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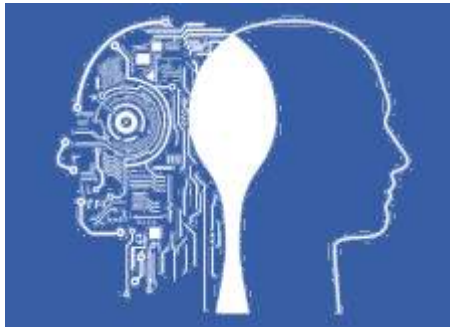

THE HUMANTECH CHALLENGE: A CONSUMER RESEARCH PERSPECTIVE

IV X.ITE RESEARCH STORM - 2019

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.ITE INSIGHT TECHNOLOGY ENHANCED

AGENDA

Smart Objects Roles in Consumers' Life
Russell W. Belk
Schulich School of Business, Kraft Foods Canada Chair in Marketing

X.ITE Research Report 2019

I Love Robots. The Bright Side of Human-Tech Interactions
Rumen Pozharliev, Simona Romani, Patrizia Cherubino

The Dark Side of Human-Tech Relationships
Simona Romani, Paolo Peverini, Francesco Ricotta

X.ITE Research Storm 2020

New Social Relationships in HumanTech Hybrid MIlieu
Matteo De Angelis, X.ITE Research Team

Research Storm and Future Research Directions
Business Community Members and X.ITE Research Team

X.ITE Knowledge Transfer Unit – Attività e Innovazioni
Marco Francesco Mazzù

HUMAN VS ROBOTS

- **RESEARCH QUESTIONS**

1) An increase in Positive Customer Experience (RSA, pleasantness, satisfaction, WOM) is expected during interaction with the human service agent compared to robot service agent.
2) Anxious attachment style will moderate the association between the service agent (human, robot) and Positive Customer Experience.

- **IMPLICATIONS:**

Psychological models of behavior can provide novel customer segmentation criteria.

THE DARK SIDE OF HUMAN-TECH RELATIONSHIPS

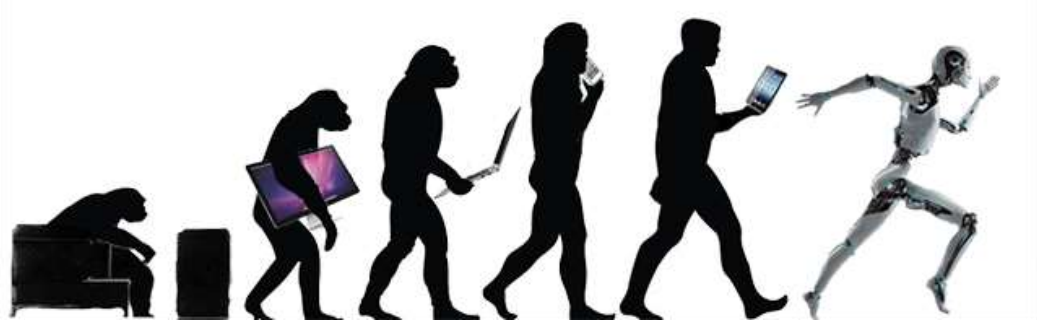
- **RESEARCH QUESTIONS**

1) Why consumers are reluctant to enter into relationships with smart objects?
2) What are the smart object roles that consumer anticipate and that prevent them to adopt these technologies?

- **IMPLICATIONS:**

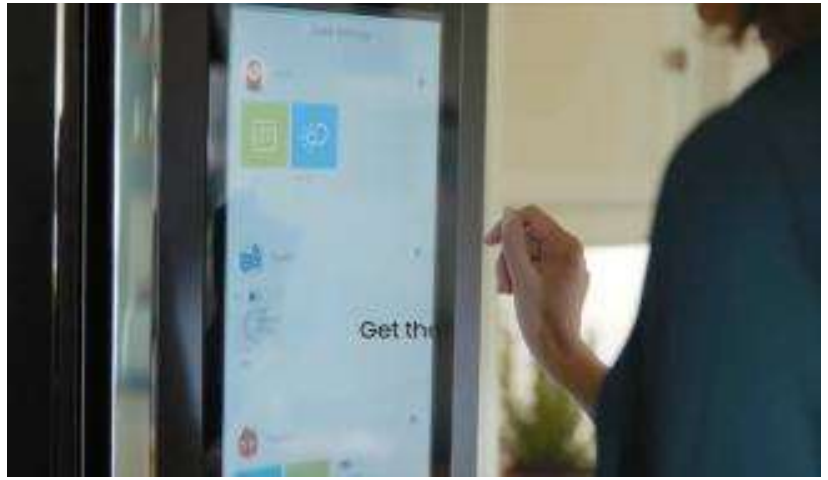
1) Methodological: the advantage of the use of the qualitative explorative study (ZMET)
2) Managerial: insight about how to understand and overcome fears; insight about anthropomorphism

FROM AUGMENTED REALITY TO AUGMENTED HUMANITY



Human vs Tech

Human-Tech



HumanTech

NATURE MUST NOT WIN THE GAME BUT SHE CANNOT LOSE

- CARL JUNG: ALCHEMICAL STUDIES, 1942

SMART OBJECTS ROLES IN CONSUMERS' LIFE

Prof. Russel W. Belk

Professor of Marketing @ Schulich School of Business
Kraft Foods Canada Chair in Marketing

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I Love Robots.
The Bright Side of Human-Tech Interactions

Simona Romani, Rumen I. Pozharliev, Patrizia Cherubino

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AGENDA

- SMART OBJECTS AND ATTACHMENT THEORY
- RESEARCH QUESTION
- EXPERIMENT PROCEDURE
- RESULTS
- MANAGERIAL IMPLICATIONS


変なホテル
Henn na Hotel
ヴェロキラプトル

ATTACHMENT THEORY

RESEARCH QUESTION

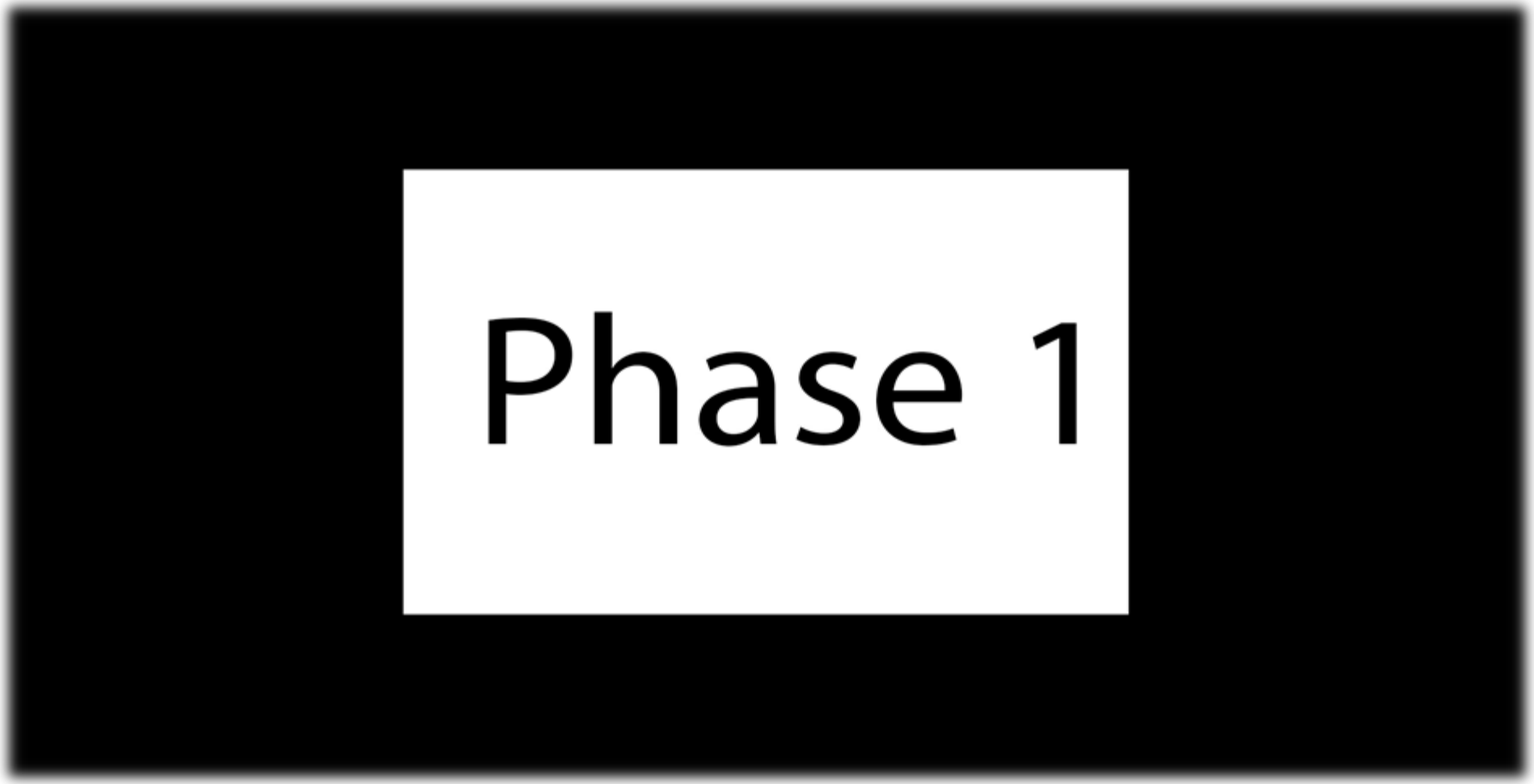
Use **consumer neuroscience** and **interpersonal attachment style** to study **customer experience** during interaction with human compared to robot service agent.

HYPOTHESIS

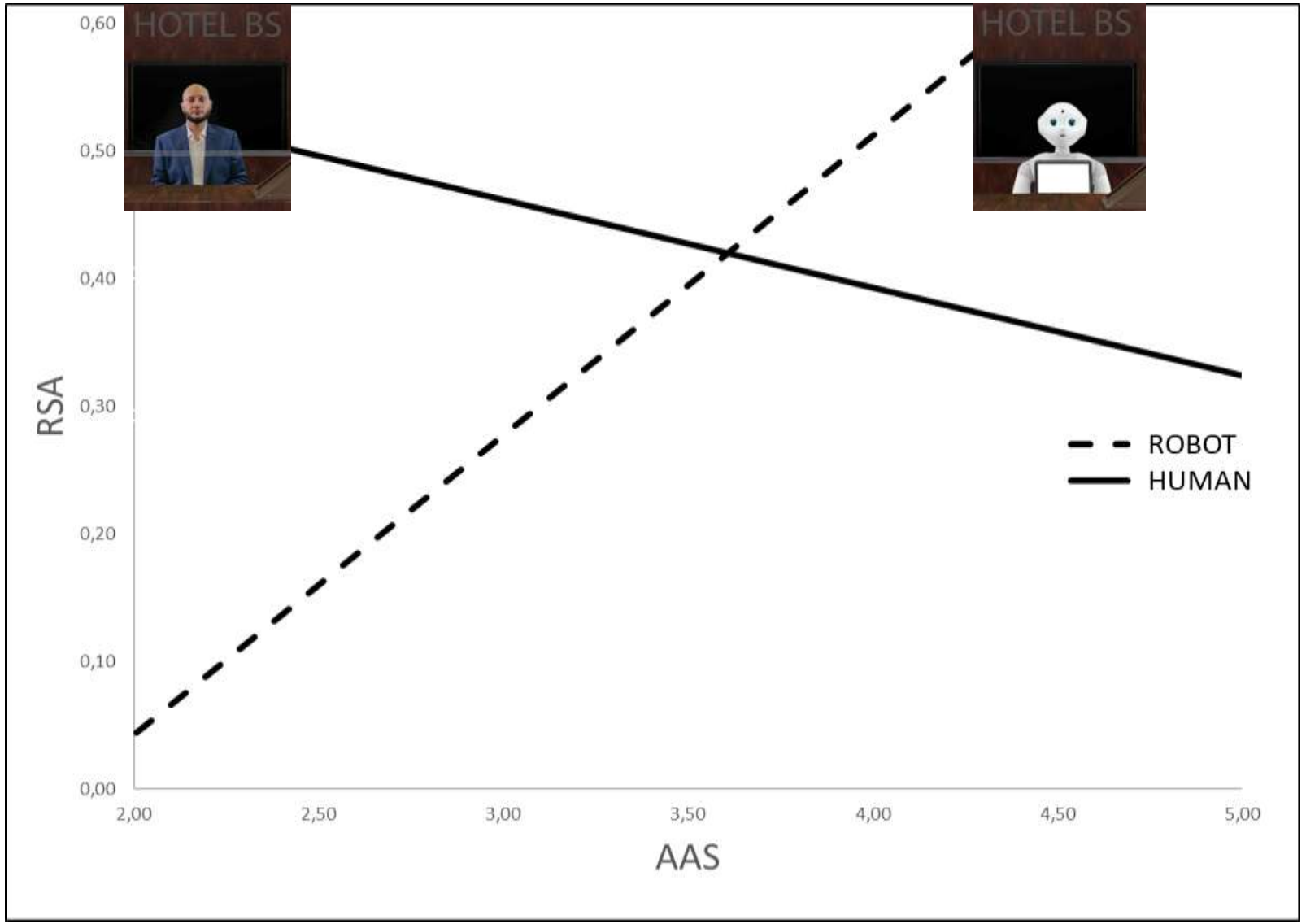
- **H1**: An increase in **Positive Customer Experience** (RSA, pleasantness, satisfaction, WOM) is expected during **interaction with the human service agent** compared to robot service agent.

- **H2**: **Anxious attachment style** will moderate the association between the service agent (human, robot) and Positive Customer Experience.

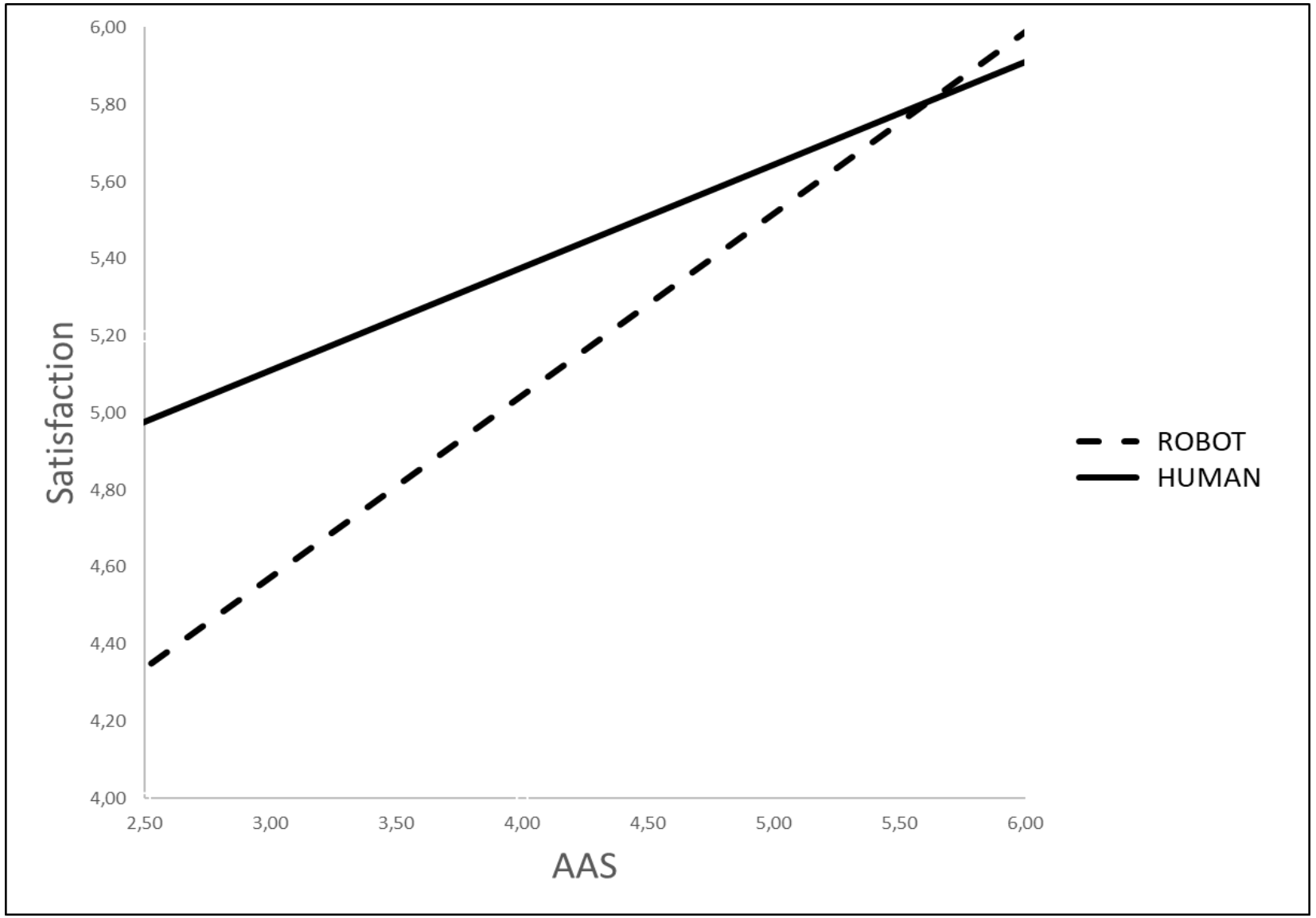
STUDY 1: N= 117 - IT



STUDY 1


HOTEL BS
HOTEL BS
0,60
0,50
0,40
0,30
0,20
0,10
0,00
RSA
2,00
2,50
3,00
3,50
4,00
4,50
5,00
AAS
ROBOT
HUMAN

STUDY 2: N= 350 - US

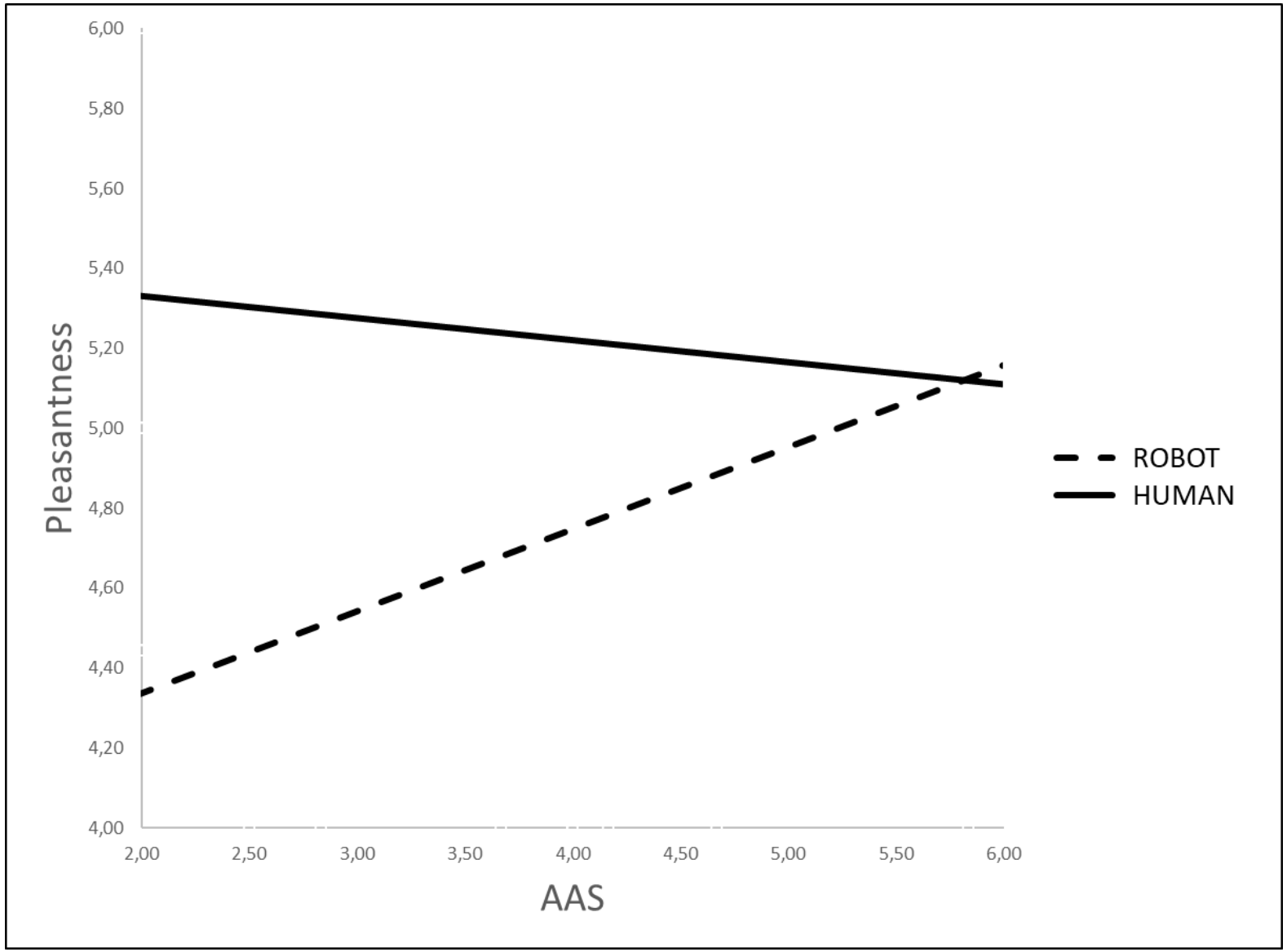


STUDY 3: N= 279 - US

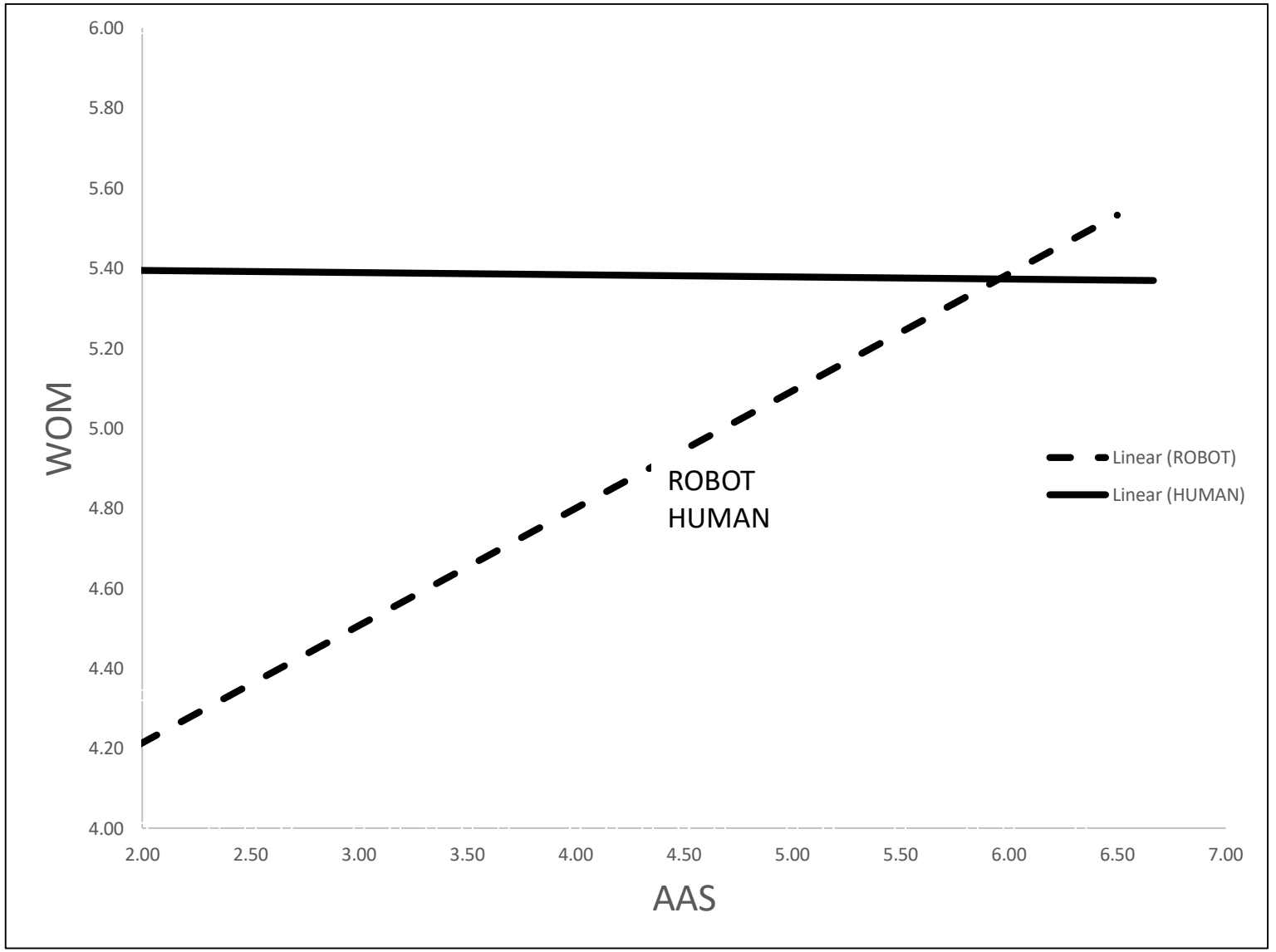
Video of Check-in Hotel (Umano con Voce Umana)

Video of Check-in Hotel (Robot con Voce Robotica)

STUDY 3


6,00
5,80
5,60
5,40
5,20
5,00
4,80
4,60
4,40
4,20
4,00
Pleasantness
2,00
2,50
3,00
3,50
4,00
4,50
5,00
5,50
6,00
AAS
ROBOT
HUMAN

STUDY 3

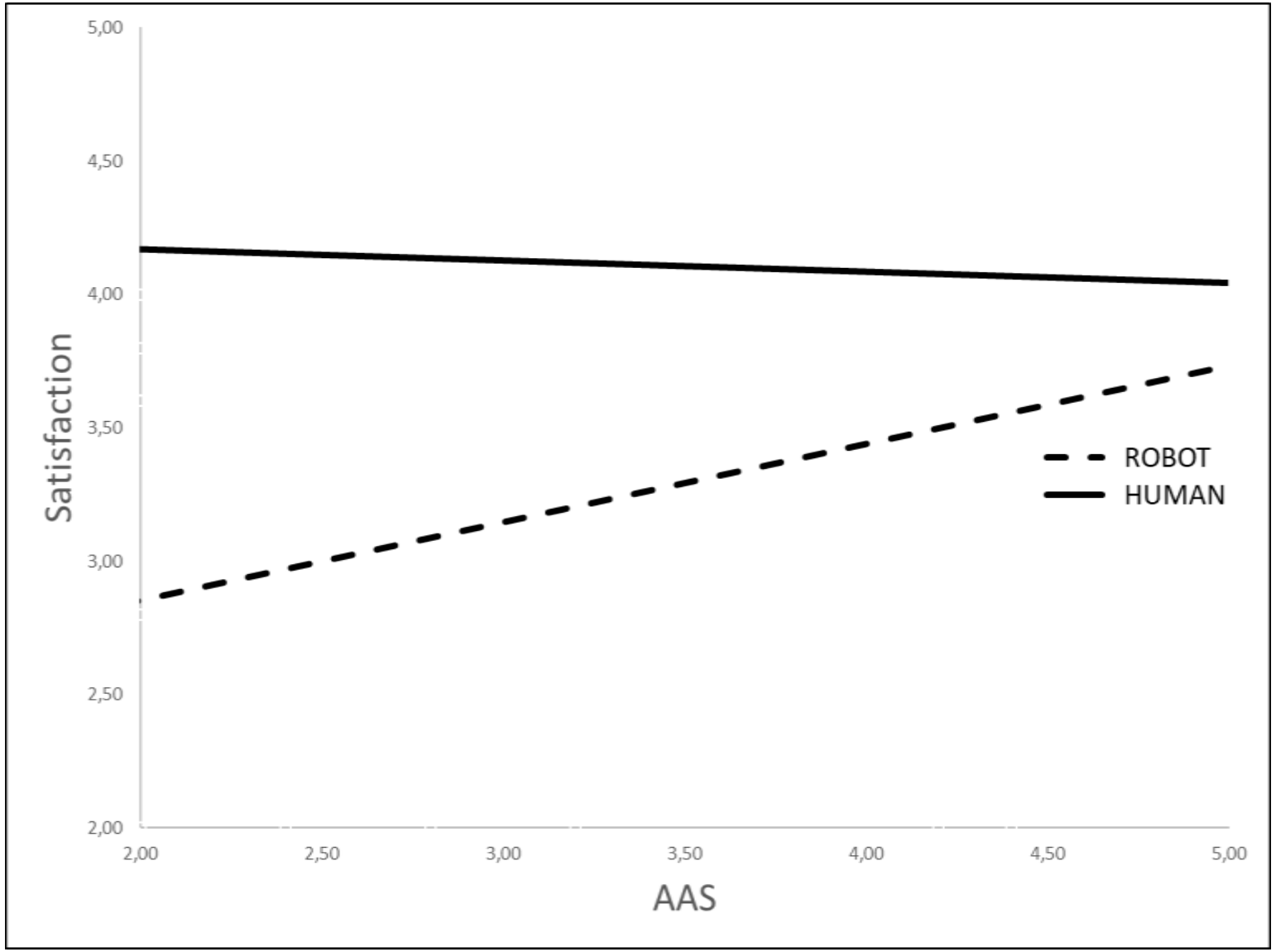

6.00
5.80
5.60
5.40
5.20
5.00
4.80
4.60
4.40
4.20
4.00
WOM
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
6.50
7.00
AAS
ROBOT
HUMAN
Linear (ROBOT)
Linear (HUMAN)

STUDY 4: N= 191 - IT

Video of Check-in Hotel
(Umano con Voce Umana)

Video of Check-in to a Hotel
(Robot Aspetto Umano con Voce Umana)

STUDY 4


5,00
4,50
4,00
3,50
3,00
2,50
2,00
Satisfaction
2,00
2,50
3,00
3,50
4,00
4,50
5,00
AAS
ROBOT
HUMAN

MANAGERIAL IMPLICATIONS

Psychological models of behavior can provide **novel customer segmentation criteria.**

- Anxious attached individuals (20% of the global population) experience no difference between interacting with human compared to robot service agent. Anxious attachment style could **facilitate smart-object adoption.**
- Individual **interpersonal attachment styles** and object attachment information available **from online sources such as social media** (e.g., Facebook, Linkedin, Twitter etc.) could generate insights useful to **enhance the quality and impact of communication campaigns.**

The Dark Side of Human-Tech Relationships

Simona Romani, Paolo Peverini, Francesco Ricotta

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.ITE INSIGHT TECHNOLOGY ENHANCED

AGENDA

- THEORETICAL BACKGROUND AND CONCEPTUAL FOUNDATIONS
- RESEARCH QUESTION(s)
- METHODOLOGY: DATA COLLECTION AND DATA ANALYSIS
- CROSS CASE ANALYSIS: FINDINGS

THEORETICAL BACKGROUND AND CONCEPTUAL FOUNDATIONS

Consumer-smart object relationships

(Novak & Hoffman, 2019; Schweitzer et al., 2019)

Barriers to consumers' adoption of smart objects

(Mani & Chouk, 2017, 2018)

Self-disclosure

(Hatfield, 1984; Reis & Shaver, 1998)

RESEARCH QUESTION(s)

Why consumers are reluctant to enter into relationships with smart objects?

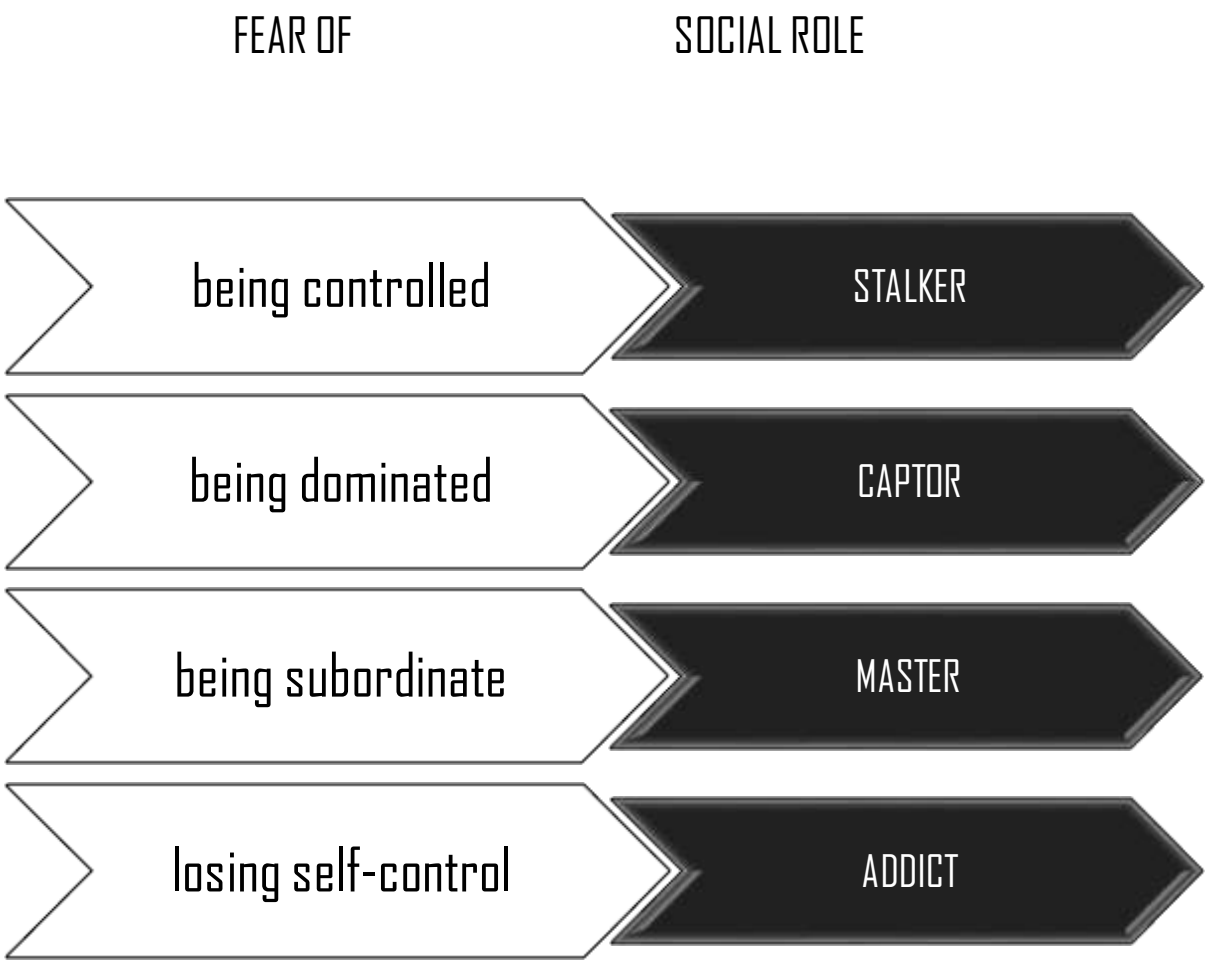
What are the smart object roles that consumer anticipate and that prevent them to adopt these technologies?

METHODOLOGY: DATA COLLECTION AND DATA ANALYSIS

- Qualitative explorative study employing the Zaltman Metaphor Elicitation Technique (ZMET; Zaltman, 1995).
- 33 adult Italians, non-users of smart objects (45% female and 55% male, average age = 29.08). We produced 300 pages of interview transcripts and 402 images.
- We started with a reading of the transcript and the identification and selection for each respondent of the stories directly related to the theme of resistance to be in a relationship with a smart object considered as a potential partner (stories of resistance – N= 134)
- For each of this story, at individual level, we identified the associated behavioral and psychological tendencies. Then we moved to a second level of analysis – across person analysis – with the goal of discovering patterns across stories and individuals that could help structure an understanding of the consumer resistance to enter in a relationship with smart objects.

Source: Zaltman, Coulter (1995, 1997)

CROSS CASE ANALYSIS: FINDINGS



FEAR OF BEING CONTROLLED.

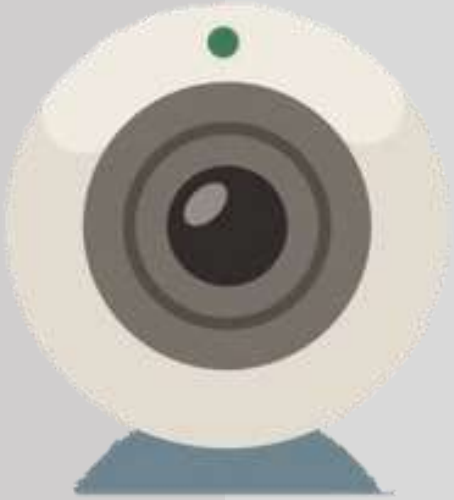
SMART OBJECT AS A STALKER

«There is a shadow over me, it controls every movement and every habit. It is something oppressive»

F, 26

ANTICIPATED CHARACTERISTICS:

Negative goal directed
Intrusive
Harming
Ambivalent



ANTICIPATED BEHAVIORS:

Invasive
Surveillance
Intimidating
Harassing
Saboteur
Coercive

FEAR OF BEING DOMINATED.

SMART OBJECT AS A CAPTOR.

«What really worries me is the possibility that I become a "prisoner" in my smart home when a blackout occurs» *F, 33*

ANTICIPATED CHARACTERISTICS:

Threatening
De-humanizing
Constraining

ANTICIPATED BEHAVIORS:

Violent
Coercive
Aggressive

FEAR OF BEING SUBORDINATE.

SMART OBJECT AS A MASTER.

«I think that with this bracelet on me I will be even more controlled and a slave of things. For example, being reachable all the times»

M, 58

ANTICIPATED CHARACTERISTICS:

Close

Proximate

Regular

ANTICIPATED BEHAVIORS:

Control

Giving order

FEAR OF LOSING SELF-CONTROL.

INDIVIDUAL AS AN ADDICT.

«It instills the feeling of addiction in me; using smart objects people just can't get enough of them. We should control this evolution»

ANTICIPATED SYMPTOMS:

Salience
Fear of Loss
Repetitive pattern
Mood modification

ANTICIPATED CHARACTERICS:

Confused
Depressed
Anxious
Isolated
Heavy User

ANTICIPATED NEGATIVE EFFECTS:

Social Impairment
Physical Impairment
Loss of Capacities

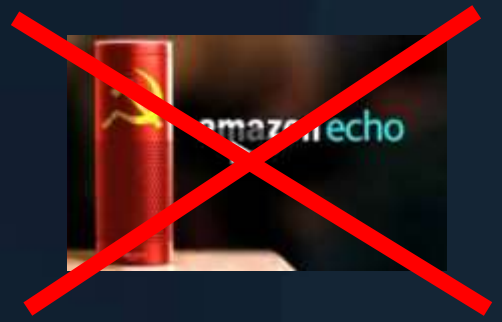
IMPLICATIONS (I): METHODOLOGY

Explorative Study

- Qualitative Method
  - Word
  - Visual
- Consumer Insight
  - Perception
  - Positioning

Why not UGC?

- Anonimity of Source
- Not homogeneus market/product coverage
- Auto-representation



IMPLICATIONS (II): UNDERSTAND AND OVERCOME FEARS

Communications

Apple, 2019

BMW, 2019

Huawei, 2018

Product Design

HP, 2019

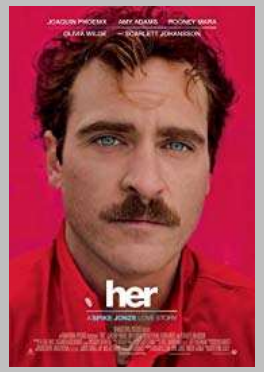
Amazon, 2015

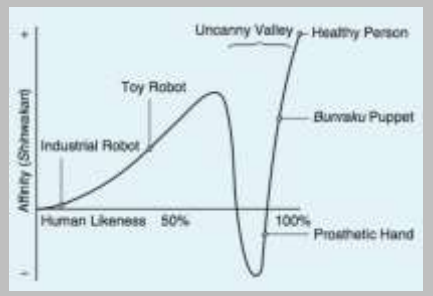
IMPLICATIONS (III): IS ANTROPOMORPHISM ALWAYS GOOD?

Amazon, 2016

LG, 2017

Google, 2017





Mori, M., MacDorman, K. F., & Kageki, N. (2012).

NEW SOCIAL RELATIONSHIPS IN HUMANTECH HYBRID MILIEU

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RESEARCH STREAMS

PHYSICAL PRESENCE and SMART OBJECTS

SOCIAL PRESENCE and SMART OBJECTS

SOCIAL INFLUENCE and SMART OBJECTS

PHYSICAL PRESENCE & SMART OBJECTS

- Focus on people's behavioral and physiological responses to smart technologies in real customer-robot service interaction
- Use of Consumer Neuroscience, Interpersonal Attachment Style and Genotype
- Data collected in Sushi Sun, a sushi restaurant in Rome which recently replaced part of its human waiting staff with robotic staff

RESEARCH QUESTION

RQ1 Use Consumer Neuroscience (Eye Tracking, EEG, Biometrics) and Interpersonal Attachment Style to study Customer Experience (attention, emotional responses, satisfaction) during interaction with robot service agent in real-life service encounter (e.g. Sushi Sun Magliana).

RQ2 Use Consumer Neuroscience (Eye Tracking, EEG, Biometrics) and Genotype to study Customer Experience (attention, emotional responses, satisfaction) during interaction with robot service agent in real-life service encounter (e.g. Sushi Sun Magliana).

SOCIAL PRESENCE & SMART-OBJECTS

Individuals treat computers and AI-enabled objects like social entities

Nass and colleagues (Fogg & Nass, 1997; Novak & Hoffman, 2019; Nass & Brave, 2005; Nass & Moon, 2000; Reeves & Nass, 1996; Schweitzer et al., 2019)

Mere social presence can impact consumer choice

- Mere (non-interacting) social presence can be influential (Argo et al., 2005)
- Social presence makes it more likely that respondents will identify and act in socially desirable ways (Puntoni and Tavassoli, 2007; Luchs et al., 2010)
- Being observed activates impression management motives (Kristofferson et al., 2014)

RESEARCH QUESTION

RQ1 What are the effects of AI-enabled objects with social presence on consumer behavior?

RQ2 The presence of a AI-enabled device in one's home can have similar effects to being observed by other individuals? Does making the presence of a AI device salient lead to better behaviors?

SOCIAL INFLUENCE & SMART-OBJECTS

Social influence dynamics applied to human-robot interactions

- Smart speakers act as conversational agents
- Robotic word-of-mouth (rWOM): conversations happening between an individual and a smart speaker (“humanized” AI)
- Control and entertainment as rWOM motives (beyond the predominant “functional view” of human-robot interactions

Implications for marketers

- Insights into new possible ways to position smart speakers in consumers’ mind
- Insights about to help shrink the psychological barriers that often characterize human-robot interactions.

RESEARCH QUESTION

RQ1 What are the motives driving individuals to engage in conversation with smart speakers?

RQ1a How is each of the motives identified likely to drive individuals to purchase a smart speaker?

RQ1b To what extent does communication messages highlighting the conversational aspect of smart speakers help offset possible privacy concerns connected with smart speakers?


ASK MORE
QUESTIONS

THANK YOU!

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Knowledge Transfer Unit

ATTIVITÀ E INNOVAZIONI

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X.ITE Governance – Il ruolo della Knowledge Transfer Unit (KTU)

- Ricerca trasformativa e «actionable» con progettazione di **nuovi protocolli**, riapplicabili in diversi contesti
- **Co-sperimentazione** con le aziende di nuovi modelli e teorie sviluppate dalla consumer research
- Generazione di **insight multimetodo** e/o con sperimentazione di tecniche innovative
- Analisi e **studi "istituzionali"** su consumer reaction agli investimenti di marketing, all'utilizzo delle tecnologie e su comportamenti competitivi in prospettiva di consumer impact

Progetti e innovazioni di ricerca applicata - 2019

BrandTelling

Processo strategico di brand content management basato su approccio multi-metodo

«Why they don't buy»

Approccio multi-metodo su miglioramento conversion rate

Bias-driven product launch strategy

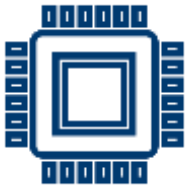
Approccio al lancio guidato dal consumer bias measurement and management

Applied consumer research – Food

Progetto istituzionale su consumer reaction a introduzione di nuove «policy» pubbliche

Customer observatory, customer adoption -

Protocollo multi-metodo di screening rapido su nuovi prodotti high-tech



Text mining implicit scenario building

Generazione di insight per definizione direzioni di sviluppo «implicite»

Benchmarking multi-metodo

Progetto istituzionale di definizione fair pricing di servizi

Price dominance e dumping

Progetto di consumer insight per market design/redesign

Temi e protocolli in corso di sviluppo

- Aree di interazione fra tecnologie e consumer behavior
- Consumer bias measurement e management
- Applied consumer neuroscience
- Machine-consumer learning

THANK YOU!

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