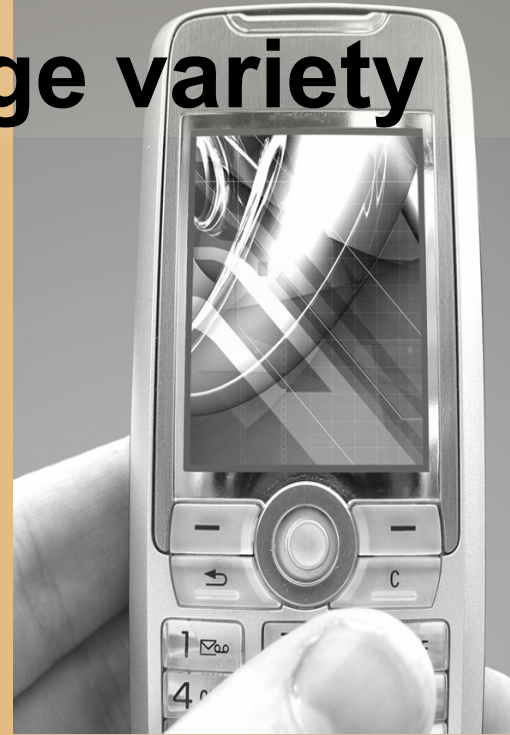


The Cultural and Motivational Factors that Influence Mobile Phone Usage variety



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AGENDA

- Motivation for Research
- Issues
- Research Design
- Analysis and Findings
- Future Research

Motivation for Research

Mobile phone: ultimate **personal computer** with **unprecedented adoption** record.

What drives mobile phone adoption and usage?

Cultural factors in mobile phone adoption and usage	IFIP TC 13 Seminar
Mobile learning	SACLA 2007
Mobile phone feature selection for design	INTERACT 2007
Technology adoption model for mobile phones	SAICSIT 2007

Research Question 1

What should guide the selection of mobile phone features?



User needs:

Task analysis and context perspectives ✓

What other needs?

Research Design

- Initial Interviews (10 participants)
- Pilot survey (40 participants from Monash)
- Survey (168 participants from UP & TUT)
- Evaluation Interviews (6 participants)

Data analysis

Statistical analysis: Data reduction methods

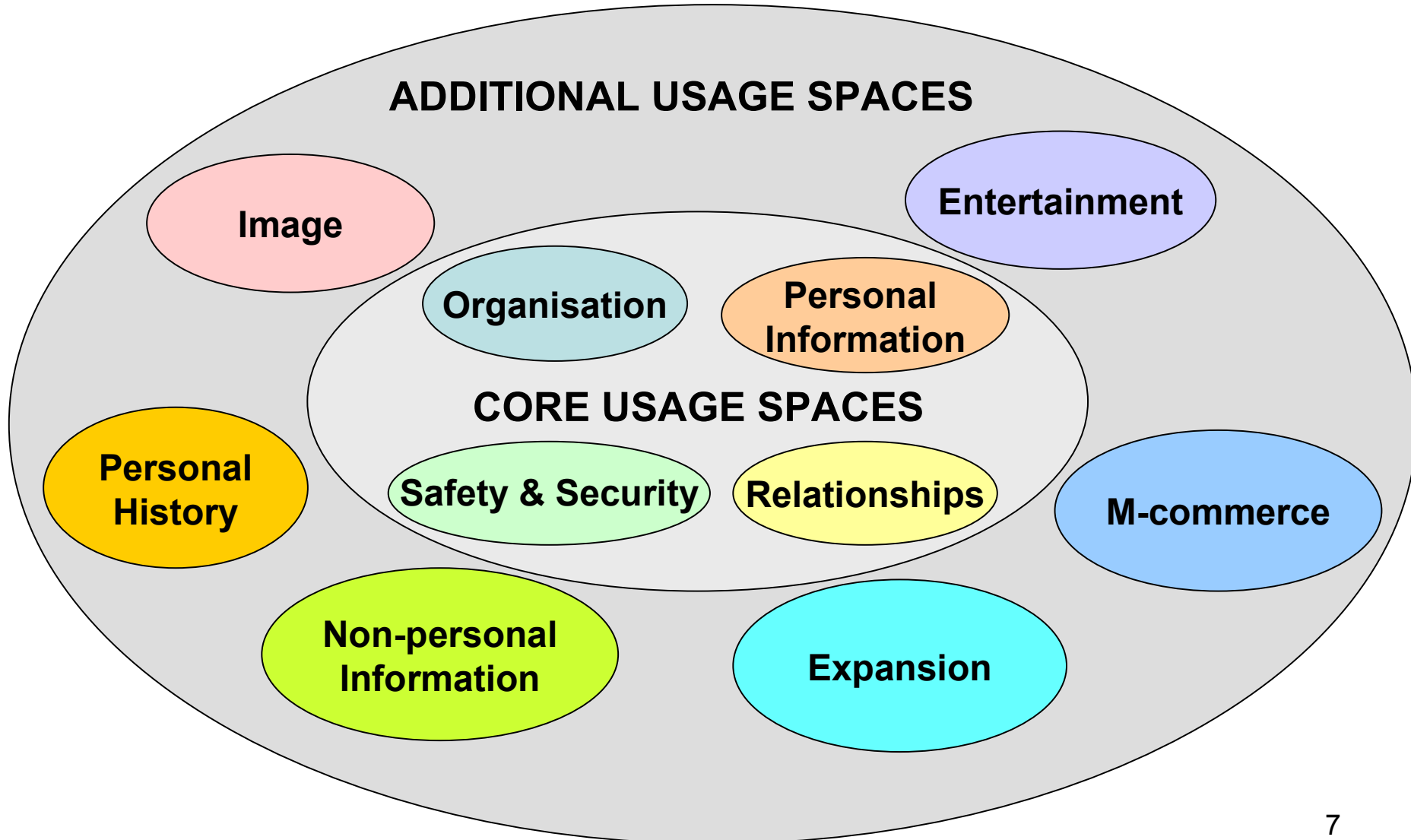
Exploratory factor analysis:

- **New technology:** Bluetooth, video player, MP3, e-mail, voice recorder etc.
- **Safety, security, relationships:** phone book, caller identity, missed calls, SMS.
- **Organisation:** vibrating alert, reminders, profiles, calendar
- **Personal history:** camera, photo-album, MMS, ring tones, personal notes etc.

Optimal scaling:

- **Safety, security, relationships:** phone book, caller identity, missed calls; SMS.
- **Organisation:** vibrating alert, reminders, profiles and alarm.
- **Personal history:** camera, MP3, personal organiser, photo-album, video capture.

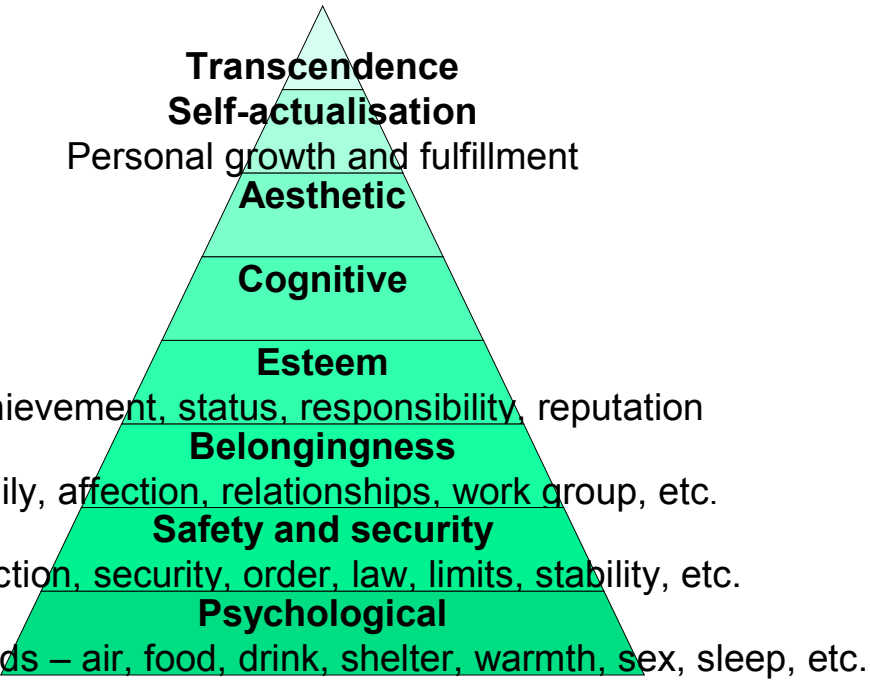
Mobile phone Usage Space Model



MASLOW

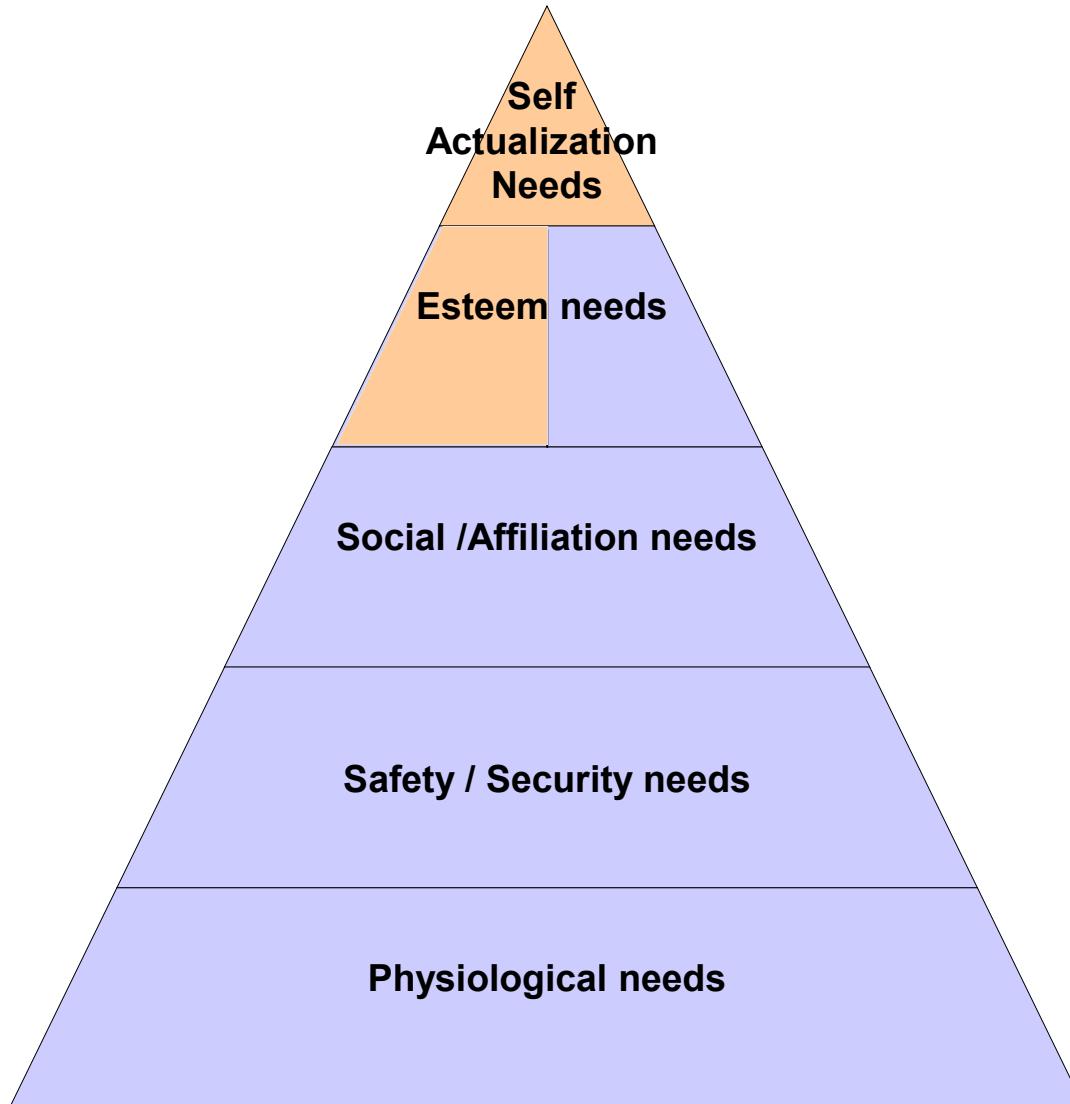


8 levels of needs



Theoretical Framework (2-4)

HERZBERG → motivator-hygiene theory



Findings and conclusion: Research Question 1

Links: MASLOW and HERZBERG to mobile phone user needs



Recommend **usage spaces** for facilitating interaction between designers and users

Research Question 2

How can mobile phone adoption be represented?

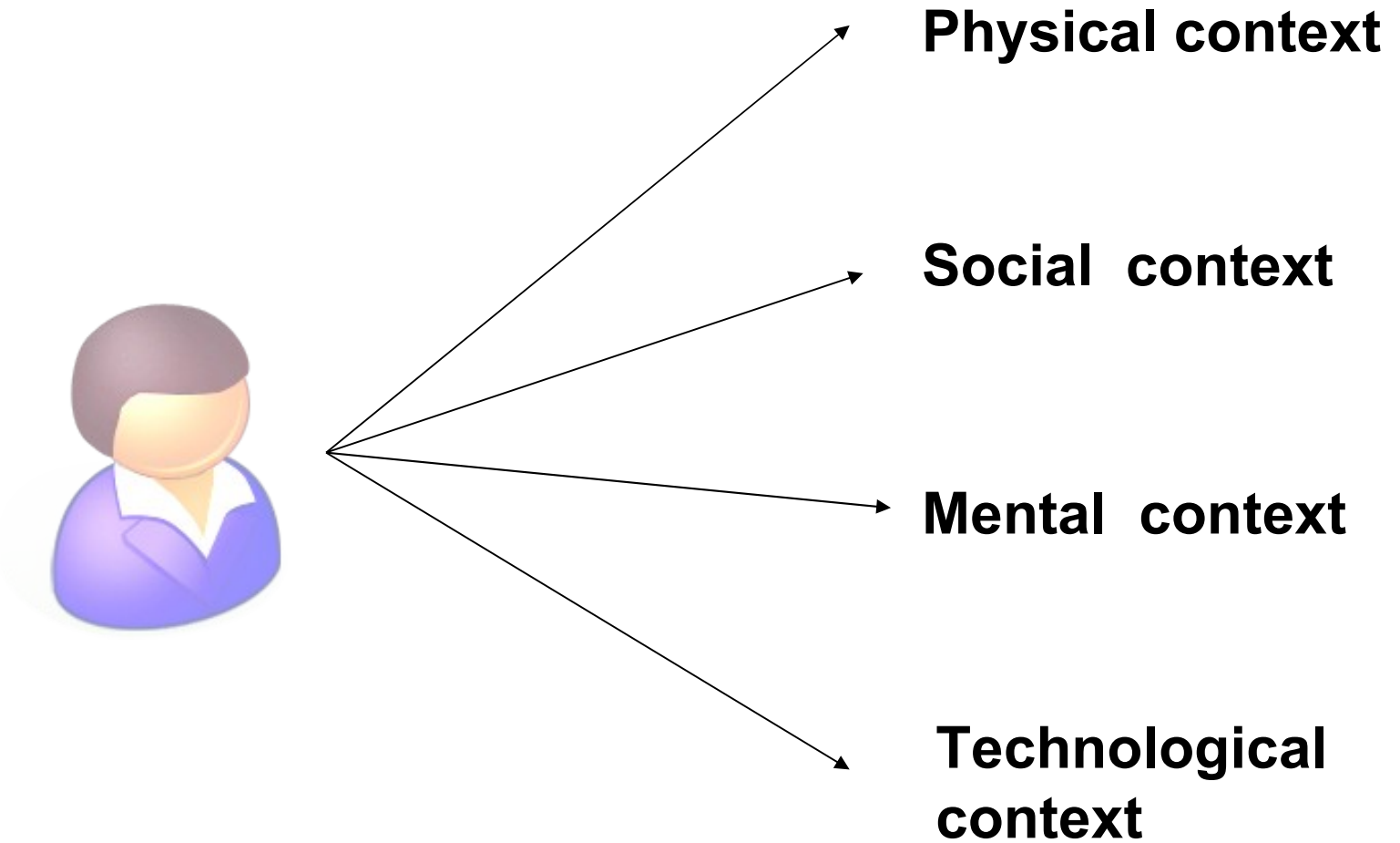
Existing research

- Rogers
- TAM, UTAUT – organisations
- Focus on specific aspects e.g. wireless finance, mobile internet, cultural factors
- Mobile phone adoption models:
 - Kwon and Chidambaram
 - Sarker and Wells

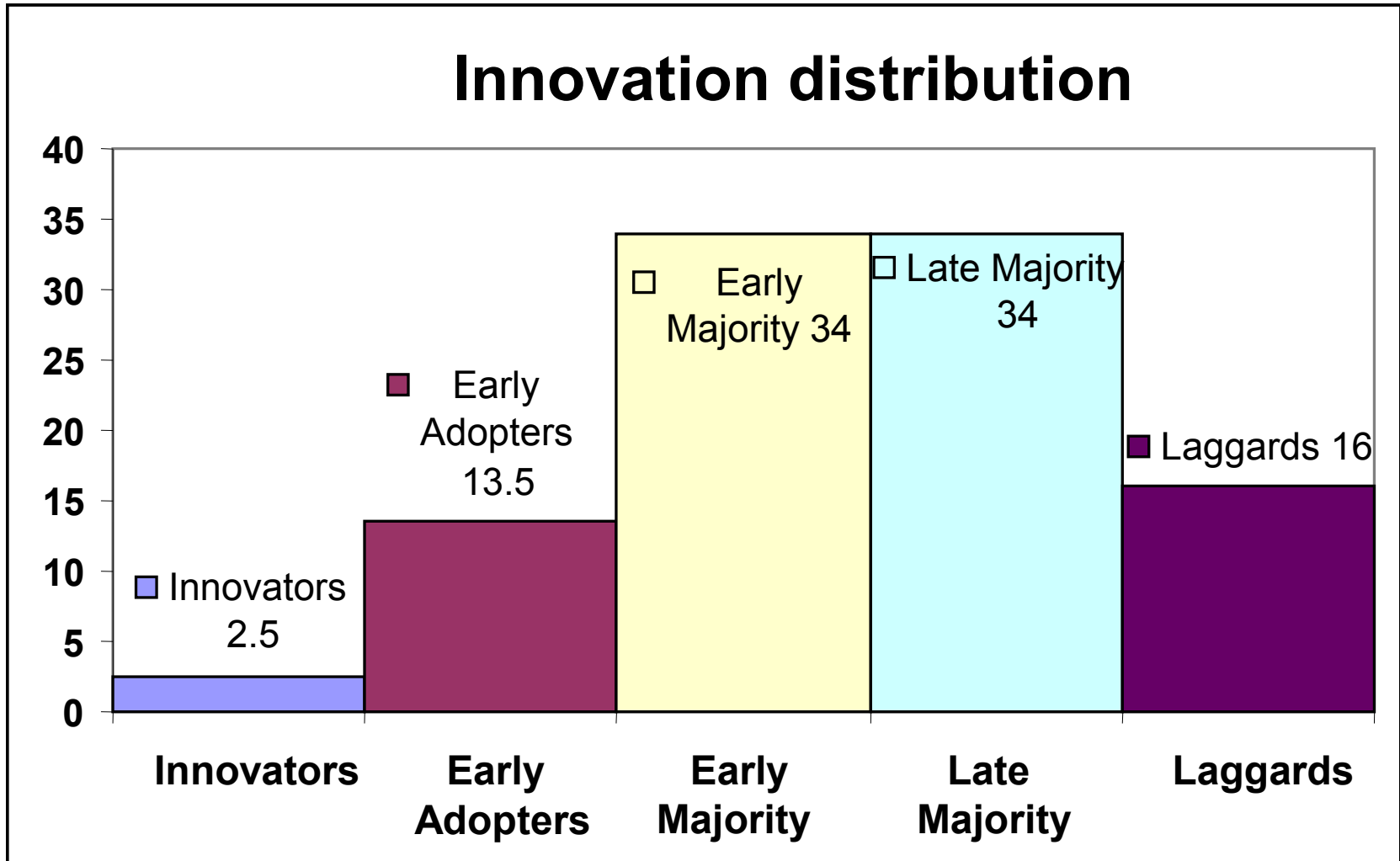
Research Design

- Literature study on:
 - mobile context
 - technology adoption models
- Survey (59 participants from Monash)
- Evaluation Interviews (6 participants)

Mobile Phone Context

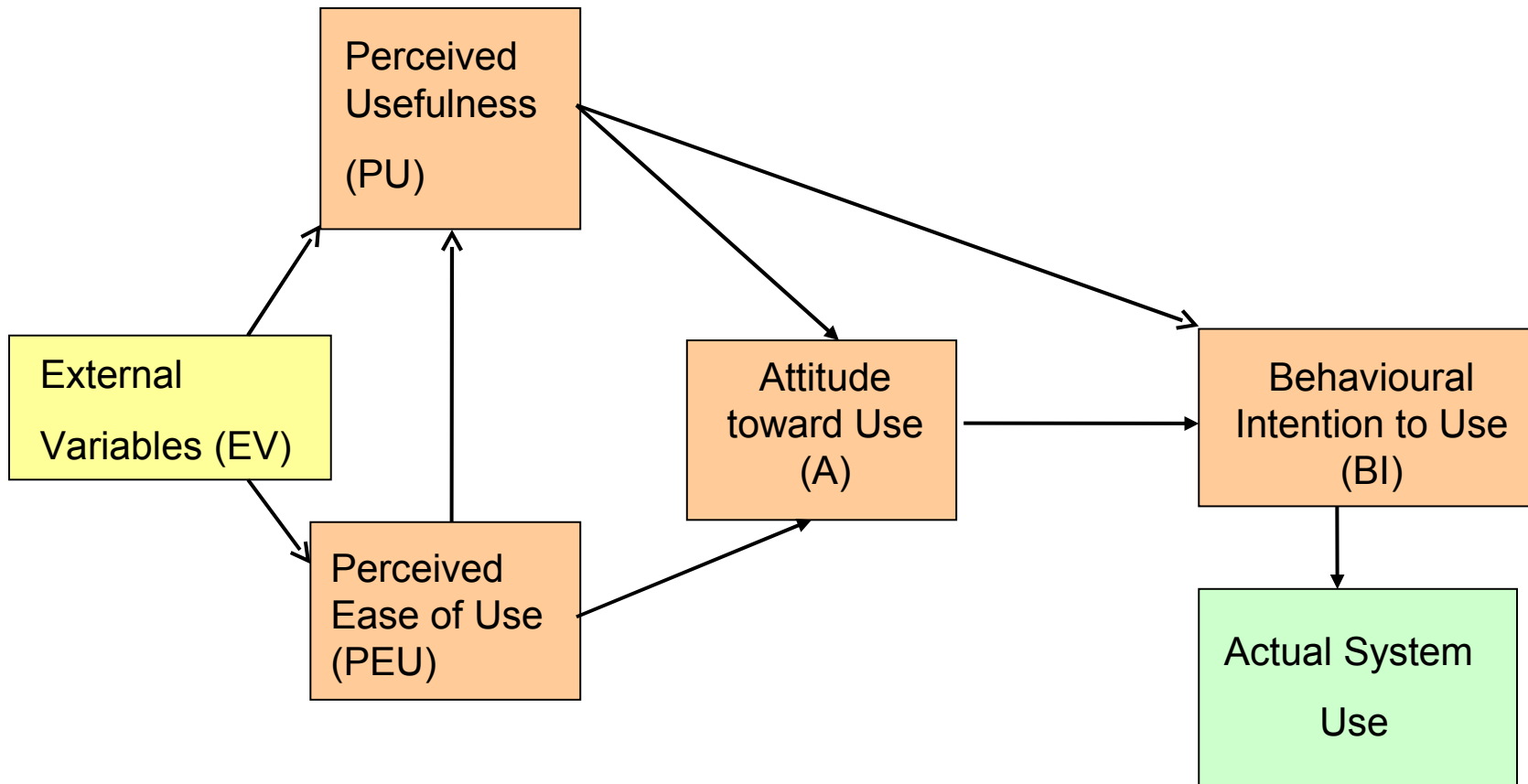


Rogers's Innovation Diffusion Model

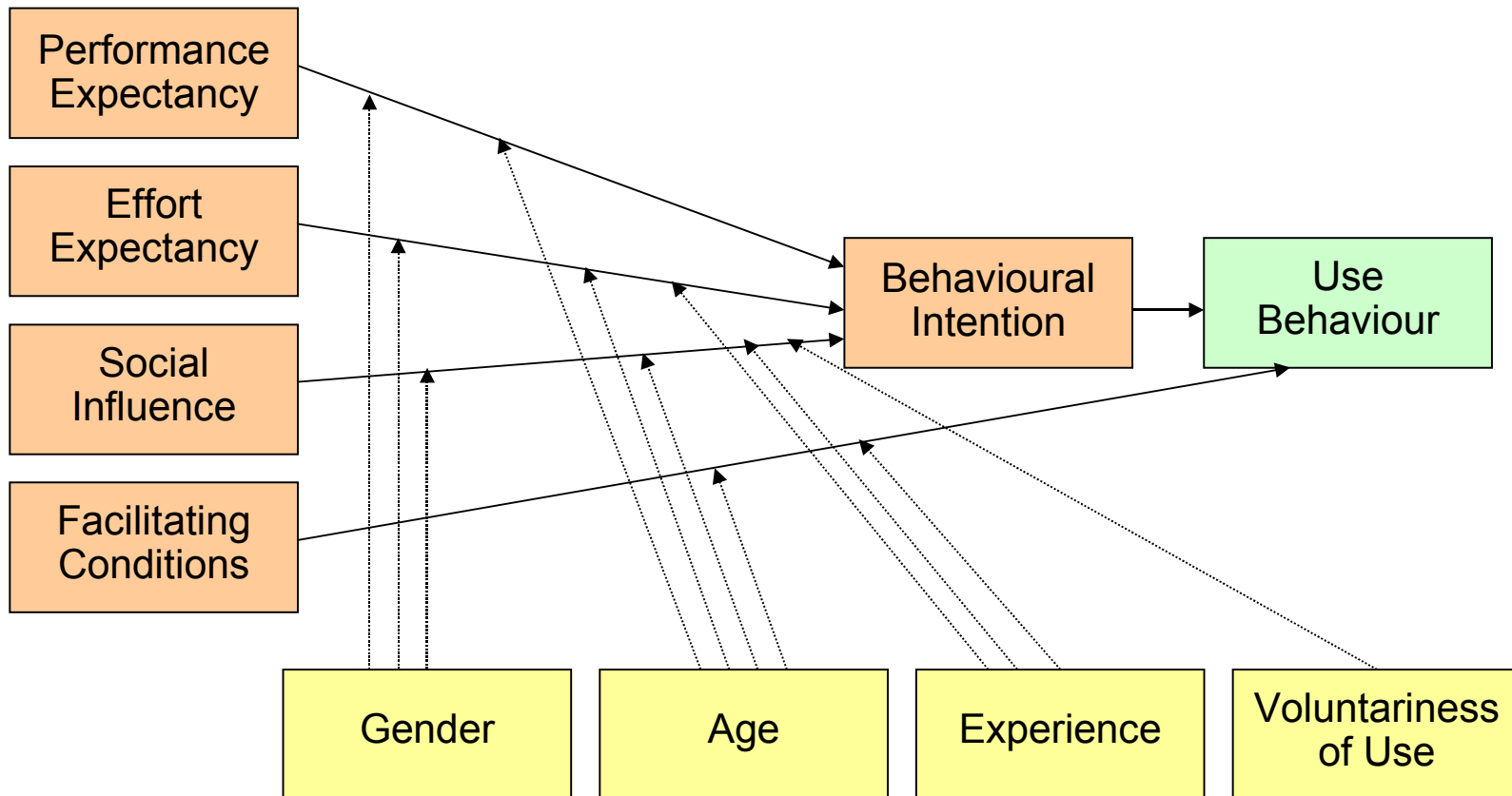


Technology Adoption Model

[Davis 1989]



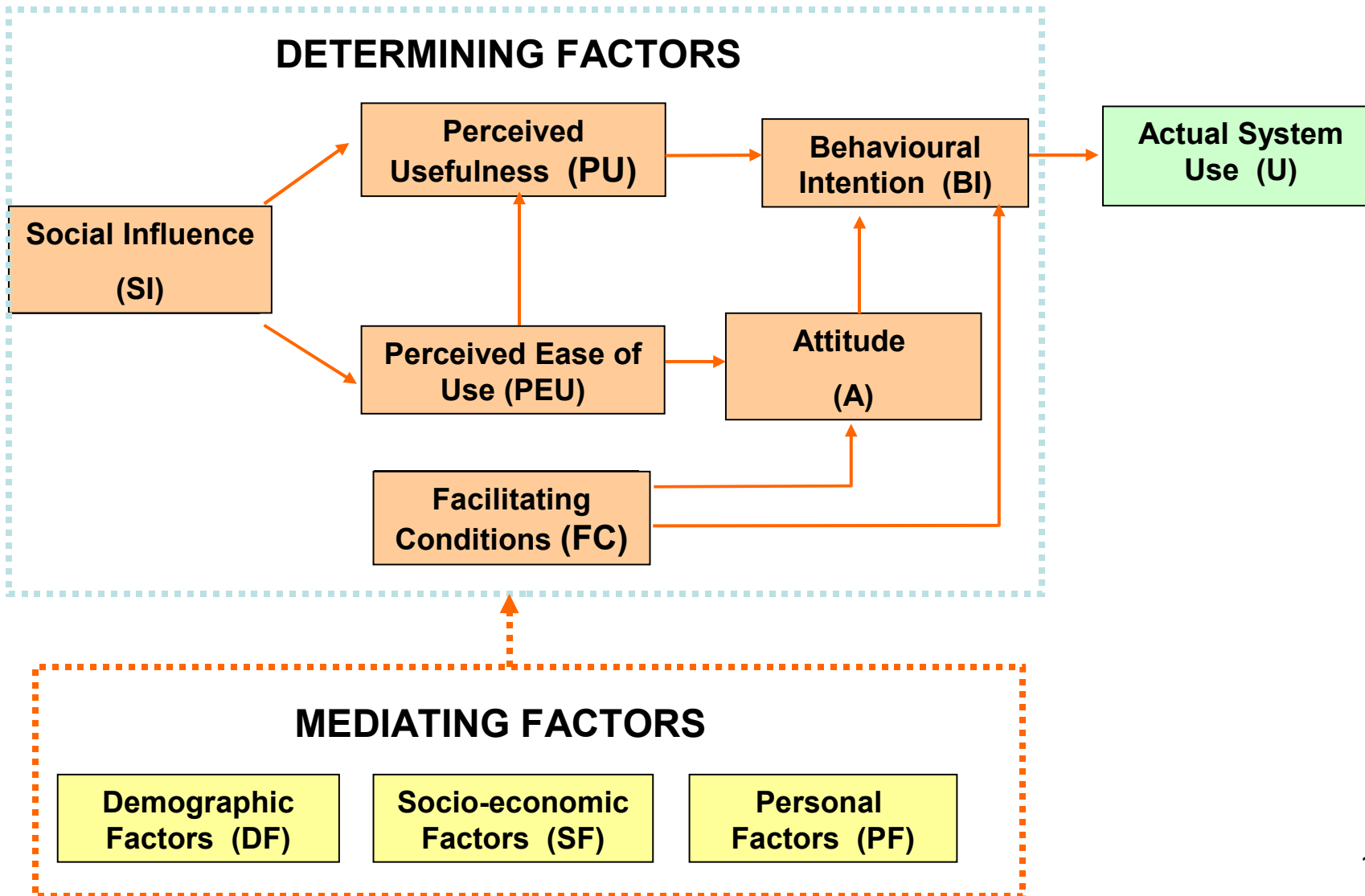
Unified Theory of Acceptance and Use of Technology Model [Venkatesh 2000]



Data Analysis

Factors	TAM 1989	UTAUT 2000	K&C 2000	S&W 2003	
Social influence	No	Yes	Yes	Yes	
Perceived ease of use	Yes	Yes	Yes	Yes	✓
Perceived usefulness	Yes	No	No	Yes	
Facilitating conditions (infrastructure)	No	Yes	No	Yes	
Attitude	Yes	No	No	No	
Behavioural intention	Yes	Yes	Yes	No	
Actual system use	Yes	Yes	Yes	Yes	✓
Demographic	External variables	No	Yes	Yes	
Socio-economic	External variables	No	Yes	Yes	
Personal	No	No	No	Yes	

Proposed Technology Adoption Model



Quantitative Results

			Personal Factor	Demographic Factor	Facilitating Conditions			
	PEU	PU	Tech_O	Tech_A	System Service	System Cost	Phone Cost	System Quality
PEU	1							
PU	.241	1						
Tech_O	.661**	.220	1					
Tech_A	.480**	.245	.389**	1				
System Service	.356**	.159	.358**	.294*	1			
System Cost	.286**	.334**	.154	.352**	.430**	1		
Phone Cost	.016	.248	-.124	.113	.161	.456**	1	
System Quality	.189	.256*	.177	.366**	.225	.393**	.108	1

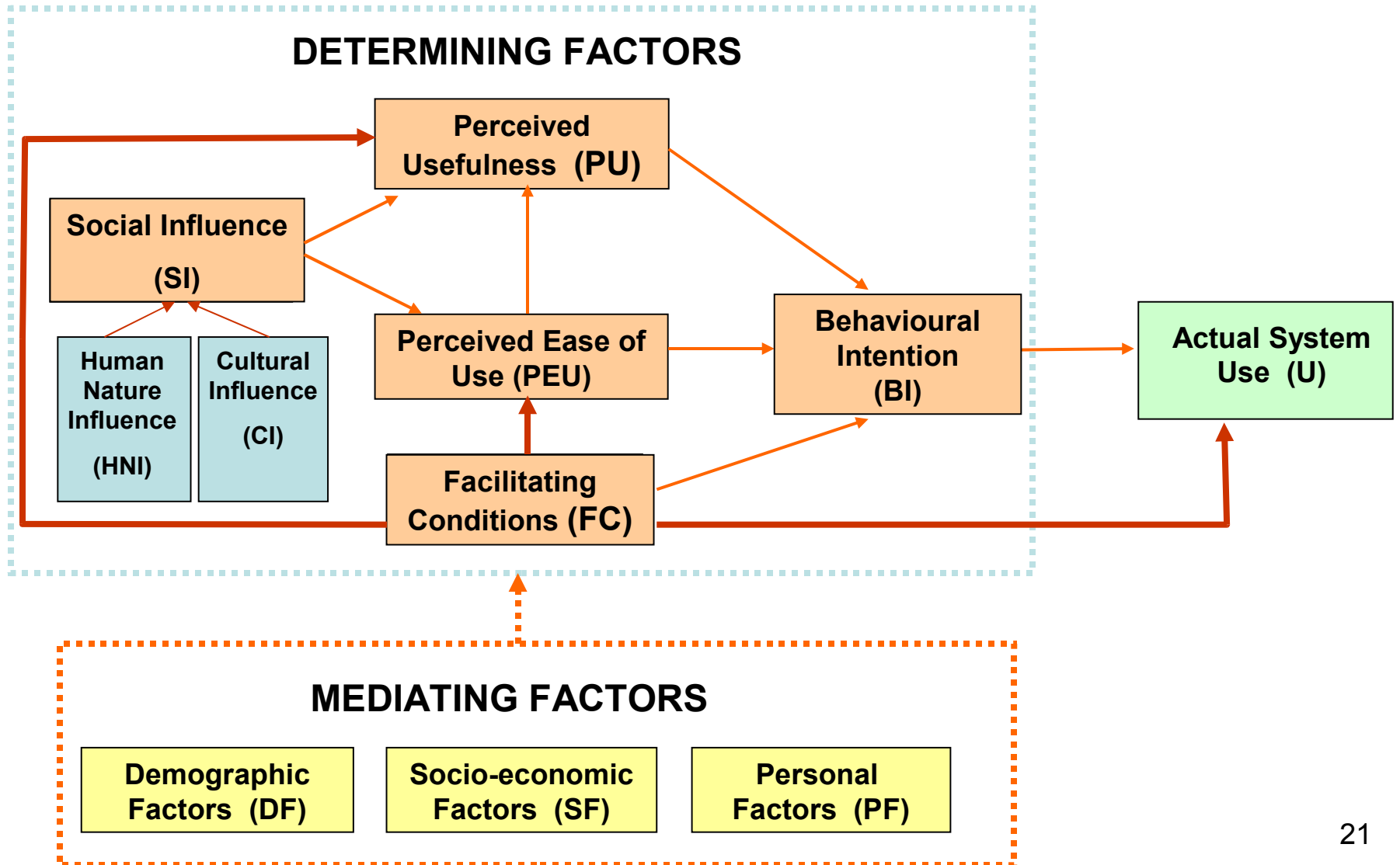
* significant values at 0.05 level

** significant values at 0.01 level

Quantitative Results

ATTRIBUTE	NUMBER OF SIGNIFICANT CORRELATIONS
System Cost	6
Tech_Advancement	5
System Service	4
Perceived Ease of Use	4
Tech_Orientation	3
System Quality	3
Perceived Usefulness	1
Phone Cost	1

Final MOPTAM



Conclusions:

Research Question 2

- Findings: Mobile phone technology adoption model is influenced by demographic, social and personal factors and **infrastructural** factors
- Contribution : Mobile phone technology adoption model (MOPTAM)
- Limitations of the research design
 - Self-reporting
 - Generalisability

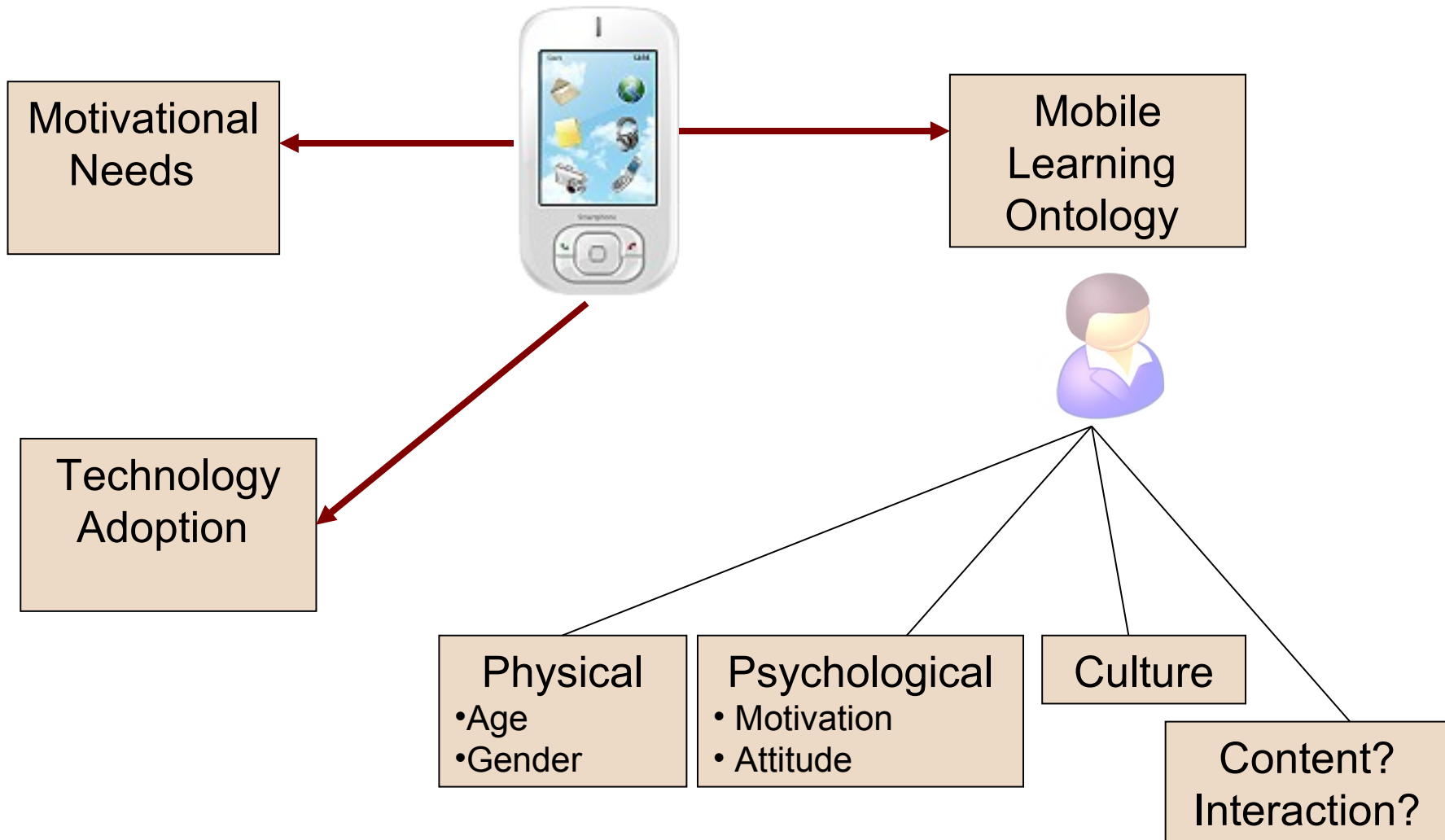


Findings for Development Informatics

- Motivational needs as basis of mobile phone usage
- Mobile phone technology adoption model (MOPTAM) – importance of infrastructure
- Ethnic culture no basis for distinguishing mobile phone usage



Future Research



Questions?

Acknowledgements:

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