

# Evaluating the users' invisible emotions in interactive situations

B.Cahour, P.Salembier, C.Brassac,  
JL.Bouraoui, B.Pachoud, P.Vermersch

«Elixir» STIC/CNRS-IRIT

- The observable/inferable emotions (externalized, public)
- The «invisible» emotions and feelings (internal, private)  
face management (Goffman), subtle feelings ...  
no observable cues -> subject's verbalizations

User-centred techniques for evaluating affective experiences

How to approach the lived experience ?

Development of **qualitative methods of interview**  
(psychology and ergonomics)

Objective :

Avoiding reconstruction, justification and generalization

Recall as vivid as possible

Embodied discourse (not general discourse)

>> reliability and exhaustivity

Emotions and other affective states (pleasant/unpleasant,  
adhes<sup>o</sup>/reject<sup>o</sup>, associat<sup>o</sup>/dissociat<sup>o</sup>...)

their link to action, decision, thinking & relation

2 methods

- **Explicitation interview** (Vermersch 1994)

Psycho-phenomenology (actions)

becoming aware of what was lived ; reflective act  
from prereflected to reflected consciousness

- >> questioning the sensorial context ; not inducing the responses and access mode (auditive, visual...); technics for asking information about their doing/thinking/feeling ...
- >> complex interview >> training of several days/weeks

- **Self-confrontation interview**

Video trace of the agents and environment

Mnesic support

Stopping the video and questioning about what was lived

# Observable and unobservable emotions in a mediated interaction

Collaborative buying of a jewel for a friend, by Marie and Agnes  
Collective decision, negotiation processes

Remote and mediated communication : audio and video

Marie in the shop , Agnes outside

they talk and Marie shows the jewels to Agnes

Data :

- the video of the interaction (4 cameras) ; 15 mn
- 2 explicitation interviews ; 2x1h
- 2 self-confrontation interviews ; 2x1h30

Affective state during showcases changes :

**Observable** data \* and **experiential** data may be :

- congruent : positive/positive, negative/negative...
- compatible : neutral/positive, neutral/negative...
- contradictory : positive/negative

\* evaluated by 10 judges

Video : sequences of interaction (observable data) + interviews

- Change showcase 1 -> 2

Agnès observable affect (10 judges): 7 neutral\_

Agnès verbalized affect : negative (rushed, dissociated, pushed)

too rapid move of the camera ; no control

-> compatibility

- Change showcase 2 -> 1

Agnès observable affect (judges): 9 neutral/positive

Agnès verbalized affect : negative (frustrated);

choice of showcase (but agreement for the choice)

-> contradiction

- Change showcase 2 -> 3

Agnès observable affect (judges): 9 neutral/positive

Agnès verbalized affect : positive

-> congruency

## Conclusion

Interest in identifying socially displayed emotions  
in simulating emotions (ECAs)

-> facial, gestural, vocal observable cues

Interest in identifying what is lived by the user/subject in a  
HC/HH interaction ; not necessarily public  
Complex link emotion/cognition/relation

Interest in disambiguating/interpreting observable behaviours  
and in mapping observable cues / lived experience

-> Need of developing specific interview technics for  
approaching the complexity of affective and cognitive  
processes