Day Reconstruction Method

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Approaches to Well-being

• How people evaluate their lives
  – “How satisfied are you with your life as a whole?”
  – Basis of most of what we know about well-being
  – Answers
    • highly context dependent
    • poorly related to objective conditions

Approaches to Well-being

• How people live and experience their lives
  – Time use & experience
    • How much time spent doing what?
    • How does it feel?
  – Pioneered by Tom Juster in 70’s
    • “An important ingredient in the production and distribution of well-being is the set of satisfactions generated by activities themselves” (Juster, 1985, p. 333)

Day Reconstruction Method (DRM)

• Builds on Juster’s approach
• Takes advantage of last 20 years of cognitive research into reports of emotions and experience
  – Juster: global enjoyment ratings for classes of activities (“dislike very much” to “enjoy a great deal”),
  – DRM: tailored affect profiles for specific episodes of yesterday, which are “reinstatialed” in memory in some detail

DRM

Step 1

• R’s reconstruct “yesterday” on a private form
  – List major meaningful episodes from getting up to going to bed, noting some details
  – Can insert new episodes as later ones prompt memories of earlier ones
  – The interlinked structure facilitates rich “reinstatement” of the last day.
• R’s indicate approximate times (to estimate duration)
• R’s keep this form, which serves as their own memory prompt for later questions.

DRM

Step 2

• R’s complete a form for each episode, reporting
  – Where
  – Who with
  – What
  – How they felt during the episode
• Specifics tailored to the purpose of the study
DRM Episode Questions

Where were you? (check one)
- At home
- At work
- Somewhere else

Who were you interacting with (including on the phone, etc)? Check all that apply.
- no one
- spouse/significant other
- my children
- friends
- parents/relatives
- co-workers
- boss
- clients/ students
- other people

What were you doing? (check all that apply)
- commuting
- working
- shopping
- preparing food
- doing housework
- taking care of your children
- eating
- pray/worship/meditate
- socializing
- watching TV
- nap/resting
- computer/internet/email
- relaxing
- on the phone
- intimate relations
- exercising
- other (please specify)

DRM Feelings

How did you feel during this episode?

Not at all Very much

<table>
<thead>
<tr>
<th>Feeling</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impatient for it to end</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Happy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Frustrated/annoyed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Depressed/stricken</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Competent/capable</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Hazed/pushed around</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Warm/friendly</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Angry/hostile</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Worried/anxious</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Enjoying myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Criticized/put down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Tired</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Data Collection

- Initially tested with diverse convenience samples
  - Full day takes about 1 hour
- Currently adapted for representative surveys conducted by Gallup and WHO
  - Different parts of the day for different R's
  - Detailed reports on random subset of episodes
  - 10-15 minutes
- Feasible task, independent of R's education

Analyses

- Feelings as a function of episode characteristics
- Duration weighted to characterize day
- Provides rich descriptions of the subjective experience related to different activities, situations, interaction partners, etc.
- Can be related to background variables
  - e.g., SES, work conditions, personality

Validation

- Gold standard for measuring momentary experience is ESM
- Against ESM data from the same person for the same day
- Against ESM profiles from other persons for the same type of episode
- Non-obvious ESM patterns
  - Can we reproduce non-obvious patterns observed in ESM?
  - E.g., diurnal patterns
Tiredness

- People predict a linear increase in tiredness over the course of the day.
- ESM shows
  - you start out tired
  - tiredness drops over the morning
  - is lowest at lunch
  - increases after that
- DRM replicates this pattern, which R’s can’t report introspectively (Kahneman et al., *Science*, 2004)

“Tired” in DRM and ESM

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Negative Affect

- People do not predict diurnal patterns for negative affect, which they see as situation driven.
- ESM shows diurnal pattern
- DRM replicates it – without introspective insight.

Negative Affect in DRM and ESM

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Validity

- More examples in Kahneman et al., *Science*, 2004
- DRM replicates non-obvious ESM findings
- ESM and DRM profiles show good correspondence

Some Illustrative Observations
### Activities & Affect

<table>
<thead>
<tr>
<th>Activity</th>
<th>Net Affect</th>
<th>% Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimate relations</td>
<td>4.26</td>
<td>1.6</td>
</tr>
<tr>
<td>Relaxing</td>
<td>3.71</td>
<td>14.3</td>
</tr>
<tr>
<td>Socializing</td>
<td>3.59</td>
<td>16.6</td>
</tr>
<tr>
<td>Voting</td>
<td>3.35</td>
<td>16.7</td>
</tr>
<tr>
<td>Prayer/meditate</td>
<td>3.26</td>
<td>7.6</td>
</tr>
<tr>
<td>Watching TV</td>
<td>3.17</td>
<td>15.2</td>
</tr>
<tr>
<td>Preparing food</td>
<td>2.80</td>
<td>3.7</td>
</tr>
<tr>
<td>Shopping</td>
<td>2.51</td>
<td>2.0</td>
</tr>
<tr>
<td>Childcare</td>
<td>2.55</td>
<td>7.9</td>
</tr>
<tr>
<td>Internet/email</td>
<td>2.50</td>
<td>11.0</td>
</tr>
<tr>
<td>Doing housework</td>
<td>2.30</td>
<td>14.7</td>
</tr>
<tr>
<td>Working</td>
<td>2.05</td>
<td>49.5</td>
</tr>
<tr>
<td>Commuting</td>
<td>2.10</td>
<td>10.5</td>
</tr>
</tbody>
</table>

Net affect = positive minus negative (possible range -6/6)

N = 909 employed women

24% African-American

22% Hispanic

48% White

Household income $54.7k

### “Enjoying Myself”

#### Features More Correlated with Job Satisfaction Than Job Affect (DRM)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Satisfaction &gt; Affect</th>
<th>Affect &gt; Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current job compared to previous</td>
<td>.31</td>
<td>.17</td>
</tr>
<tr>
<td>Low status job (-)</td>
<td>.23</td>
<td>.11</td>
</tr>
<tr>
<td>Overqualified for my job (-)</td>
<td>.20</td>
<td>.12</td>
</tr>
<tr>
<td>Requires specialized education/training</td>
<td>.20</td>
<td>.09</td>
</tr>
<tr>
<td>Can make decisions that help people</td>
<td>.20</td>
<td>.11</td>
</tr>
<tr>
<td>Household income</td>
<td>.20</td>
<td>.04</td>
</tr>
<tr>
<td>Excellent benefits</td>
<td>.17</td>
<td>.09</td>
</tr>
</tbody>
</table>

#### Features Less Correlated with Job Satisfaction Than Job Affect (DRM)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Satisfaction = Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Disposition</td>
<td>.25</td>
</tr>
<tr>
<td>Constant pressure to work fast (-)</td>
<td>.19</td>
</tr>
<tr>
<td>Had trouble staying awake, etc (-)</td>
<td>.08</td>
</tr>
<tr>
<td>Constant attention to avoid mistakes</td>
<td>.04</td>
</tr>
<tr>
<td>Can chat with other workers while on job</td>
<td>.04</td>
</tr>
<tr>
<td>Exposed to offensive noise (-)</td>
<td>.04</td>
</tr>
</tbody>
</table>

### Global vs. Episodic: How Much Do People Enjoy Their Kids?
Direct Ratings

• Juster and colleagues, 1975 survey:
  – 28 activities rated from "dislike very much" (0) to "enjoy a great deal" (10).
• Activities with one's children top the list (ranks 1-4)
• Grocery shopping and cleaning the house at the bottom (ranks 27 & 28)
• But ....

Top-down vs. Bottom-up

<table>
<thead>
<tr>
<th>Direct Ratings</th>
<th>Momentary Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socializing</td>
<td>10</td>
</tr>
<tr>
<td>Taking care of your children</td>
<td>9.6</td>
</tr>
<tr>
<td>Eating</td>
<td>9.5</td>
</tr>
<tr>
<td>Watching TV</td>
<td>9.4</td>
</tr>
<tr>
<td>Grocery Shopping</td>
<td>4.4</td>
</tr>
<tr>
<td>Housework</td>
<td>4.7</td>
</tr>
<tr>
<td>Socializing</td>
<td>8.6</td>
</tr>
<tr>
<td>Eating</td>
<td>8.5</td>
</tr>
<tr>
<td>Watching TV</td>
<td>8.5</td>
</tr>
<tr>
<td>Preparing food</td>
<td>8.3</td>
</tr>
<tr>
<td>Grocery shopping</td>
<td>5.7</td>
</tr>
<tr>
<td>Taking care of your children</td>
<td>5.7</td>
</tr>
<tr>
<td>Housework</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Why?

• Global and episodic reports result in different rankings
• Likely key contributors:
  – Organization of memory
  – Memory bias
  – Social desirability

Organization of Memory

• Activities are encoded and represented by their key goals and features
  – Cooking while the kids are present is still "cooking"
• What's recalled for "kids" are kid-focused activities
  – Reading stories, watching movies...
• Activities that are not kid-focused are missed
  – But make up most of the time spent with kids

Salient Memories

• Global reports are based on memorable episodes
  – Memorable episodes are rarely typical – they are more extreme.
• The DRM’s episodic reports are based on the specific episodes of yesterday
  – Avoids memory bias
Social Desirability

• Negative global judgments are less acceptable than negative episodes

• Compare
  – “I don’t like being with my kids” (global)
  – “My kids were a pain last night” (specific episode)

Conclusions

• Global and episodic reports paint different pictures
• Assessments should be based on specific and recent episodes
• DRM does so and combines affect reports with time use data, providing a rich characterization of people’s daily experience

Event Reconstruction Method (ERM)

• Does not focus on yesterday
• Asks for the last instance of an activity
  – E.g., last time you went out for dinner
• Reproduces the DRM affect profiles
  – provided the episode is recent
• Does not provide time use information
  – Which can be taken from other sources
• Has lower respondent burden and can capture less frequent activities