

Online Communication in Organizations Does Not Kill Distance (and Why That Might Be a Good Thing)

Research in Progress

Introduction

Debates on the effects of online communication on distance within organizational networks have persisted within extant literature. Early contributions, which focus primarily on geographical distance, have highlighted the negative impact of distance on network evolution and sustenance, alluding to the importance of online communication as a means of nullifying these effects (Caimcross, 2001; Wellman, 2001). These studies have led to optimistic, but also premature, declarations of the ‘death of distance’ (Caimcross, 2001).

More recent works however, have demonstrated that online networks are “*to a significant part, digital reflections of pre-existing offline, local networks*” (Hage & Noseleit, 2015, p. 4), emphasizing the relevance of distance to network formation. Not only do informal friendship networks have digital counterparts (Hage & Noseleit, 2015), the same can be said for other networks (Takhteyev, Gruzd & Wellman, 2012; Tranos & Nijkamp, 2013), especially that of organizational networks (Recker & Lekse, 2016).

Building on propinquity theory, we contend that distance still permeates organizations because distance among network actors is inevitable. We further argue that distance may prove to be beneficial to organizing at the individual, organizational and societal level. Consequently, rather than aiming to eliminate distance through online communication, collaborators should strive to position themselves at an *optimal distance*.

We conducted a systematic literature review of published articles from multiple disciplines that investigate the role of online communication in shaping the effects of distance on the evolution and sustenance of formal and/or informal organizational networks. The organizational context was chosen as online communication has an enormous impact on work arrangements and the nature of work in general (e.g., Gibbs, Rozaidi & Eisenberg, 2013; O’Leary, Wilson & Metiu, 2014). In addition, formal and informal networks naturally occur within organizations.

From our synthesis of extant literature, we advanced a contextualized model of how, why and when online communication shapes the effects of distance. We illustrate that, to-date, the negative impact of online communication has received very little scholarly attention and that this finding points to significant knowledge gaps at the individual, organizational, as well as the societal level. We suggest that rather than *minimize*, organizations should aim to *optimize* distance among network actors.

Formal and Informal Organizational Networks

Over the past decades, organizational networks have become a well-established topic in multiple fields of research (Brass, Galaskiewicz, Greve & Tsai, 2004; Borgatti & Foster, 2003; Borgatti & Halgin, 2011; Kilduff & Brass, 2010; Tasselli, Kilduff &

Menges, 2015). Networks comprise actors, or nodes, and the relationships among these actors (i.e., ties). The nature (e.g., strong or weak ties, Granovetter, 1973) and number of connecting ties culminates in a network structure in which actors occupy a specific position relative to others (Borgatti & Halgin, 2011). Organizational networks can be further categorized as being either formal or informal (Chandler, 1962). Formal networks refer to networks that are prescribed and imposed by management (Allen, James & Gamlen, 2007; Chandler, 1962). Informal networks, on the other hand, are organic structures (Mintzberg, 1973; Tichy, 1981) that may extend across organizational boundaries (Allen et al., 2007). Such networks take shape through personal initiatives and are not reflected in organizational charts (Cross & Parker, 2004).

Prior research has shown that organizational networks, whether formal or informal, are important because they enable organizational members to gain access to novel or additional resources through network ties (Borgatti & Foster, 2003). For this reason, scholars have begun to explore antecedents of organizational networks in order to better understand how network formation could be shaped and strengthened.

Propinquity and Network Formation

One well established research stream is rooted in classical social psychology (e.g., Allen, 1977; Festinger, Schachter & Back, 1950; Newcomb, 1961). It argues that propinquity (derived from the Latin ‘propinquitias,’ meaning nearness, see Wikipedia, 2015) is one of the key determinants of social interaction and thereby, network formation. Early contributions in this field reason that the likelihood of establishing a friendship between two actors depends on both physical and functional distance (Festinger et al., 1950). Whereas physical distance refers to the geographical space between actors, functional distance relates to the design features of buildings and the wider environment.

Online Communication and Effect of Distance on Organizational Networks

Despite the introduction of online communication in multiple organizational contexts, we argue that distance is still pertinent to organizational network formation. First, distance is bound to exist among network actors. To take an extreme example, two actors cannot occupy the exact same space, in the same way that two individuals are unlikely to have the same perception of identity or institutions, friendship and so on.

Second, recent studies have identified additional dimensions of distance. Particularly, Knoblen and Oerlemans (2005) distinguished among three dimensions of distance, namely geographical, organizational and technological. Online communication may affect each of these dimensions differently. Moreover, it has been argued that the multiple dimensions of distance are dynamic and likely to interact (Balland, Boschma & Frenken, 2015; Boschma, 2005), thereby compounding unto the ambiguous role played by online communication in this process.

Finally, what all dimensions of distance have in common is that they reduce uncertainty and allows for coordination between actors (Boschma, 2005). This may,

however, also increase the risk of a lock-in and/or allow for opportunism (Boschma, 2005). A certain degree of distance among actors may therefore be desired by organizations. As such, we conclude that distance is still very much alive and influences organizational network formation despite the introduction of online communication.

Methodology

For our systematic literature review, we searched top journals from four scientific disciplines: namely Information Systems, Organizational Studies, Communication and Geography. Next, we defined two sets of key words, each consisting of a network, online communication, and distance word-category. We then searched for abstracts that included at least one word from each category of either set of key words. We formulated seven inclusion criteria related to the: research context; nature and role of online communication; distance, and; study type to select papers to be included in the review.

Results

71 paper were included in the review, 18 of which were retrieved from IS journals. Research on online communication and formal and informal organizational networks is an emerging field within the IS discipline (12 papers published in or after 2013).

We discovered that the effects of online communication effects on informal networks have been examined more extensively than their effects on formal networks (only 9 of the 76 included papers discusses formal networks). This is surprising as the limited research available suggests that online communication can (but does not always) alter formal relationships, through self-control (Leclercq-Vandelannoitte, Isaac & kalika, 2014), trust (Persson, Mathiassen & Aaen, 2012), or manipulating awareness (Quan-Haase, Cothrel & Wellman, 2005). Findings also suggest that the impact of online communication on formal network depends on informal network characteristics, and vice versa. For example, trust (informal network characteristic) between collaborating partners may diminish the importance of formal hierarchies in online communication.

Next, organizational distance is the most studied dimension of distance (36 studies), especially in combination with geographical distance (an additional 34 studies) and, to a lesser extent, technological distance (5 additional studies). We did not find any study that included all three dimensions of distance. Failure to include all three or even two dimensions of distance might be problematic because findings also suggest that proximity on one dimension may compensate for distance on another dimension. For example, O'Leary, Wilson and Metiu (2014) uncovered that the effect of geographical distance is minimized when online communicators share a social identity.

Looking at the type of information systems analysed in the studies, we note that there is a wide diversity between studies. However, most studies focused on social networking sites (SNSs), 21 in total, followed by email (15), online communities (12), and microblogging (10). Scholars generally agree that these online communication tools supplement conventional communication channels e.g., face to face. Opinions differ,

however, on which mechanisms explain the effect of online communication on organizational networks and the role it plays within an organization. Studies suggest online communication acts as a knowledge sharing platform (Leonardi, 2015; 2014), organizing agent (Kavada, 2015), or shelter (Vaast & Levina, 2015), to name a few.

Discussion

From the literature review, we advance a model of online communication (Figure 1). Future research on the topic should differentiate between the type of use and type of technology investigated, to enhance understanding of the mechanisms explaining the role of online communication in shaping the effect of distance on the formation of organizational networks. Moreover, researchers should consider the role of multiple dimensions of distance and types of networks (i.e., formal or informal) on the evolution and sustenance of a particular network. We conclude that the effect of distance might be altered as a consequence of online communication. But at the same time, we cannot discount the impact of distance on the evolution and sustenance of organizational networks.

Moreover, we note a general lack of attention for the negative consequences associated with online communication and reduced distance in organizational networks. This offers several directions for future research. First, at the individual level, researchers may want to study social exclusion through sub-grouping or lack of system accessibility, opportunism, and surveillance. Second, at the organizational level, research attention might be directed to lock-in effects and knowledge spill-overs. Finally, at the societal level, the limited commitment of online participants in social movement and the opportunities for organizing crime and terror via online communication deserves further attention. Considering the negative effects of online communication, we suggest that organizations should aim to *optimize*, rather than *minimize*, distance among communication partners within organizations.

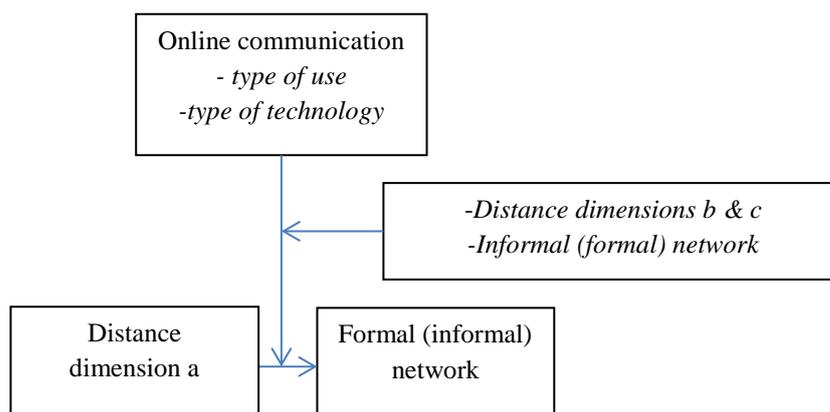


Figure 1: Improved Model of the Effects of Online Communication on Distance

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