As globalization and popularity of virtual teams increases, computer tools that can support distributed communication have become commonplace. Instant messaging (IM) is a type of near-synchronous computer mediated communication [1]. It usually is used in distributed environments ranging from different rooms in the same building to locations at the opposite ends of the globe. According to a report from the International Data Corporation, the number of workers using public IM was expected to grow to 255 million by 2005 [2]. The Radicati Group predicted the enterprise IM market to balloon to 349 million users in companies by 2007 [3]. IM is diffused throughout the workplace and is useful especially for coordination and organization of impromptu social meetings [4]. The primary use of workplace IM is to support complex work discussions between people, who seem to be very effective at discussing complicated topics using only text messages [5]. Therefore, IM provides an emerging communication medium and context for studying human behavior.

Deception generally entails messages and information knowingly transmitted to create a false conclusion [6]. People who intend to deceive tend to display unique behavior that can be used to identify deception. Despite extensive deception research efforts, we find at least three limitations in the current body of research: (1) much of the past research focused mainly on behavioral cues to deception in face-to-face communication [7]–[10], (2) prior findings were based mostly on monologic and/or dialogic communication context, and (3) the limited extant studies of deception in computer mediated communication focused on asynchronous communication [11], [12]. Published reports on behavioral cues to deception in IM are very rare. As an important step toward addressing these issues, this research empirically explores both verbal and nonverbal behaviors indicative of deception in IM group communication with the aim of broadening our knowledge of behavioral cues that can be used to detect deception in an emerging communication medium.

The current investigation is motivated by two of the previous studies. Zhou et al. discovered the difference in linguistic behavior between deceivers and truth tellers in asynchronous computer mediated communication [11]. They adopted email as the communication medium. Compared to email, IM is more spontaneous in terms of receiving feedback. Detecting deception may be different in spontaneous communication than in planned communication [13]. Another study on the effect of distance on deception found that geographical distance between collaborating partners influences one's willingness to initiate deception on the partner [14]. In particular, people were less likely to be persuaded by a person that they believed to be distant from them, and they were more likely to give deceptive (positive) portrayals about themselves to a partner that they believed to be in a remote city [14]. However, the latter study relied on self-reported measures, which tended to be subjective and were usually inaccessible in the real world situation. In contrast, operationalizing deception by tracing the actual behavior could provide a more objective and practical solution.

The need for analyzing deception in an IM context becomes increasingly imminent as synchronous computer mediated communication pervades daily life. Deception in multiparty communication has received much less attention than interpersonal

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