchers should not focus only on the deficits of online compared to FtF groups but acknowledge that there are benefits of the computer communication tools that support online groups (cf. Culnan & Markus, 1987; see also Cameron & Tenenbaum, 2021, for discussion of the benefits of online groups in social development). For example, video meetings can support task-related chats among all members of a group as well as between specific group members. Breakout rooms, in which smaller groups can interact, can make large events more engaging. Group members can simultaneously edit meeting documents through Google Docs. Meetings (including chats) can easily be recorded and automatically transcribed, providing a permanent record of discussions and decisions. However, the speed at which popular video conferencing tools such as Zoom and Google Meets change to adapt to employees' needs suggests that focusing on any specific technological feature for research may be outdated by the time of research publication.

Sociomateriality, however, provides a metatheoretical approach that is particularly useful right now. Sociomateriality focuses on both the technological affordances (e.g., specific characteristics of a computer communication tool, such as the gallery view or speaker view on Zoom) as well as the social processes involved in using these affordances in any specific group (e.g., agreeing on using gallery view, speaker view, or no video at all; Leonardi, 2013; Orlikowski & Scott, 2008). It helps researchers generalize up from any specific technological affordance to a theoretical understanding of why and how group use of particular features affects group outcomes. For example, it is not just that video conferencing increases the group's interpersonal relationships, it is that group members prioritize the gallery view so that they can see and be seen by each other. The research construct is copresence (i.e., seeing and being seen, as defined by Biocca et al. [2003]), which is facilitated by the technology and the group's social processes. Currently, sociomateriality prioritizes qualitative methods and analyses, with some founding theorists arguing that technology and social processes are constitutively entangled and cannot be examined separately (Orlikowski, 2007). Nonetheless, social psychologists and organizational scientists can use this metatheory to sensitize themselves to the technological affordances and social processes that are important in online groups. As online work groups become more widespread, we should be able to test, via quantitative and experimental designs, technological affordances and social processes that generalize into effective online groups. For example, copresence and supportive interpersonal processes may be enacted in a specific way in some particular group, but, overall, technological affordances that increase copresence and supportive social processes are important for successful online groups.

Finally, we have long known that computer communication blurs the boundaries between home and work for individuals (cf. Orlikowski & Scott, 2008), but how does communicating across different locations affect online group dynamics? One perspective is that the distance between communication partners complicates members' cognitions about each other (Wilson et al., 2013). Employees have more detailed perceptions of proximal coworkers and more generic perceptions of distal coworkers in terms of both time and geographic location. Coworkers who were once colocated in the same building are now more distal. And while some employees are working at home, others have moved permanently to other cities, regions, and even countries. The increased number of employees navigating home and work boundaries now and in the foreseeable future suggests we should explicitly focus on how disparate physical communication locations affect online work group cognitions and functions.

Entitativity in Online Work Groups

As an example, I would like to share how these perspectives have influenced my own lab's research on entitativity in small, interacting groups. Entitativity is an individual's cognitive assessment that a social unit is a group (Blanchard et al., 2020; Campbell, 1958; Lickel et al., 2001). It is assumed

to be fundamental to groups because people do not enact group processes or experience group outcomes without reaching some level of entitativity within their interacting group (Blanchard et al., 2020; Igarashi & Kashima, 2011).

Before the pandemic, my lab and I focused on the theoretical mechanisms underlying the connection of the antecedents of entitativity (i.e., interactivity and similarity) to entitativity. Based on our previous research (Blanchard et al., 2020), we believe that perceptions of similarity may develop through different social categorization processes. Our plan was to experimentally manipulate deductive and inductive social categorization processes (Jans et al., 2011; van Veelen et al., 2013) in a FtF group task, and link these processes to entitativity's specific antecedents of similarity of characteristics and similarity of goals.

The start of the pandemic stopped all of our university's FtF experiments. We then began to move our experiments online. Because my lab members are sensitive to both entitativity and similarity, we immediately noted how our own video meetings affected our perceptions of similarity with each other and the group, and our concern about whether we still had "enough" entitativity. Video was not a replacement for sitting around the table. And we specifically noted the importance of copresence with each other. We realized that whenever focal members did not have their video on, they felt excluded from the group: they did not belong. They (the focal members) felt the other group members would have no understanding of their similarity to the rest of the group. We are an established group. For new groups, these perceptions of similarity and membership would be even more pronounced and delayed. We noted that while we could develop specific social processes to overcome someone's lack of visibility (specifically calling on the "hidden" member), it required more effort and focus to do so.

My research assistants also noticed a lack of informal interactions and created a "GroupMe" group text, which has been helpful but is not a replacement for working beside each other. We also began to use Google Drive and Google Docs in new ways during our video meetings. Google Docs started as agendas and turn into meeting minutes as the entire lab simultaneously edited it with notes, decisions, assignments, and even some humorous team-building comments. Finally, the lab members are dispersed around their personal residences, dorms, and their family's homes in and out of state. It is unclear how this affects our conceptions of each other except that each meeting will possible involve discussing each member's current location, to reestablish our connections.

Each of these observations affected our current entitativity research and our plans for future projects. Indeed, our insights into the importance of copresence, informal interactions, new uses of technologies, and the effects of location are not possible by only examining—or being in—FtF groups. We suggest there is a dialectal advancement of theories by moving between considerations of online and FtF contexts.

Finally, we unexpectedly noted another outcome from our online lab meetings: Zoom fatigue. Zoom fatigue (Fosslien & West Duffy, 2020) is a level of exhaustion that employees report after being involved in multiple video meetings during the day. We examine this through the lens of entitativity: there may be a link between our need to create a functioning group (i.e., experience a high enough level of entitativity) and our increased cognitive and emotional labor (cf. Ashforth & Humphrey, 1993; Beege et al., 2020; Brodsky, 2020). While a full review of the relationship between cognitive and emotional labor and technology is beyond the scope of this essay, our efforts at surface acting to create enough entitativity could account for how effective the group is and how draining it feels.

Surface acting occurs when people behave in ways they feel artificial, which causes cognitive dissonance and increases fatigue (Grandey, 2003). We know that our Zoom groups are not "real" as we have experienced them FtF, but we are trying very hard to perceive that our dispersed group members are "really there," to project our own realness (i.e., similarity) to the others, and to foster interactions that are stilted by the technology. This is all part of an effort to create enough

entitativity for a highly functioning online group. Emotional labor has not been linked to virtual working or to the additional cognitive labor of online groups (see Brodsky, 2020, for an exception). However, social psychologists and organizational scientists might find new, fruitful avenues for research like this one, using thought experiments to apply their established theories to their current experiences.

The Future

It is not clear whether after the pandemic is over, the world will return to long commutes to "go to" work. Remote work and online groups may be here permanently. Much like the telephone replaced the telegraph, video conferencing may replace phone conferencing. Remote workers may no longer be a subset of employees, but how most employees work. The following ideas may provide us with the most pressing and fruitful avenues for research as we adapt to this new normal.

How does video conferencing change group processes? Clearly, we, as a society, prefer video communication with our important online groups. And while video is close to FtF, it is not the same. There may be substantial and important social and cognitive differences between two-dimensional, curated videos and three-dimensional interactions that engage all five senses. This is an exciting area of development for which traditional social psychologists and organizational scientists can provide insights, perspectives, and a depth of theoretical knowledge needed to advance our understandings on why video interactions substantially differ from FtF group interactions.

How does copresence affect the "groupyness" (i.e., entitativity) of online groups? Specifically, the copresence aspect of "being seen" may be more important in small groups, explaining our need to be on video with our remote work groups. However, as groups' size increases, for example, large organizational meetings and the copresence perception of "seeing others" may become more important. This suggests more interesting and complicated relationships between copresence and groups, and provides new avenues for research on entitativity and group size in interacting groups.

Finally, remote employees need informal interactions to support their online workgroups. It is likely that because of the critical mass of employees working remotely, we will see successful online work groups develop new and unexpected uses of their communication technology tools to create opportunities for informal online interactions. How these informal interactions will develop may be specific to the particular work group, at least initially. But we can be sensitive to the importance of these interactions and their effects on employees and their work outcomes.

There is little that is positive in a pandemic, but social psychologists and organizational scientists can use our knowledge and theories to help guide employees, managers, and organizations into more positive outcomes for all.

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