

## Chapter 9

# Using Discourse Analysis to Assess Social Co-Presence in the Video Conference Environment

**Kristy Beers Fägersten**  
*Dalarna University, Sweden*

### EXECUTIVE SUMMARY

*In this chapter, I analyze computer-mediated communication in the form of online, synchronous, professional discourse in the multimodal video conference environment with the aim of assessing social co-presence (Kang, Watt & Ala., 2008). I argue for the applicability of discourse analysis methodology by presenting extracts of video conference communication which illustrate how talk-in-interaction contributes to or threatens the three elements of social co-presence: co-presence, social richness of the medium, and interactant satisfaction. Examples of interaction illustrate how disruptions in mediation serve to threaten co-presence by isolating interlocutors, how multiple modes of communication are exploited to ground participants in a shared communicative environment thereby establishing social connectedness, and how multimodal communication allows for iconic or paralinguistic support of the discursive expression of emotional stance. The chapter concludes with feature recommendations for video conference software development from the perspective of social co-presence.*

### BACKGROUND TO THE CASES

Increased globalization and the subsequent dispersion of human resources in the corporate environment have resulted in significant commercial interest in video conference technology (Townsend, DeMarie & Hendrickson, 1998). In answer to the growing needs of a global economy, a number

of web-based video conference technologies are currently competing on the market, for example, WebEx, iVideo, Skype, Adobe Connect, and Marratech. In April 2007, Marratech was acquired by Google. That same year, Google announced that there would be no further development of the Marratech client and server software as of July, 2009. Instead, Google is now working with the Marratech team to develop its own web-based video conferencing tools.<sup>1</sup>

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Ultimately, the production or further development of a successful video conference product will depend on designing features that make video conferencing an effective and satisfying form of remote communication and collaboration. The technological aspects of video conferencing, such as bandwidth requirements and audio-visual quality, are the most obvious and tacit issues to consider. However, as technology improves and enables interaction that closely approximates face-to-face communication, it is the social aspects of video conferencing, and of computer-mediated and video-mediated communication in general, which emerge as essential to providing user satisfaction and, consequently, product success.

In this chapter, I consider two cases of video conferencing via the Marratech client with the aim of assessing social co-presence (Kang, Watt & Ala, 2008). First, I review the literature on video-mediated communication, establishing the evolution of VMC as a viable alternative to face-to-face communication, particularly in the virtual workplace. Next, I present the theoretical constructs of social presence, co-presence and social co-presence, and I argue for the applicability of discourse analysis methodology in assessing social co-presence. I then present extracts of video-conference interaction, illustrating how talk-in-interaction can be analyzed to evaluate co-presence, social richness of the medium, and interactant satisfaction. The analysis is followed by a discussion and summary of how research on the ways people actually communicate through online discussion can contribute to a better understanding of social co-presence. Finally, I suggest features of video conference software which can optimize the social co-presence aspects of video-mediated communication.

## **VIDEO-MEDIATED COMMUNICATION**

Video-mediated communication (VMC) such as video-conferencing offers users the widest variety

of channels of communication, combining video with voice chat, text chat, whiteboard capabilities, and collaborative document manipulation. Video conferencing thus exemplifies a rich media environment (Daft & Lengel, 1984), allowing for a form of communication that closely approximates face-to-face interaction. For this reason, video-conferencing is increasingly being adopted in workplace settings as a viable solution to the problem of communicating with dispersed colleagues and business partners. The use of video-mediated communication technologies is therefore key to facilitating meaningful teamwork activity remotely (Morgan, 1993; Nguyen & Canny, 2007; Townsend et al., 1998).

Much of the literature on video-mediated communication reveals a tendency among researchers to highlight problematic aspects of remote interaction. Bandwidth issues (Angiolillo, Blanchard, Israelski & Mané, 1997) as well as the related distortion of audio signals or visual images (Benford, Brown, Reynard & Greenhalgh, 1996; Heath & Luff, 1991; Rutter, 1987) have been established as the primary contributing factors to a compromised interaction structure, affecting the sequencing of turns. For example, in video-mediated communication, the practices of holding or relinquishing the floor, interrupting, or other negotiations of turn-taking are impeded, such that there are generally fewer speaker turns, longer lengths of turn, and fewer interruptions than in face-to-face conversations (Cohen, 1982; Cook & Lalljee, 1972; Rutter & Stephenson, 1977). Disruptions in audio or visual transmissions render these deviating features even more salient (Cohen, 1982; Isaacs & Tang, 1994; Kraut, Fussell & Siegel, 2003; O’Conaill, Whittaker & Wilbur, 1993).

Comparisons of video-mediated communication with face-to-face interactions persist as a distinct trend in the research of video-mediated communication (O’Malley, Langton, Anderson, Doherty-Sneddon & Bruce, 1996; Reiserer, Ertl & Mandl, 2002; Sapsed, Gann, Marshall & Salter,

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