Culture, Media, and Deception Detection: A Global Study

Joey F. George

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

April 6, 2013

IOWA STATE UNIVERSITY
COLLEGE OF BUSINESS

Agenda

- Justification
- Research Question
- Theory/Literature
- Methods
- Preliminary Findings
- Closing Comments

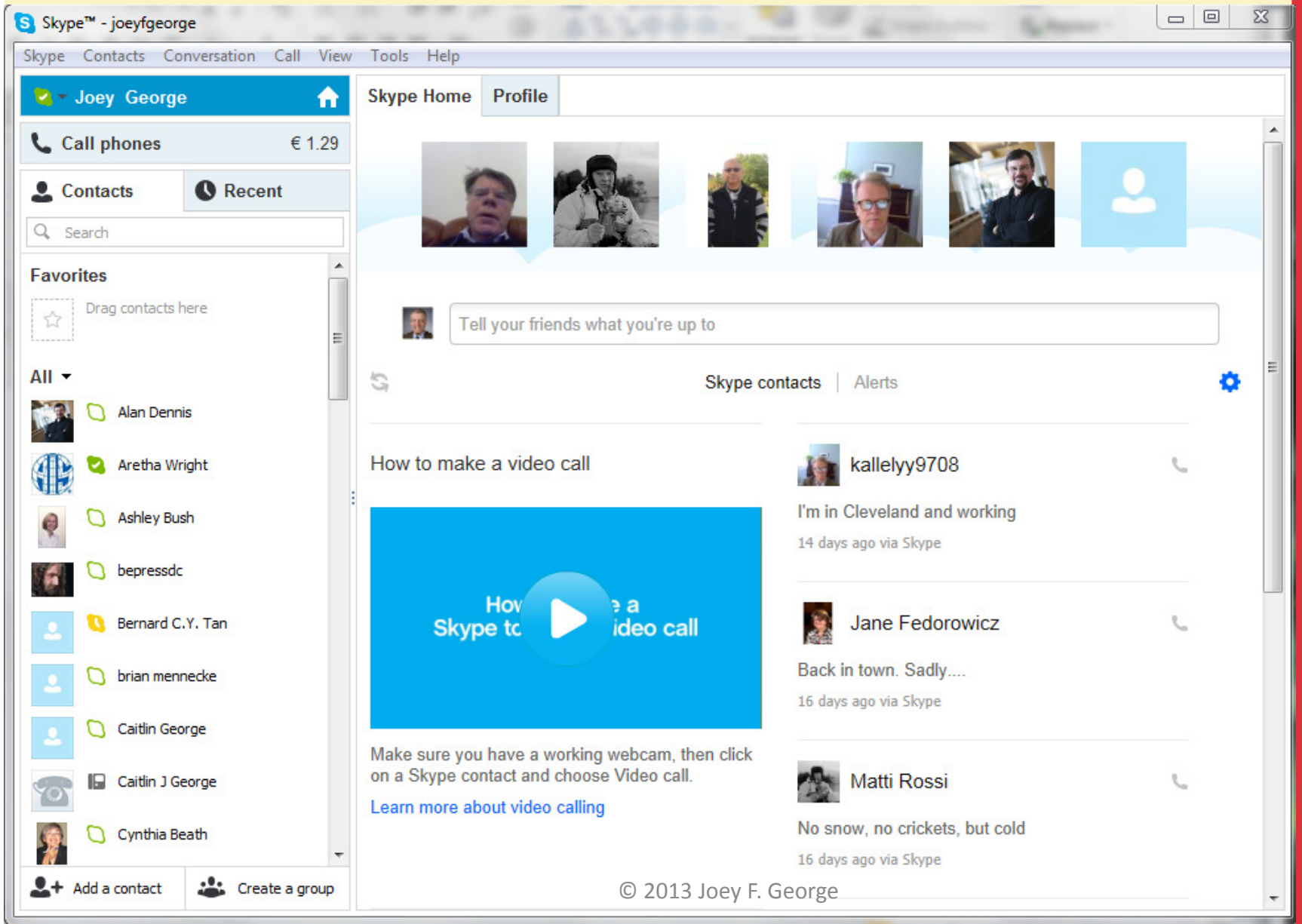
History

- My interest in deceptive CMC goes back to about 1993
- AFOSR grant 2001-2006
- Deception literature had largely left unexplored issues dealing with CMC, groups & culture
- After the grant, I supervised two dissertations at FSU about culture
- Now working on global study of deception

Justification for Cultural Studies

- The world has changed a great deal in the past few decades
- 25 years ago, international phone calls were extremely expensive & e-mail was unreliable –communication across cultures was limited
- The Internet existed but the Web did not
- Now, only 25 years later, global communication is cheap and in many cases practically free

Justification for this research: Skype



IOWA STATE UNIVERSITY
COLLEGE OF BUSINESS

Research Questions

- Is the ability to successfully detect deception among people of a different culture and language impeded (or enhanced) by cultural or language differences?
- And what is the role of communication media (CMC in particular)?

Literature Review

- Computer-mediated communication (CMC)
- Deception
- Culture
- CMC & Culture
- Deception & CMC
- Deception & Culture

Literature Review

- Computer-mediated communication (CMC)
  - Media Synchronicity Theory (Dennis, et al, 2008)
- Deception
- Culture
- CMC & Culture
- Deception & CMC
- Deception & Culture

MST

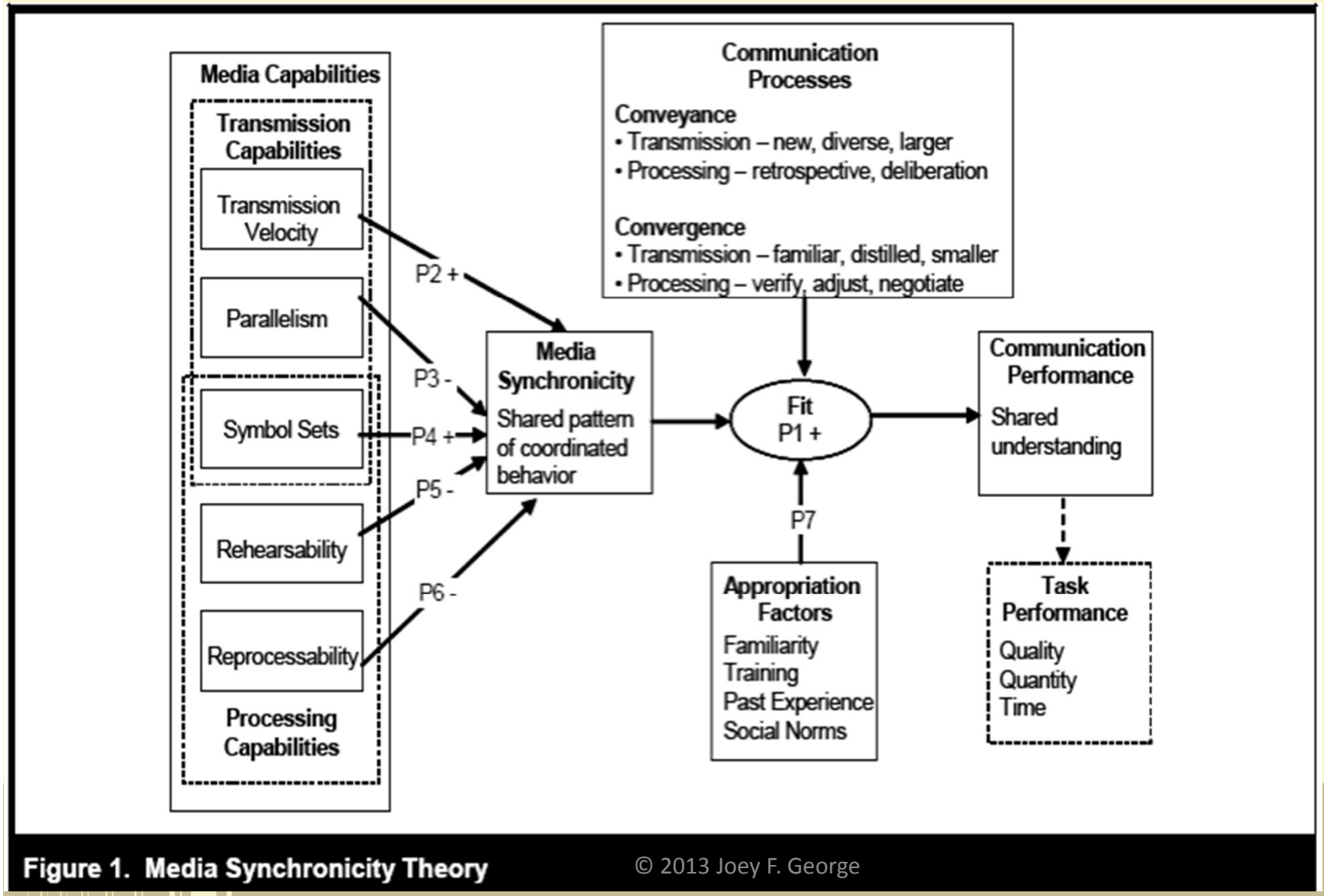


Figure 1. Media Synchronicity Theory

Literature Review

- Computer-mediated communication (CMC)
- Deception
  - Detecting deception
  - Leakage theory
- Culture
- CMC & Culture
- Deception & CMC
- Deception & Culture

Ability To Detect

- Very poor detection ability by humans, including experts
- On average, accuracy rates are about 40 to 60%--about the same as flipping a coin
- People do better at detecting truth when it is present: About 80%
- People are poor at detecting deception when it is present: About 35%

Why Deception Can Be Detected

- Deception is a cognitively difficult and challenging act
- Deceivers must control facial expressions & body language & focus on the words of the message as well as how it is delivered
- "Leakage theory" states that deceivers cannot control everything well, so some cues to deception "leak" out to the receiver

Literature Review

- Computer-mediated communication (CMC)
- Deception
- Culture
  - Theory of Cultural Differences (Hofstede, 1980)
- CMC & Culture
- Deception & CMC
- Deception & Culture

Hofstede & Culture

- Four dimensions of national culture:
  - Collectivism
  - Power distance
  - Uncertainty avoidance
  - Masculinity

Literature Review

- Computer-mediated communication (CMC)
- Deception
- Culture
- CMC & Culture
  - Media use varies by culture (e.g., Lee & Lee, 2003)
- Deception & CMC
- Deception & Culture

Literature Review

- Computer-mediated communication (CMC)
- Deception
- Culture
- CMC & Culture
- Deception & CMC
  - Differences in cues transmitted (see chart)
- Deception & Culture

Deception & Media

Behavior	Video	Audio	Written
Less talking time	Detectable	Detectable	
Fewer details	Detectable	Detectable	Detectable
More pressed lips	Detectable		
Less plausibility	Detectable	Detectable	Detectable
Less logical structure	Detectable	Detectable	Detectable
More discrepancies and ambivalence	Detectable	Detectable	Detectable
Less verbal and vocal involvement	Detectable	Detectable	
Fewer illustrators	Detectable	Detectable	Detectable
Less verbal immediacy (all categories)	Detectable	Detectable	Detectable
Less verbal and vocal immediacy (impressions)	Detectable	Detectable	
More verbal and vocal uncertainty (impressions)	Detectable	Detectable	
More chin raises	Detectable		
More word and phrase repetitions	Detectable	Detectable	
Less cooperative	Detectable	Detectable	
More negative statements and complaints	Detectable	Detectable	
Less facial pleasantness	Detectable		
More nervous and tense (overall)	Detectable	Detectable	
More vocal tension	Detectable	Detectable	
Higher frequency, pitch	Detectable	Detectable	
More pupil dilation	Detectable		
More fidgeting	Detectable		
Fewer spontaneous corrections	Detectable	Detectable	
Less admitted lack of memory	Detectable	Detectable	Detectable
More related external associations	Detectable	Detectable	Detectable

Deception & Media

- If leakage is the key to deception, more opportunities to leak should provide more opportunities to detect successfully
- Evidence of a direct media effect is largely missing
- If media has an effect at all, it is mediated by another variable (probing – George et al 2008; sender motivation – Hancock et al 2010; sender demeanor – Levine et al 2011)

Literature Review

- Computer-mediated communication (CMC)
- Deception
- Culture
- CMC & Culture
- Deception & CMC
- Deception & Culture
  - People are better able to detect deception in outgroup compared to ingroup (Al-Simadi 2000, Bond & Atoum 2000, Lewis 2009)

Sample of Deception-Related Cultural Differences

Study	Countries	Select Findings
Triandis et al 2001	Korea, Hong Kong, Greece, Japan, US, Australia, Netherlands, Germany	Collectivist groups more apt to deceive in business negotiations than individualist groups
Fu et al 2001	Canada & Chinese	Canadians considered lies concealing pro-social behavior to be lies, but Chinese did not & rated such behavior favorably
Cheng & Broadhurst 2005	Hong Kong Chinese	Observers better able to identify deception in their second language than in native language
Al-Simadi 2000	Jordan & Malaysia	Individuals detected 52% of lies within their own cultures & 57% between cultures
Bond & Atoum 2000	US, Jordan & India	Individuals do not perceive those from other cultures as more deceptive than individuals from their own culture

Methods

The research consisted of two phases:

- **Phase I**: Creating the stimulus sets
- **Phase II**: Making the veracity judgments

Stimulus Sets

- Four sets:
  - American English
  - Castilian Spanish
  - Indian English
  - Hindi

Methods – Stimulus Sets

- For each stimulus set, students were asked to enhance their résumés (scholarship application)
- They were then interviewed about the application
- Interviews were videotaped
- From the interviews, 32 snippets were selected
- One half of each stimulus set was made up of honest snippets, and the rest were dishonest
- Each stimulus set was also varied by communication mode: audiovisual, video only, audio only, or text (8 each)

Methods – Veracity Judgments

- Judges observed one of the stimulus sets
- Snippets randomly placed throughout each set
- Participants observed each snippet and then rated its honesty on a 7-point Likert scale, with 1 as most honest and 7 as most dishonest
- Responses from 1 to 4 were recoded as honest; responses from 5 to 7 were recoded as dishonest
- If a snippet was judged to be dishonest, judges were asked to explain what they experienced that indicated deception

Data Collection

Data Collection

- Spanish judges were exposed to either Spanish or American stimulus sets; American judges exposed to Spanish or English stimulus sets
- Iowa judges were either exposed to either American, Indian English, or Hindi stimulus sets
- Ohio judges and Jamaican judges were exposed to all four stimulus sets
- Still collecting data in New Zealand

Detection Success Rates

Spanish Judges		American Judges	
English	55.5%	English	51.7%
Spanish	63.9%	Spanish	64.7%

The differences are statistically significant.

Iowa Judges

Iowa Judges	
American English	51.9%
Hindi	54.9%
Indian English	59.5%

The differences are statistically significant: AE is different from IE.

Ohio Judges

Ohio Judges	
American English	51.6%
Hindi	54.9%
Spanish	60.7%
Indian English	60.8%

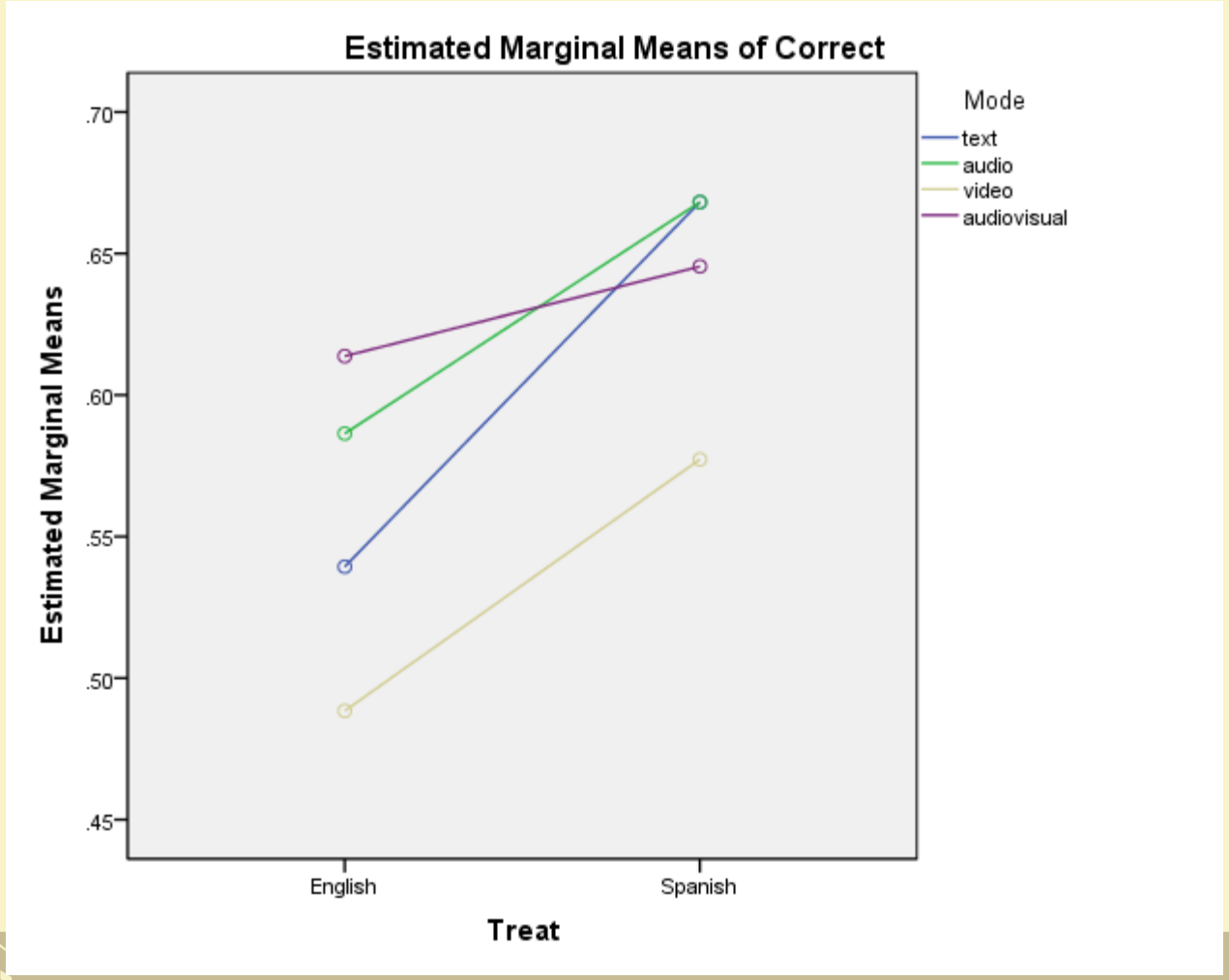
The differences are statistically significant: AE is different from IE & Spanish.

Jamaican Judges

Jamaican Judges	
American English	51.0%
Hindi	54.9%
Spanish	55.5%
Indian English	57.9%

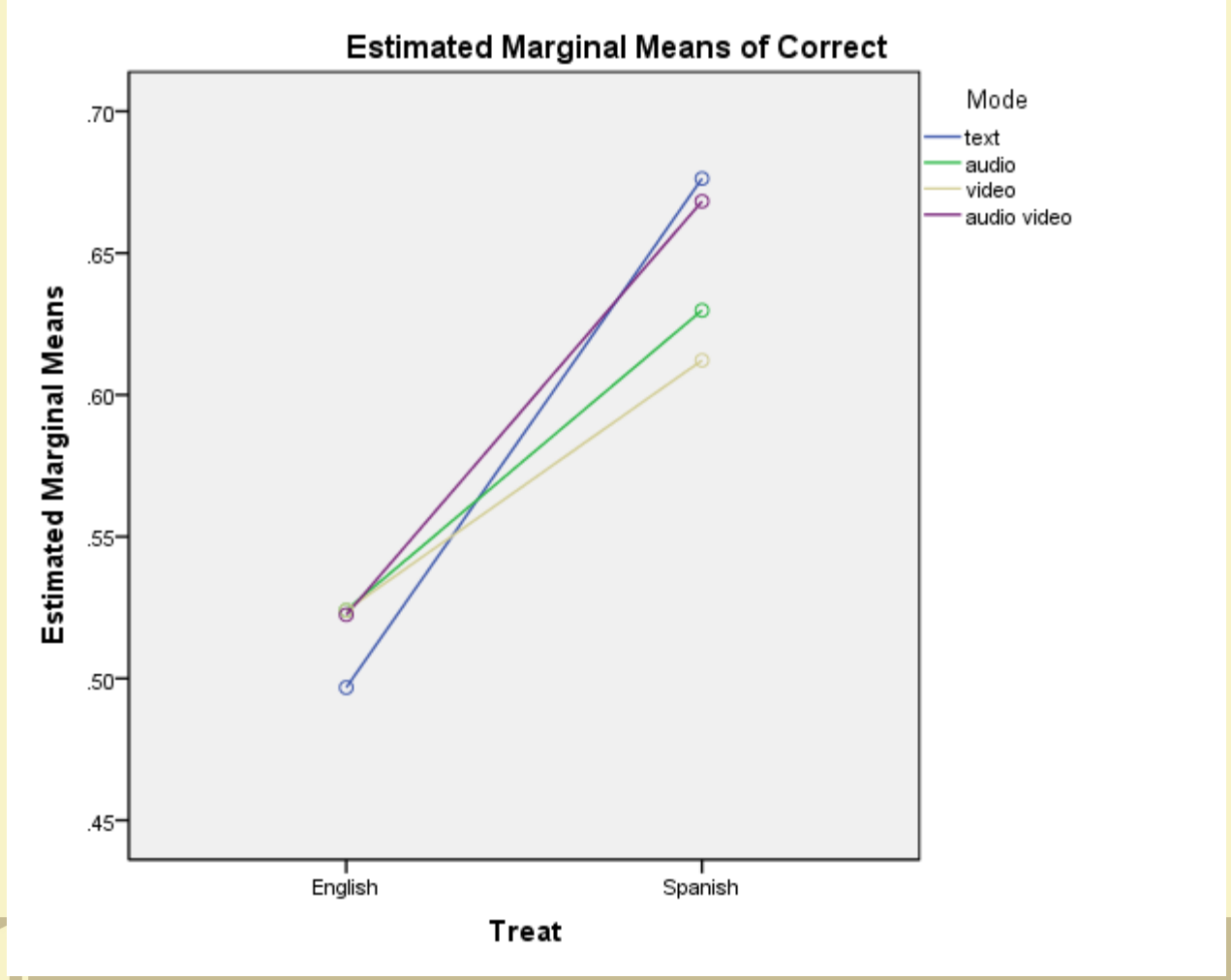
The differences are statistically significant: AE is different from IE.

Spanish Judges



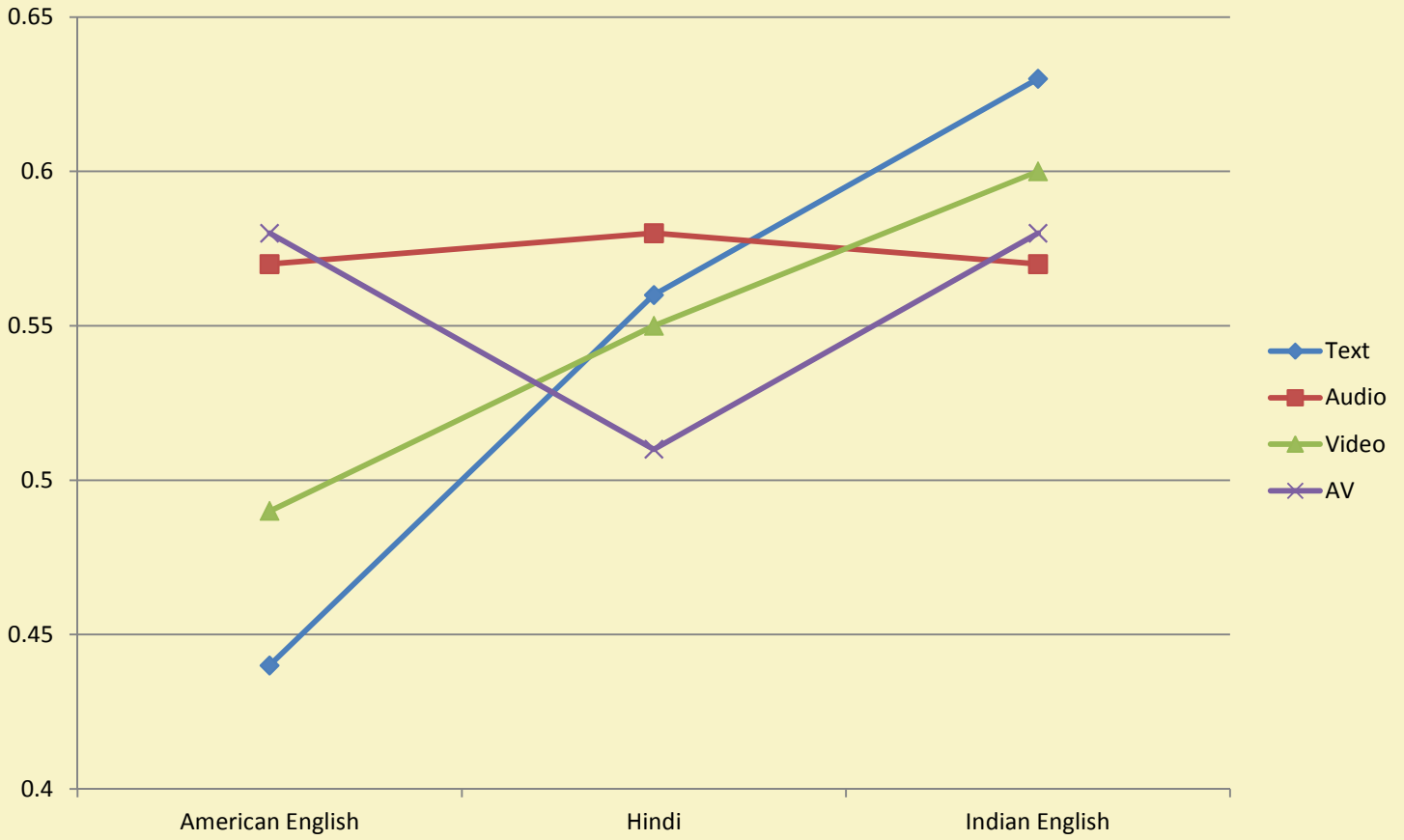
Treatment & mode are both significant; interaction is not; video is different.

American Judges (Spanish study)



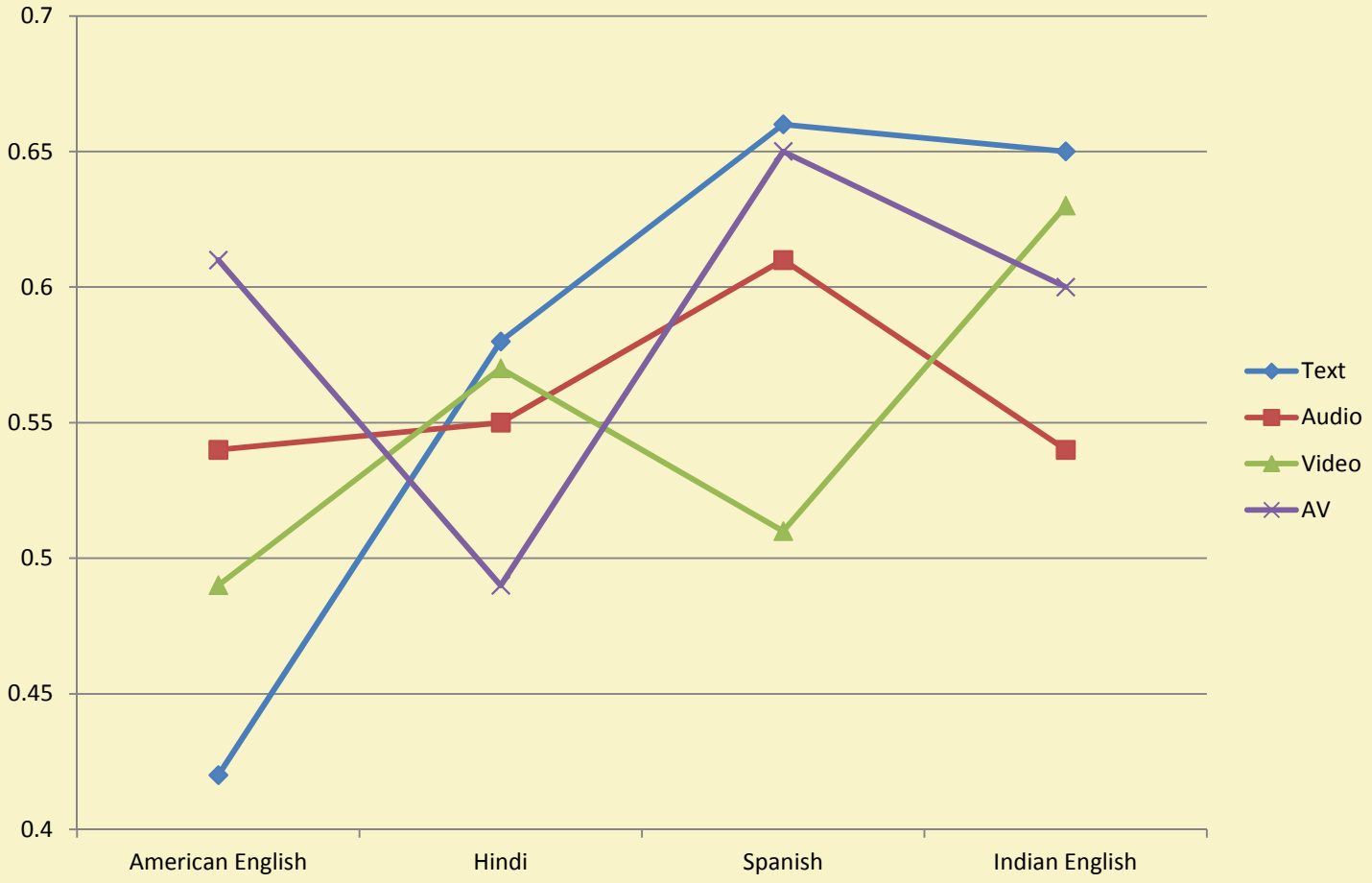
Treatment & mode are both significant; interaction is not.

Iowa Judges



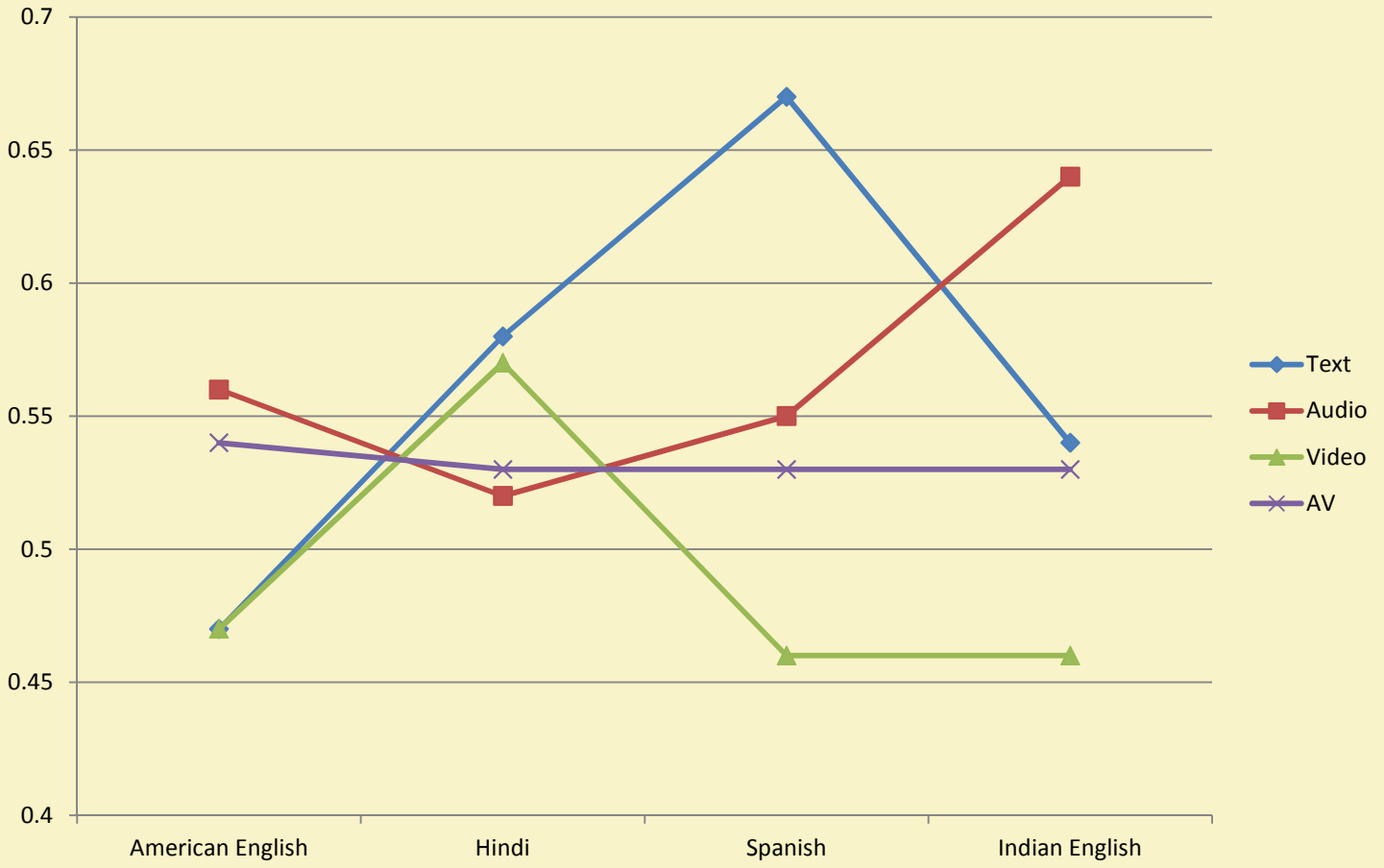
Treatment, mode & interaction are all significant.

Ohio Judges



Treatment, mode & interaction are all significant.

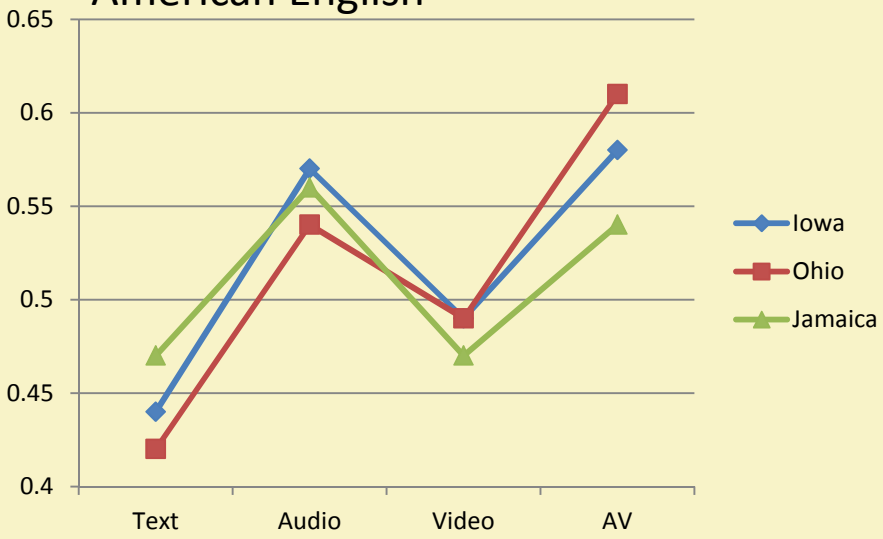
Jamaican Judges



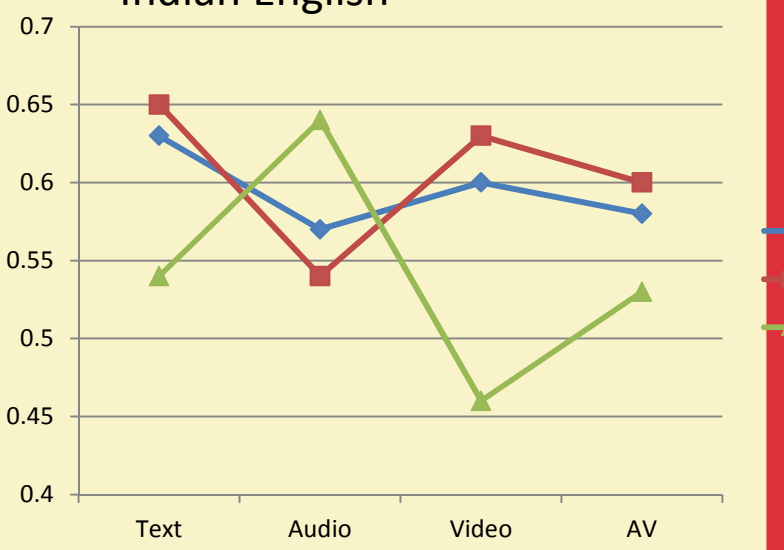
Treatment, mode & interaction are all significant; video is different from audio.

Detection Success by Judge

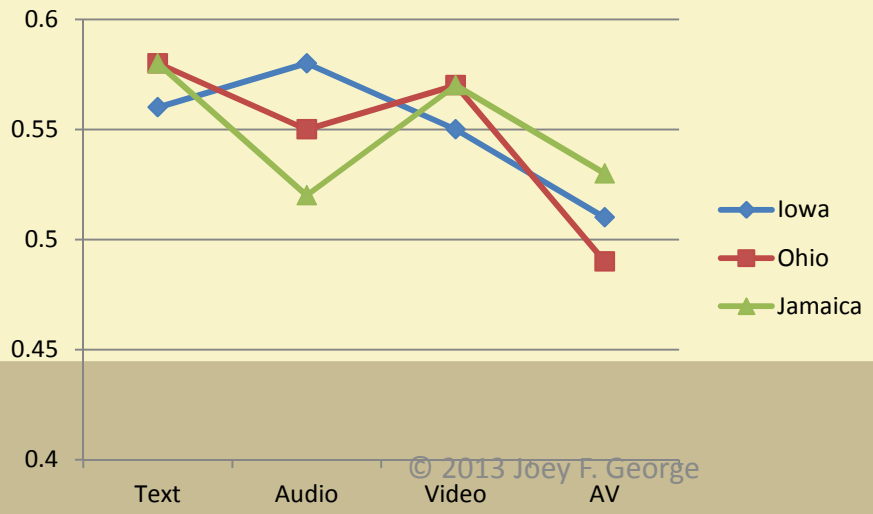
American English



Indian English



Hindi



IOWA STATE UNIVERSITY
COLLEGE OF BUSINESS

Preliminary Findings

- People can detect deception among outgroup members better than they can in their own group
- There is an interaction between culture and media
- Judges vary in their abilities to accurately detect deception in different outgroups

Conclusions

- People are able to detect deception better in out-groups than in their own groups
  - The real question is why – we have the reasons participants gave for why they perceived detection & we will be analyzing them
- Interaction between culture and media also requires additional investigation
- We still have lots of work to do