

Interactions between face-to-face (F2F) and ICT contacts and the implications for telecommunication networks



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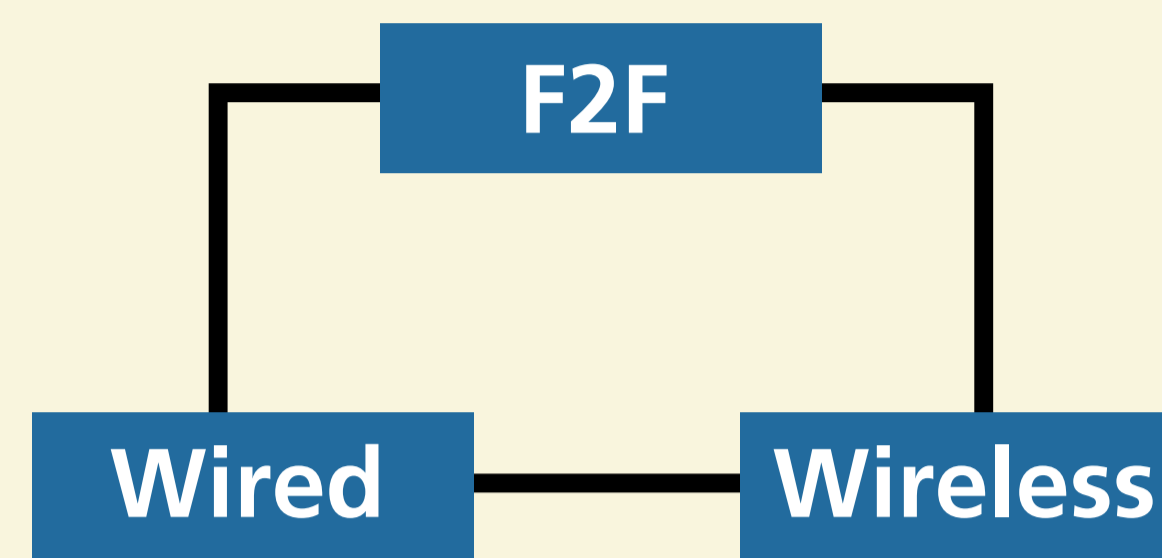
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Description of project

Our knowledge of the use of wired (e.g., landline phone) and wireless (e.g., mobile phone) communication modes is limited. This specifically holds for their use in concrete situations. Also knowledge gaps remain regarding how ICT and F2F contacts interact (e.g., substitution, generation).



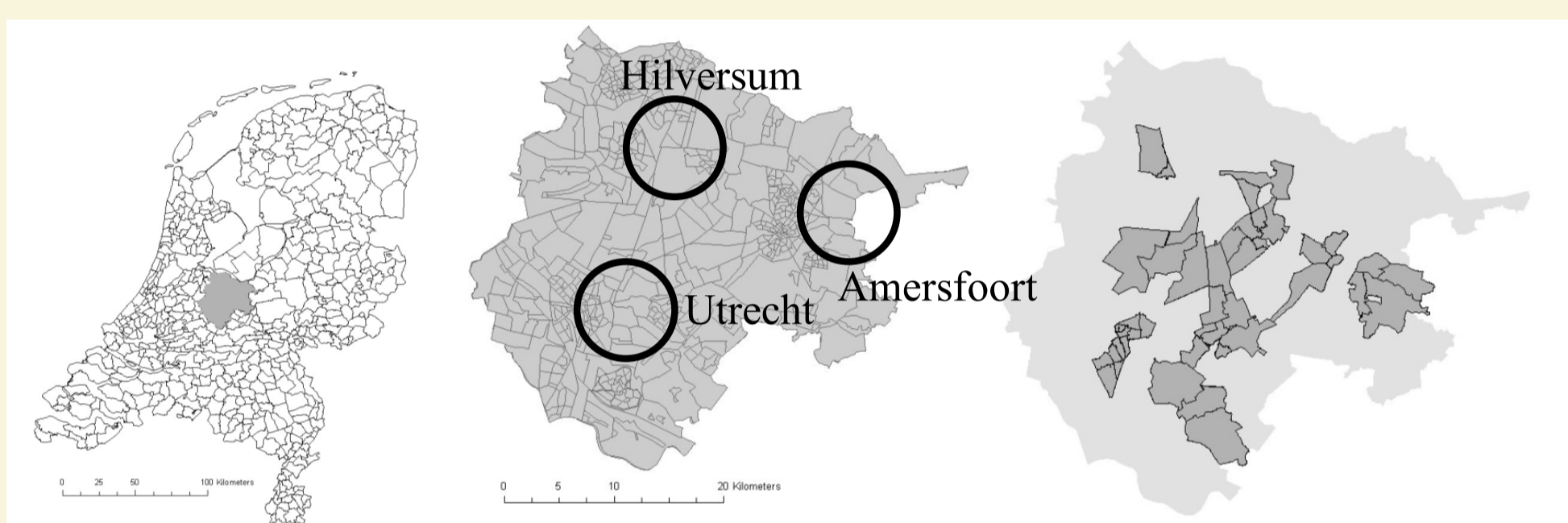
Aim

To study from a user perspective how and to what extent wired and wireless ICTs are used to communicate with social network members in general and in different concrete situations, and to gain insight to what extent F2F and ICT contacts interact. Based on the analysis implications for the planning and dimensioning of telecommunication networks will be formulated.

Data

A survey study among single and dual-earner households:

- A questionnaire (740 respondents).
- A 2-day combined activity, travel and communication diary (660 respondents).



Article 2: based on concrete situation 1 (submitted)

Discussing something confidential while travelling by train

Objective

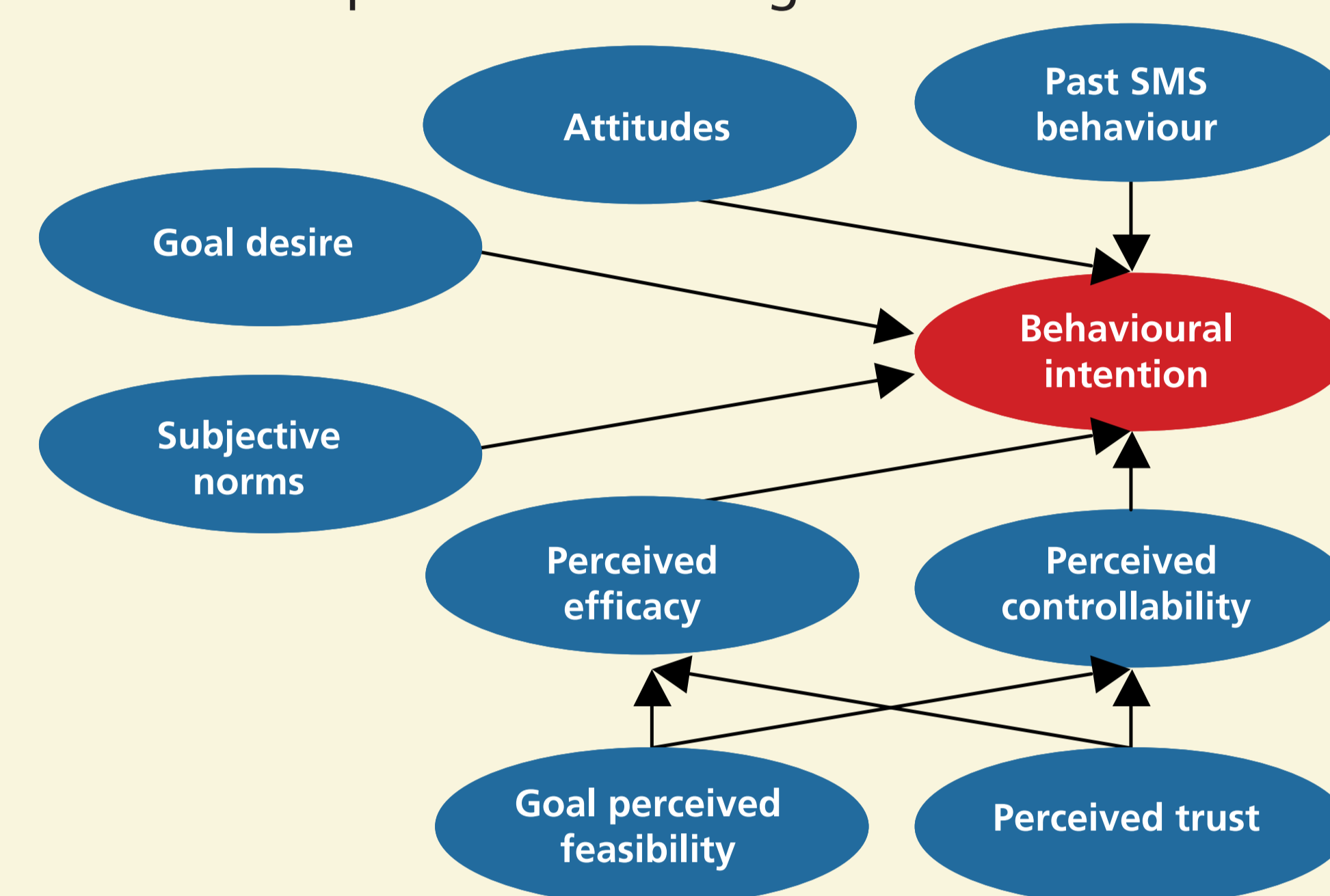
To gain greater insight into the intention to discuss something confidential with a distant person while sitting in the train, either by phone conversation or by SMS/e-mail.

Questionnaire

Questionnaire items based on a psychological decision making model: the extended model of goal directed behaviour (EMGB; Perugini and Conner, 2000)

Analysis Method

Structural equation modelling



Coming period

Article 3: based on concrete situations 2 and 3

Objective

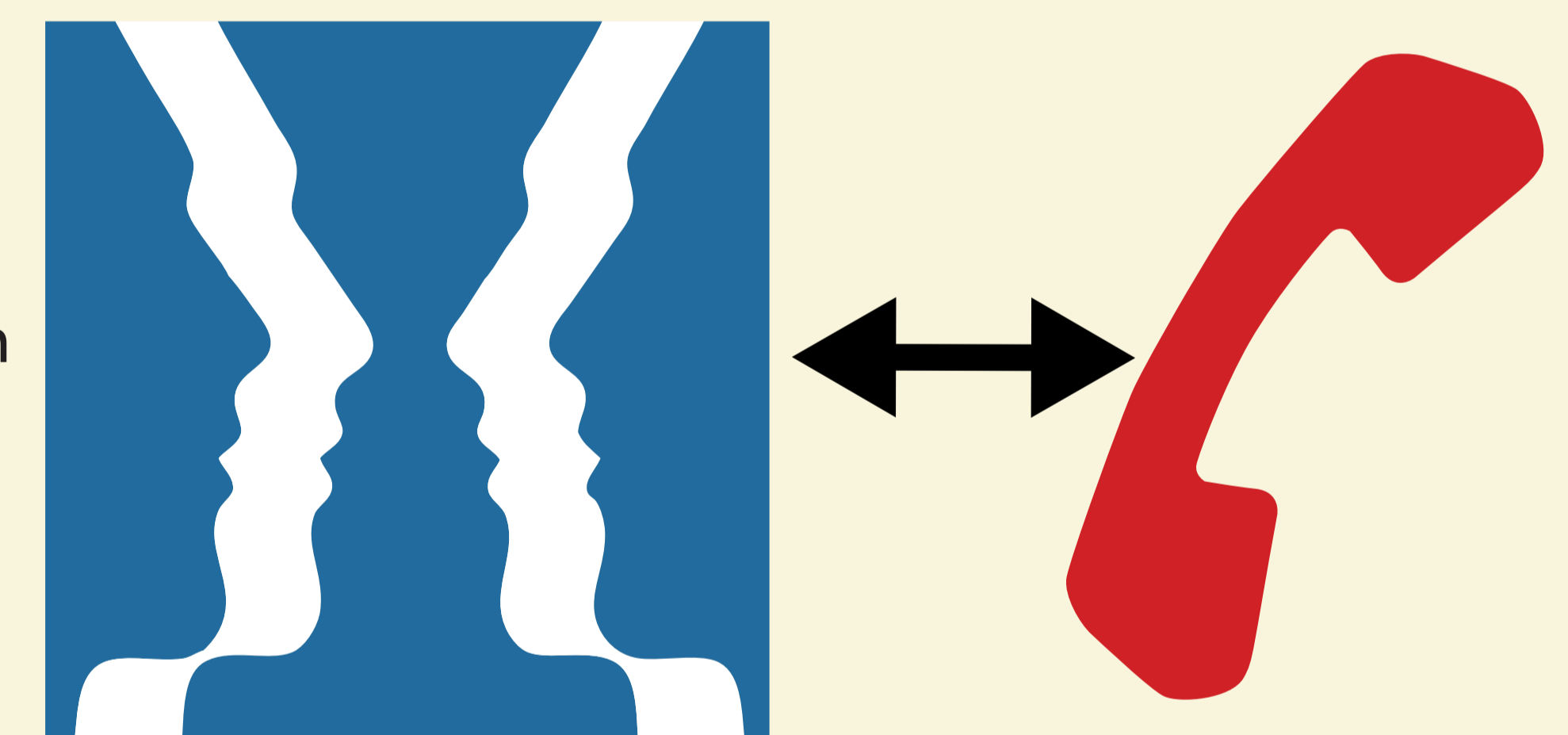
To gain more insight into people's process of decision making regarding the use of different communication modes when they intend to discuss something important but not urgent with a friend living at 10 (or 30) minutes of travel time.

Questionnaire

Questionnaire items based on a psychological decision making model: the EMGB.

Analysis Method

Structural equation modelling.



Article 4: Communication patterns in time and space

Objective

To gain greater insight into the communication patterns of people in time and space.

Data

Data from the 2-day combined activity and communication diary.

Discussion problem

How can insights in how (660) people communicate at different locations in time (i.e., micro level) be used to improve the planning and dimensioning of telecommunication networks (macro level)?

Background discussion

Currently, the planning and dimensioning of ICT networks is conducted using aggregate features: the number of inhabitants/workers, communication intensities. It is questionable whether such an aggregate place-based approach is the best way to proceed.



Concrete situations

- | | |
|--|--|
| Silent mode ↔ Audible mode | 1. Discuss something confidential while travelling by train. |
| F2F ↔ Phone | 2. Discuss something important but not urgent with a friend. |
| F2F ↔ SMS/e-mail | 3. Discuss something important but not urgent with a friend. |

Realized output

Article 1 (submitted)

F2F and electronic communications in maintaining social networks

Objectives

To gain more insight into:

- The interaction between F2F and electronic contacts
- The influence of information content and relational distance on the communication mode/service choice
- The influence of relational and geographical distance, and other factors, on the frequency of F2F and electronic contacts with relatives and friends.

Questionnaire

Respondents had to write down the F2F and electronic communication frequencies for the 5 most important relatives and friends.

Analysis method

Ordered probit analysis.

