Affective Self-Regulation in Day-to-Day Life: Applying Mobile Technology as a Research Instrument

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Purposes

1. Development of a technology that makes micro-longitudinal components feasible in heterogeneous samples (e.g., large-scale household panels)

Requirements:
- Manageability in large and widely distributed samples (i.e., mobility, management facilities for data collection and storage)
- Flexibility in easy setup, accommodation of various items and task formats, implementation of complex assessment schedules
- Ecological validity

2. First application of technology in a study on the development of day-to-day affective self-regulation

Working Model

Antecedents
- Age-associated
- Affect attitudes
- Affect knowledge

Contextual
- Location & activity
- Social partner
- Hassles & uplifts

Phenomenon
- Affective Self-Regulation
  - Regulation goals
  - Regulations strategies
  - Regulation flexibility
  - Attention requirements

Outcomes
- Short-term
  - Affect trajectories (e.g., regulation efficiency)
- Longer-term
  - Social adjustment
  - Well-being

Technology Development: Experience Sampling with Mobile Phones

- Java-client on mobile phones
  - Control of assessment schedule
  - Display of items and tasks
  - Input of responses
  - Immediate data upload to server

- Server
  - Data storage
  - Web interface
    - Study setup and modification
    - Display of individualized assessment schedules
    - Visualization of response compliance

- Possible extensions
  - Porting to many different cell phones (i.e., use of participants’ own phones as study devices)
  - Event-contingent (“interactive”) experience sampling
    - Example: Response in one person triggers measurement in another person (e.g., investigation of emotion knowledge)

Study in Progress:

Day-to-Day Affective Self-Regulation Across the Lifespan

Background

- Affective self-regulation: Ability to influence which affective states to have, when to have them, and how to experience and express them (e.g., Gross, 1999).

- Affect regulation competence may improve throughout adulthood (e.g., Gross et al., 1997, Lawton et al., 1993; but see Kunzmann et al., 2005).

- Little evidence on age-related changes in affective self-regulation as it occurs in people’s day-to-day lives and natural environments (but see Carstensen et al., 2000).

Central Predictions

- Deliberate affective self-regulation varies within persons. It is more likely (a) when affect intensity is high, (b) in the presence of strangers or not-so-close persons, and (c) when public self-awareness is high.

- The majority of affect-regulation attempts follow the hedonic principle. Exceptions may be more likely for some affects than for others (e.g., down-regulation of pride versus interest). Adolescents may be most likely, and older adults, least likely to show exceptions to the hedonic principle (e.g., to dwell on negative affects).

- More flexibly individuals tailor affect-regulatory attempts to situational demands, the more effective they are, on the average, in regulating their affect, and the better is their social adjustment.

- Affect regulation effectiveness increases from adolescence to older adulthood. This is not only due to differences in exposure to affect-eliciting events, but also to differences in affect attitudes, affect knowledge, and affect-regulation flexibility.

- Attentional demands of affect-regulatory attempts are stronger the more intense the to-be-regulated affect is, and increase with age from adolescence to older adulthood.

Method

- N = 360; age range = 14 to 75+ years, stratified by age, gender, education
- T1 (Questionnaires) → Experience Sampling → T2 (Questionnaires)
- 54 experience samples
- 3 x 3 days, 6 daily assessments, additional days when missings
- Assessment of momentary context, hassles and uplifts, affect, regulation goals and strategies, and numerical memory updating

Planned Extension

- Combination with ambulatory psychophysiological monitoring in daily life (Co-PI: Viktor Müller)

- Assessment of:
  - Physical activity (accelerometry)
  - Respiration
  - Cardiovascular activation (e.g., additional heart rate, vagal tone)

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