

# Chapter 78

## Social Responses to Conversational TV VUI: Apology and Voice

**Eun Kyung Park**

*Sungkyunkwan University, Korea*

**Kwan Min Lee**

*University of Southern California, USA*

**Dong Hee Shin**

*Sungkyunkwan University, Korea*

### ABSTRACT

*The study investigated whether apologetic synthetic gendered voices affect users' perception of an error-prone VUI. In a TV viewing task, participants interacted with the conversational TV, and executed eight menus in a 2 (apologetic error message: yes vs. no) by 2 (voice gender) by 2 (subject gender) gender balanced, between participants experiment. When participants encountered errors, the TV provided verbal error messages, with or without an apology. The results revealed significant two-way interaction effects of apology (yes) and voice gender (male) on perception of the TV, and the voice. Irrespective of gender, participants responded to a male voice more, when it offered apologies for errors. It is interpreted that the context in which genuineness of apology was regarded as important made participants perceive a male voice as being more trustworthy than a female voice. The participants seem to have applied gender stereotypical perceptions to gendered VUI, as they do to other humans.*

### INTRODUCTION

Speech has been known to be a distinctive feature of being human, but this was no longer valid by the late twentieth century, in which computer-based voice user interfaces were already widespread (Nass & Gong, 2000). In recent years, with the advent of Siri, the voice agent on the Apple iPhone 4S and 5, we have witnessed exponential growth in the technologies of voice user interface. Siri led people to believe that

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they were talking to another human being, or at least to a lifelike creature. Siri speaks natural language, thus it sounds like an efficient female secretary, who understands what a human being is trying to say - not only literally but also figuratively. Even though people ontologically understand it is a synthesized machine voice, they still tend to respond to Siri as they do to other human beings. Despite their general thinking process, users often feel frustrated at the recognition errors of a Voice User Interface (VUI). It is not the medium that causes frustration, but the source of the voice (Sundar & Nass, 2000). What if a VUI apologizes for its errors? Would people then feel better? The present study investigated whether a gendered VUI's apology for errors (i.e. recognition errors or system failures) affects users' perception of a conversational TV (i.e. an interactive voice recognition TV).

## **LITERATURE REVIEW**

Goffman (1971) defined apology as a gesture with two meanings: one with a guilty feeling of his/her offense, and the other with his/her affirmation of a belief in the offended rule. For an apology to be legitimate, the transgressor must recognize his/her wrongdoings, and explicitly show his/her regret about the violation (Fraser, 1981). In general, people are in favor of wrongdoers who offer apologies for their transgression (Exline, DeShea, & Holeman, 2007). People may offer apologies to mend relationships, save face, and receive more reduced sanctions (Thimsen, 2012). The Cross-Cultural Speech Acts Realization Project (CCSARP; cf. Blum-Kulka & Olshtain, 1984) suggests five strategies for apologizing: (1) an illocutionary force indicating device (IFID; such as, "I'm sorry", "I apologize", or "Excuse me"); (2) an explanation or account of the violation; (3) a display of the speaker's responsibility for the fault; (4) an offer of compensation; and (5) a promise of avoidance of wrongdoing in the future.

Apology studies have shown that an apology draws favorable responses from a victim, only when the genuineness of the apology is convincing (Skarlicki, Folger, & Gee, 2004). Scher and Huff (1991) operationalized four apology components, and examined the effects of four apology strategies. The use of just one apology strategy had a more dramatic effect on apology effectiveness, than the use of multiple strategies. Thimsen (2012) reported that participants were more satisfied with the defendant's explanation of the situation, when he or she explicitly said "I'm sorry." In business studies, the type of service failure seemed to affect the customer's satisfactions, rather than the magnitude of the failure (Shin, 1999). Customers were less satisfied after a process failure (i.e. inattentive service), than after an outcome failure (unavailable service). To compensate for process failure, initiating a recovery and offering an immediate apology were effective. The levels of trust, word of mouth and loyalty with the service provider were significantly higher for participants who were satisfied with the service recovery (McCullough, 2000; Kau, & Loh, 2006).

## **APOLOGY IN HUMAN-TO-COMPUTER INTERACTION**

Neilsen (1998) argued that an apologetic error message given by web servers would be of help. However, an apology would be valuable, only if it is genuine (Steiner, 2000). The computer's apologetic feedback, presented by either textual or visual formats in a computer-guessing game context, had a positive psychological effect on users' perception of the computer (Tzeng, 2004). The participants also perceived the game to be less mechanical, more enjoyable, and more sensitive to the feelings of users; whereas, users

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