# FYAP'13: Identity Deception and Detection in Computer-Mediated Communication

INTRODUCTION

▪In virtual environments, people not only invent new ways to communicate, but also seek to understand each other differently. Without the visual cues present in face-to-face interactions, one must assess the truthfulness of these conversations and the identity of their interacting partners based on limited information behavior.

▪As gender is one critical feature of identity, a user's ability to imitate or deceive on their gender online threatens our trust of others in the computer-mediated communication (CMC).

RESEARCH DESIGN

Consent → Demographics → Welcome → P1: Natural → P2: Detection → P3-1: Deception → P3-2: Deception
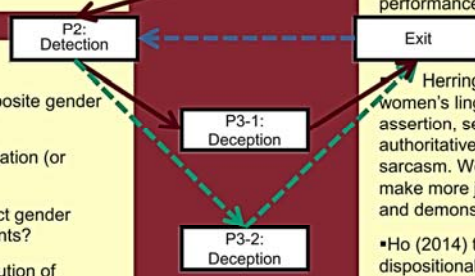
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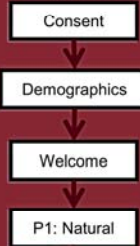
THEORETICAL GROUNDS

▪Buller & Burgoon (1996) Interpersonal deception theory: Deception is an iterative process in the interpersonal nature of deceptive (and, truthful) behavior. Zhou (2004) identifies deceptive linguistic cues, and automates the process of predicting deception with machine learning techniques in computer-mediated communication. Hancock (2004, 2007, 2008, 2010, 2012) studies motivation and classification of digital deception and their linguistic cues in online dating, butler lies, and our everyday life.

▪Bandura (1977, 1986, 2006) Self-efficacy constitutes an individual's belief concerning their capability to perform a certain task. Self-efficacy is self-instructed performance or personal mastery experiences. It is possible that one's prior performance and mastery experience can influence and contribute to one's domain knowledge.

Herring (1993) states differences in men and women's linguistic style. Men are more forceful in assertion, self-promoting, presumptuous, rhetorical, authoritative, confrontational, and exhibit more humor and sarcasm. Women are tenuous in their assertion, apologetic, make more justification, personal and supportive of others, and demonstrate intimacy and rapport.

▪Ho (2014) trustworthiness is a window to an actor's dispositional state of ethical standards, which serves as a predictor to the likeliness of betrayal, depicted in deceptive behavior.

RESEARCH QUESTIONS

▪How successfully do people imitate the opposite gender in CMC environments?

▪What factors impact successful gender imitation (or deceptive gender representation)?

▪How successfully do people attribute correct gender and/or deceptive gender in CMC environments?

▪What factors contribute to successful attribution of gender?

PRELIMINARY RESULTS
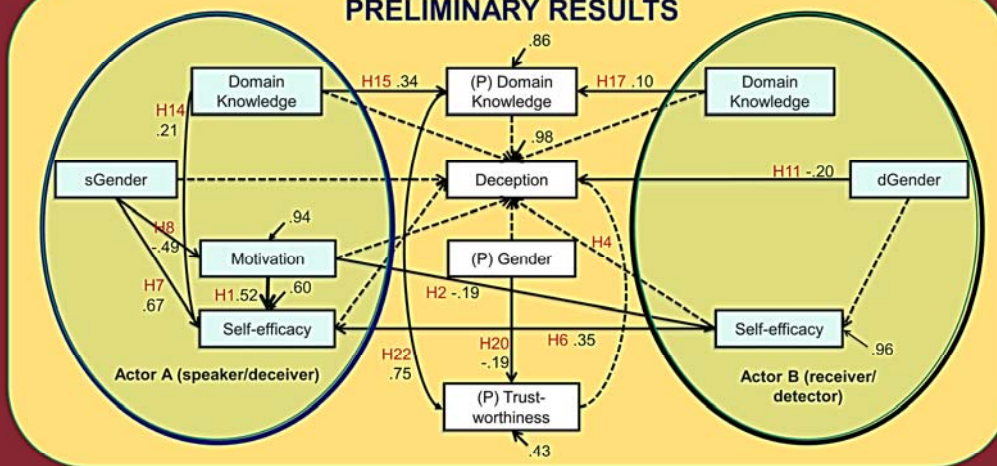
SUPPORTED HYPOTHESES

▪H1. The more motivated the speakers are to deceive, the higher their self-efficacy beliefs become.

▪H2. The more motivated speakers are to deceive, the higher self-efficacy belief that they can detect others' online gender deception.

▪H4. The higher the detectors' self-efficacy beliefs are, the easier it is for them to identify online gender deception.

▪H6. The higher one's self-efficacy in attributing correct gender, the higher their self-efficacy in gender imitation.

▪H7. Male speakers have higher positive self-efficacy beliefs in gender deception than female speakers.

▪H8. Gender has an impact on a speaker's motivation to deceive, but without a specific indication of whether male or female has a higher impact.

SUPPORTED HYPOTHESES (CON'T)

▪H11. Females have higher success rate in detecting gender deception than males.

▪H14. The higher domain knowledge the speakers have, the higher their self-efficacy beliefs become when deceiving about their gender online.

▪H15. The higher domain knowledge the speakers actually have, the higher their domain knowledge is perceived to be.

▪H17. The higher domain knowledge the detectors have, the easier it is for them to assess and evaluate speakers' perceived domain knowledge.

▪H20. Speakers perceived as male appear less trustworthy.

▪H22. The higher a speaker's domain knowledge is perceived to be, the more trustworthy they appear.

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