A Programmatic Approach to Experience Sampling Methods

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Understanding experiences at work and beyond

One person’s response on a typical survey
Understanding experiences at work and beyond

One person’s responses at the end of each day for 2 workweeks (ESM)

Fantastic

One person’s response on a typical survey

How's Work Today?
Understanding experiences at work and beyond

- Supervisor complimented work
- Co-worker was nice to me
- Everyone thanked me for recent work
- Freeway accident = 1 hour commute
- Had to redo much of last week's work
- Co-worker was still nice to me

ESM Survey
Understanding a day’s experiences at work

How's Work Right Now?

8:00 AM 10:00 AM 12:00 PM 2:00 PM 4:00 PM

Finding it hard to wake up
Coffee!
Pile of new work waiting on return from lunch
Supervisor complimented work
Completed most of what was on my desk

Fantastic 7
Soul-Crushingly Bad 1

Monday's ESM
Understanding a single experience at work

How's Work? Continuous Assessment

- Continuous Ratings: Monday, from 11:55 AM to 12:05 PM

- Observed the pile of new work waiting on return from lunch
- Coping or Recovery

Extreme Happiness

No Happiness
What is and what is not ESM?

- Experience Sampling Methods (ESMs)
  - Narrow use: Csikszentmihalyi’s approach
  - Broad use: Includes many versions of “experiential” methods
    - e.g., Ecological Momentary Assessment, Daily Diary Studies, Day Reconstruction Method (and variants), Ambulatory Assessment

- Three elements:
  - Occurs in a naturalistic setting ("in situ")
  - Representative sample of experiences
  - Emphasizes immediacy of the experiences

- Versions of ESM vary in their adherence to these elements
Practical considerations with all ESMs

- Collection tools needed (smartphones, signals, surveys)
- Participant burden
- Other effects of numerous repeated measures
- Consideration of work (or life) context
- Selection of measures
- Maintaining participant commitment
Functional Varieties of ESMs

A CLOSER LOOK AT WHAT’S IN USE
ESMs once per day

- Daily ESM
  - Usually end of day
  - Aggregated judgments
  - Links experiences from one day to the next (across days)

- Day Reconstruction Method (and variants)
  - Guides respondent through each episode of the day
  - Original method occurred at the end of only one day
  - Recent variants repeat the procedure across multiple days
  - Links experiences across – and potentially within – days
ESMs within days

- **Momentary ESM**
  - Original method; obtains a random sample of experiences within each day (usually 3-5 times)
  - Items emphasize current states rather than prior experiences
  - Links experiences primarily within days

- **Episodic ESM**
  - Slight variation; multiple samples per day structured around relevant episodes
  - Items emphasize judgments of each episode, rather than immediate states
  - Often blended with items assessing current states
Continuous Rating Assessments

- Focuses on one common or interesting experience
  - Hones in on one or more aspects of the experience continuously over a short period of time
  - Usually in the lab, but extensions to field are possible

- Leverages technology
  - Basic approaches:
    - “immediate retrospection” or observer ratings
  - Advanced approaches:
    - physiological measures; facial expression coding; discourse analysis
Conceptualizing ESM varieties

- Naturalistic Setting
- Representative Experiences
- Daily ESM
- DRM
- Episodic ESM
- Momentary ESM
- CRA
- Immediacy of Experience
Programmatic use of ESMs

WHERE TO START
Starting from Scratch

- Let’s say you’ve thought of an experience or phenomenon to study
  - Example: gratitude and collaboration
- How well do you know your constructs?
  - Specifically, do you understand how they change over time?
    - Frequencies on a day-to-day basis? Potential cycles, trends?
    - Ideally based on theory or empirical evidence
- Let’s assume (as will often be true) that you have little info to go on; here are some recommended steps...
Step 1: Explore Temporal Properties

- Once-a-day ESMs can canvas a wider timeframe
  - Can identify less frequent events, states, or behaviors
  - Recall biases likely less important for broad features of experience
- Consider just how infrequent the experience might be
  - If it is likely <3 times per week, use Daily ESM over multiple weeks
    - Advantages: connects experiences across days; less burdensome; captures weekly trends and cycles
  - If it is likely >3 times per week, consider repeated DRM for one week
    - Advantages: connects experiences across days; some capacity to link experiences within days; captures weekly and some daily trends and cycles

Yes, this number is somewhat arbitrary
Step 2: Temporally Informed Choice of ESM

- Step 1 provides crucial information for next study
  - That is: stay broad or dig one layer deeper?
- If Step 1 revealed slower pacing of all constructs of interest…
  - Then Daily ESM, DRM, or Repeated DRM is appropriate
- If Step 1 revealed evidence of fast pacing for one or more constructs of interest…
  - Then Momentary or Episodic ESM is a good next step
Step 2: Temporally Informed Choice of ESM

- Choice here involves considering the importance of obtaining representativeness of experiences
  - If representativeness is critical, Momentary ESM is the choice
  - But, Momentary ESM has an often overlooked disadvantage…

- Difficult to trace the continuity of an experience within- or across days
  - Example: episodic vs. immediate state gratitude
  - Consequently, for many purposes, Episodic ESM will be preferable
Step 3: Strategic Extensions of ESM

- At this point, there are many directions one might head
- Isolating and dissecting crucial episodes
  - Step 2 might highlight candidates for CRA
- Consider “big data” extensions of ESM
- Addressing causality
  - Incorporating elements of experimental and quasi-experimental design
- Examine higher levels of analysis
  - Micro-foundations, well built in the previous two steps, can help specify strong multilevel models
Final Thoughts

- But what if I can’t start from scratch?
  - Many ESM researchers won’t be able to follow these steps
  - Already started one or more ESM studies
  - Time and/or budget constraints

- Hopefully, there’s guidance here for any stage of research!