Methodological Trends in the Study of Emotions

Allison S. Gabriel, Ph.D.

Thomas J. Howatt Chair in Management

Faculty Director, Center for Working Well

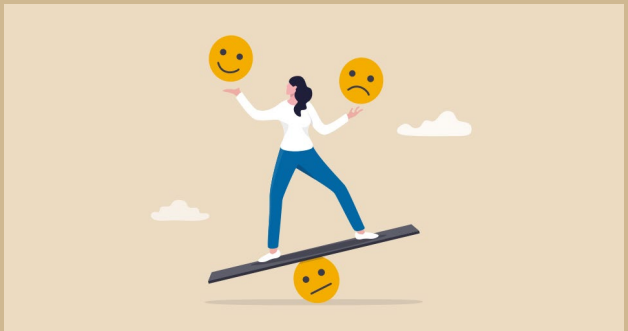
November 15, 2024

PURDUE UNIVERSITY | Mitch Daniels School of Business

Structure of Today's Talk

What Are We Studying?

- ✓ Models of Affect/Emotions
- ✓ Models of Emotional Labor
- ✓ Model of Emotion Regulation



How Are We Studying Emotions?

- ✓ **Dynamic**/Experience Sampling
- ✓ **Dyadic**/Experiments & CRA
- ✓ **Conjoint**/Latent Profile Analysis

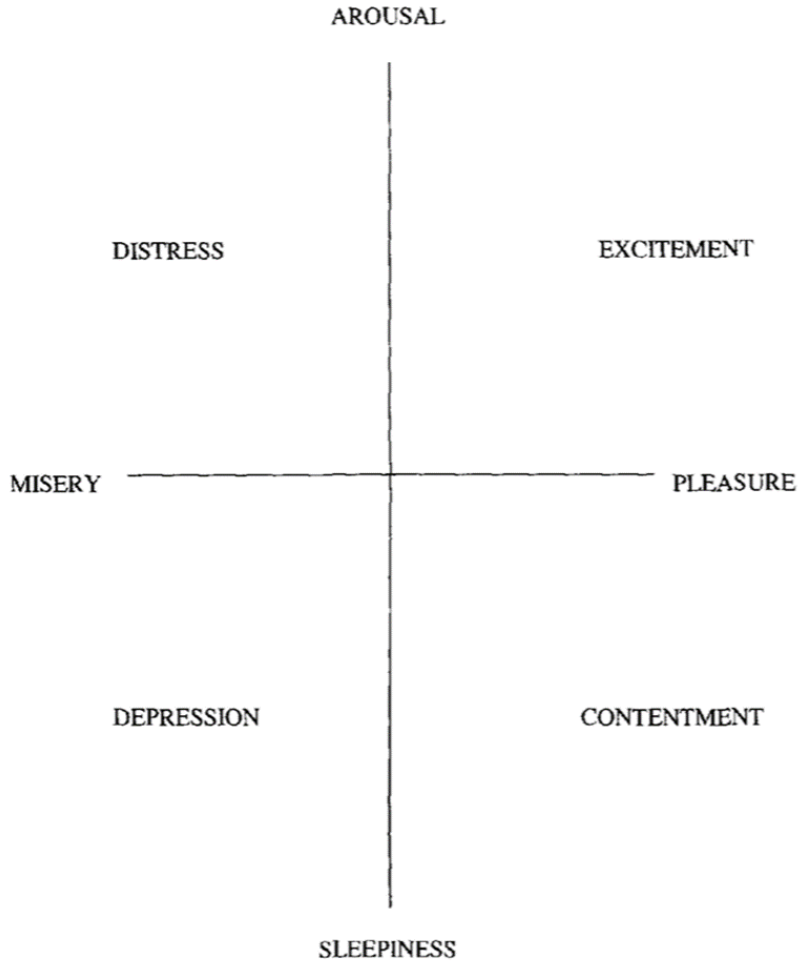
**From Gabriel, Thapa, Dutli, & Tay - forthcoming*

What Can We Do Next?

- ✓ Stronger Modeling of Time
- ✓ Actor-Partner Interdependence
- ✓ Fuzzy Set Analysis

**From Gabriel, Thapa, Dutli, & Tay - forthcoming*

What Are We Studying? Emotions at Work



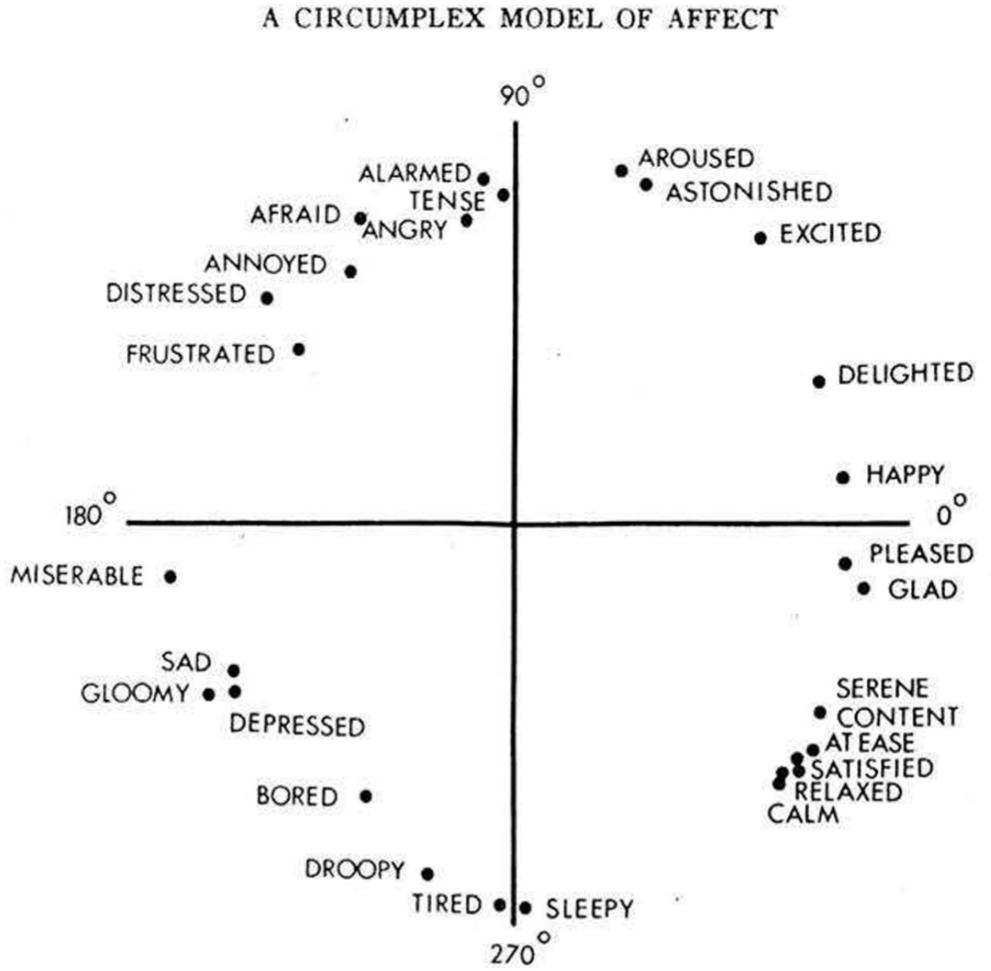
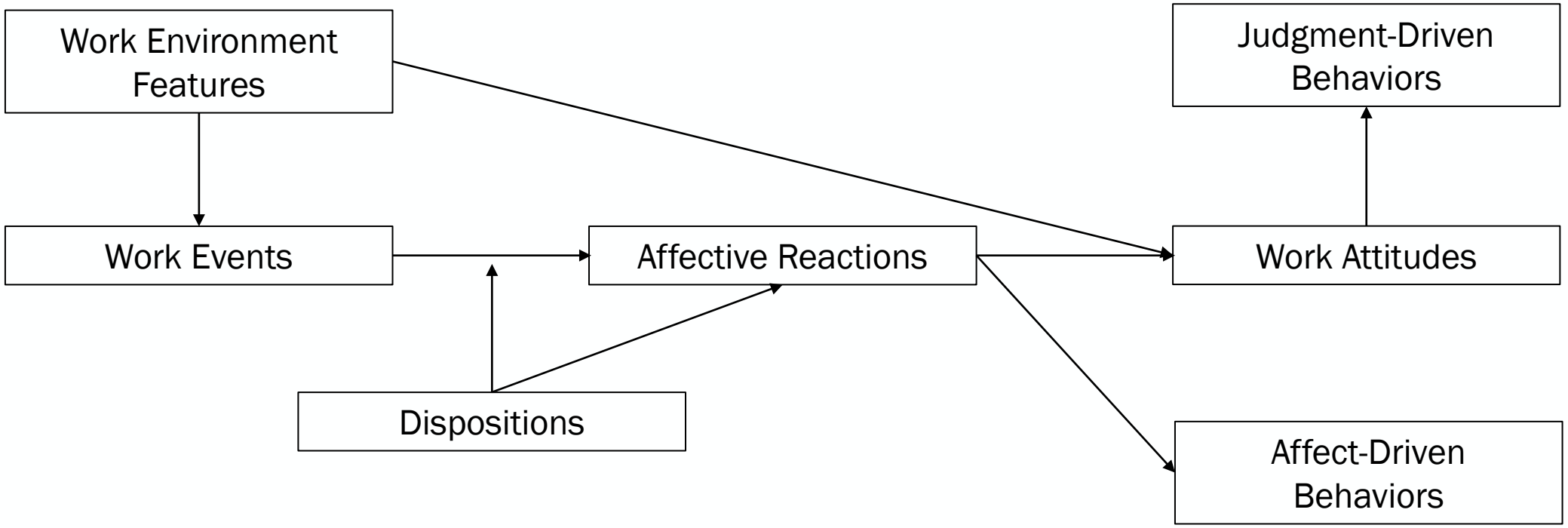


Figure 2. Direct circular scaling coordinates for 28 affect words.

Russell (1980); Van Katwyk et al. (2000); Watson et al. (1988); Watson & Clark (1994)

What Are We Studying? Emotions at Work



General Takeaway: Work events generate affective reactions, which have the potential to shape our attitudes and behaviors. These reactions are *dynamic* and can fluctuate; "event" by definition means more fleeting experiences within a given workday.

Weiss & Cropanzano (1996); Weiss et al. (1999)

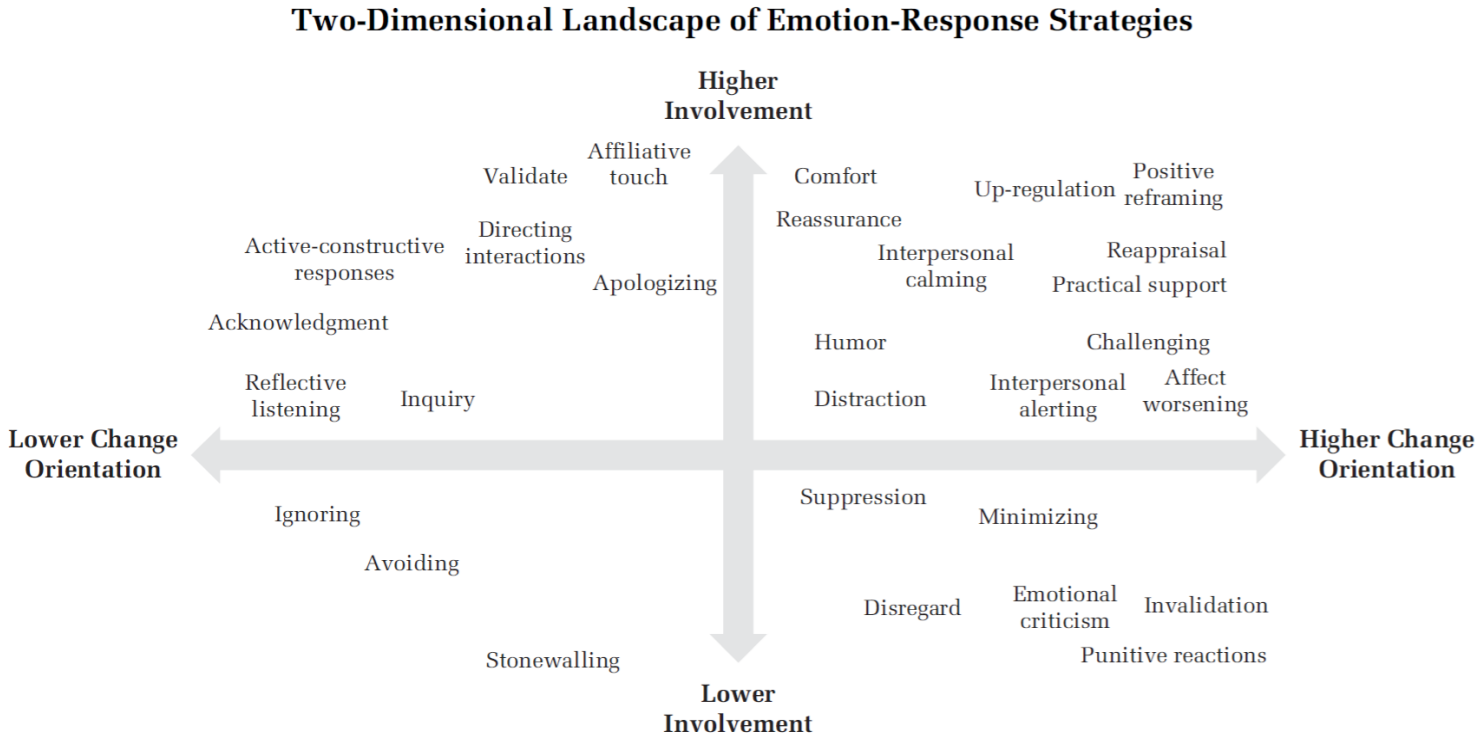
What Are We Studying? Emotional Labor

- ✓ Arlie Hochschild and The Managed Heart (1983)
  - ✓ Process of employees adhering to emotional expectations
  - ✓ EL can affect bottom-line outcomes (e.g., word of mouth recommendations, intentions to return, customer satisfaction) as well as employee well-being and performance
- ✓ Organizations enact emotional display rules for employees to follow (show positive, hide negative)
- ✓ Focus is on how employees engage in emotion regulation in response to display rules
  - ✓ **Surface Acting:** modifying outward expressions to align with expectations; focus is typically on hiding negative emotions from customers in order to still engage in 'service with a smile'
  - ✓ **Deep Acting:** changing one's internal feelings so they match the expectations of the display rules; creates alignment between internal/external states—but can still be effortful
- ✓ Display Rules/Affective Events → Emotion Regulation → Well-Being/Performance/Dyadic Outcomes

Ashforth & Humphrey, 1993; Gabriel et al. (2023); Grandey, 2000; Grandey & Gabriel (2015)

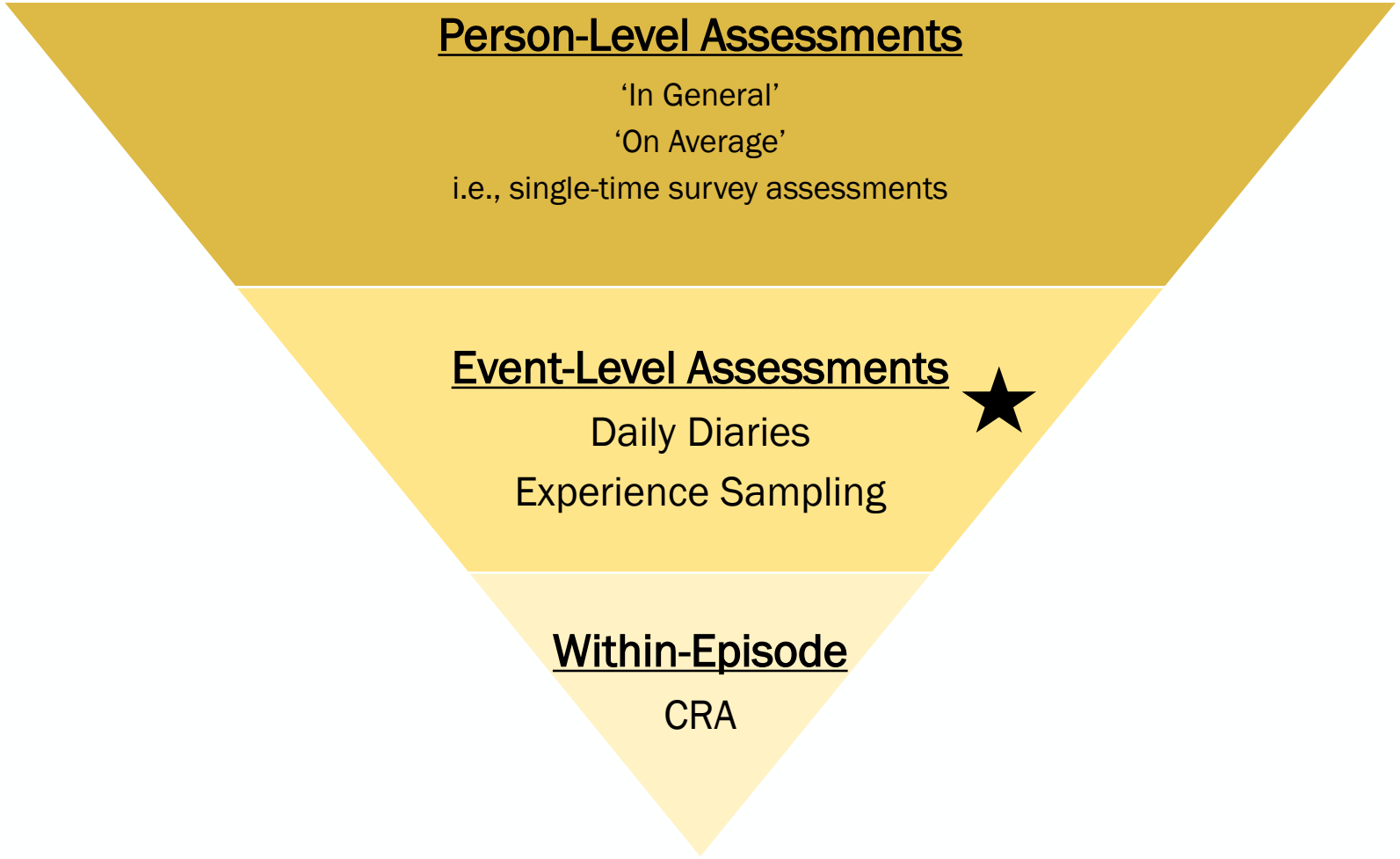
What Are We Studying? Emotion Regulation

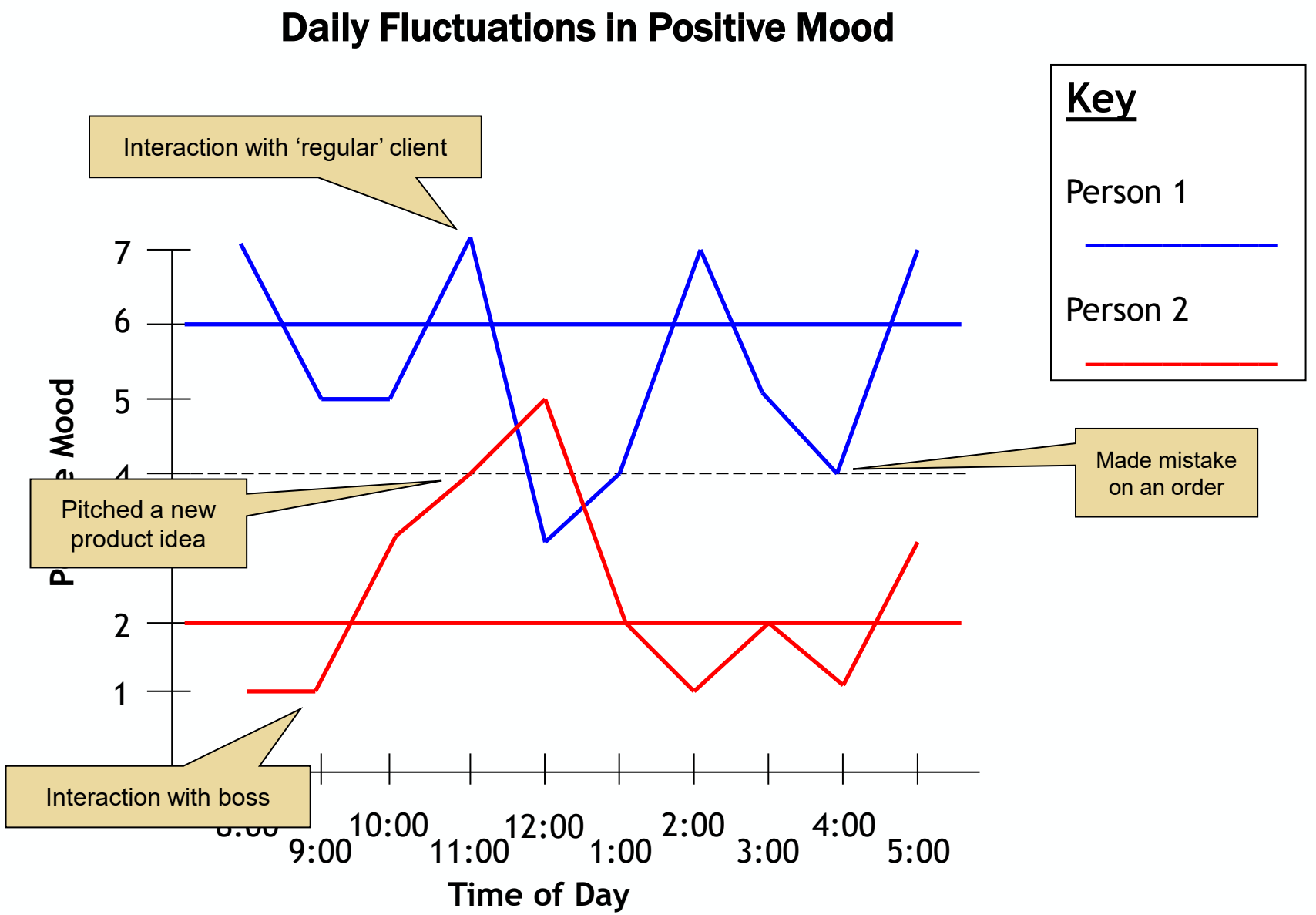
- ✓ Surface acting and deep acting are two frequently explored *intrapersonal* emotion regulation strategies
- ✓ Can also have *interpersonal* emotion regulation being enacted (e.g., Bradley et al., 2024; Niven et al., 2011)



Bradley et al. (2024); Gabriel et al. (2023); Grandey & Gabriel (2015); Niven et al. (2011)

How Are We Studying Emotions? Dynamic Approaches





Hypothetical example of momentary ESM data (adapted from training for ESM in Gabriel, Diefendorff, Chandler, Moran, & Greguras, 2014)

How Are We Studying Emotions? Dynamic Approaches

- ✓ Goals for ESM (Beal, 2015; Beal & Gabriel, 2019):
  1. Measurement of an event occurring in the natural environment
  2. Assessing constructs and/or events close to their actual occurrence capturing the immediacy of the experience
  3. Ensuring representative sampling of individuals' experiences

- ✓ Additional Advantages (Beal, 2015; Beal & Gabriel, 2019):
  1. Theoretical reasons why constructs vary day-to-day
  2. Can help minimize stylistic responding biases
  3. Decomposition of variance – can determine % within vs. % between; challenges earlier ideas that within-person = error (Dalal & Hulin, 2008)

- ✓ Four approaches: daily ESM, episodic ESM, day reconstruction, momentary ESM

How Are We Studying Emotions? Dynamic Approaches

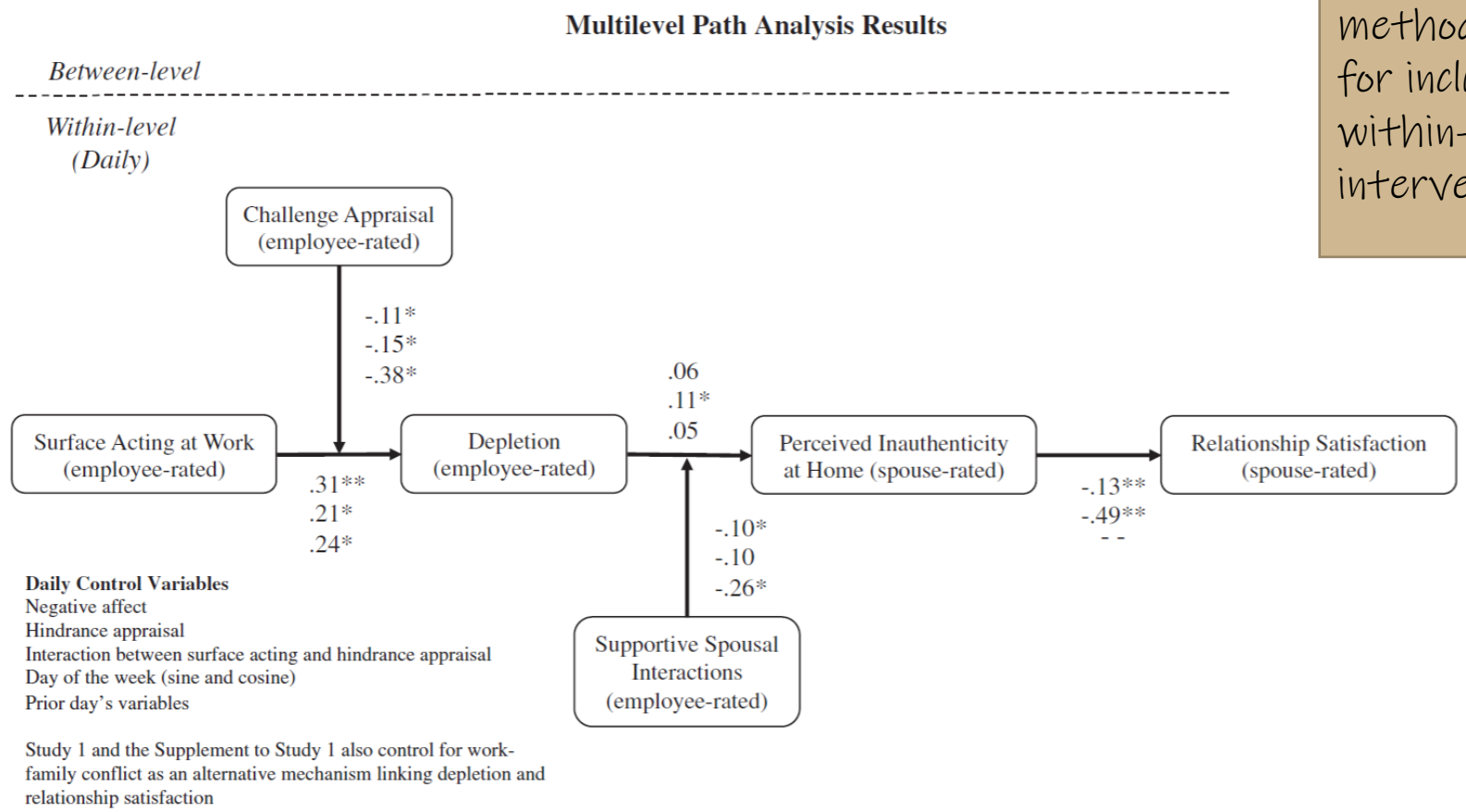
- ✓ ***Daily ESM:*** Assesses experiences/processes that occur across an entire day; not in reference to a particular/single event
  - Judge et al. (2009): Assessed surface/deep acting and emotions "that day at work"

- ✓ ***Episodic ESM:*** Assesses briefer time periods (e.g., last 2-3 hours); can be ***event-contingent*** (i.e., respond when *X* occurs) or ***signal-contingent*** (i.e., respond about the closest *X* event that happened at the time of the signal)
  - ***Event-Contingent:*** Butts et al. (2015): "Complete the survey based upon the most recent electronic communication received from work after working hours." – instructed to only complete AFTER email received; burden on participants to remember
  - ***Signal-Contingent:*** Scott et al. (2020): Assessed surface/deep acting in response to an interaction that occurred within the survey window (i.e., since the last survey)

How Are We Studying Emotions? Dynamic Approaches

Bartels, Lennard, Scott, & Peterson (2023)

Figure 1
Multilevel Path Analysis Results



Dynamic/ESM methods are great for including within-person interventions!

How Are We Studying Emotions? Dynamic → Dyadic

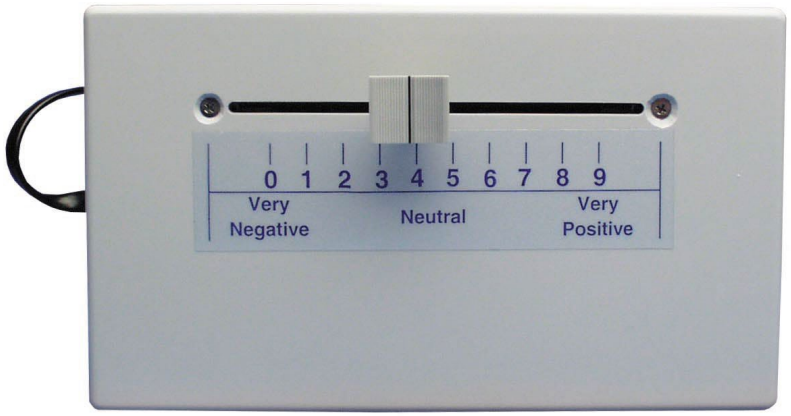
- ✓ Exchange partners (e.g., employee-coworker; employee-customer) are inherent in emotions, emotional labor, etc.
- ✓ Challenge? Getting both members of the dyad involved within the data collection!
  - ✓ Can rely on experimental (e.g., Butler et al., 2003) or observational (e.g., Barger & Grandey, 2006) methods

- ✓ Alternative? Continuous Rating Assessments (CRA)
  - ✓ …allow data to be collected 'live' as an event is experienced.
  - ✓ …show the whole 'story' as an experience unfolds.
  - ✓ …have been used in other areas of research!
    - ✓ Marital Satisfaction (Gottman & Levenson, 1985)
    - ✓ Music Evaluations (Brittin & Sheldon, 1995)
    - ✓ TV Picture-Quality Evaluation (Freeman et al., 1999)
    - ✓ Commercial Evaluation (Rossiter & Thornton, 2004)
    - ✓ Charisma in Presidential Speeches (Naidoo & Lord, 2008)

For a review, see: Gabriel, Diefendorff, Bennett, & Sloan (2017)

Participant Emotionality

Please hover over one of the rating numbers at all times.

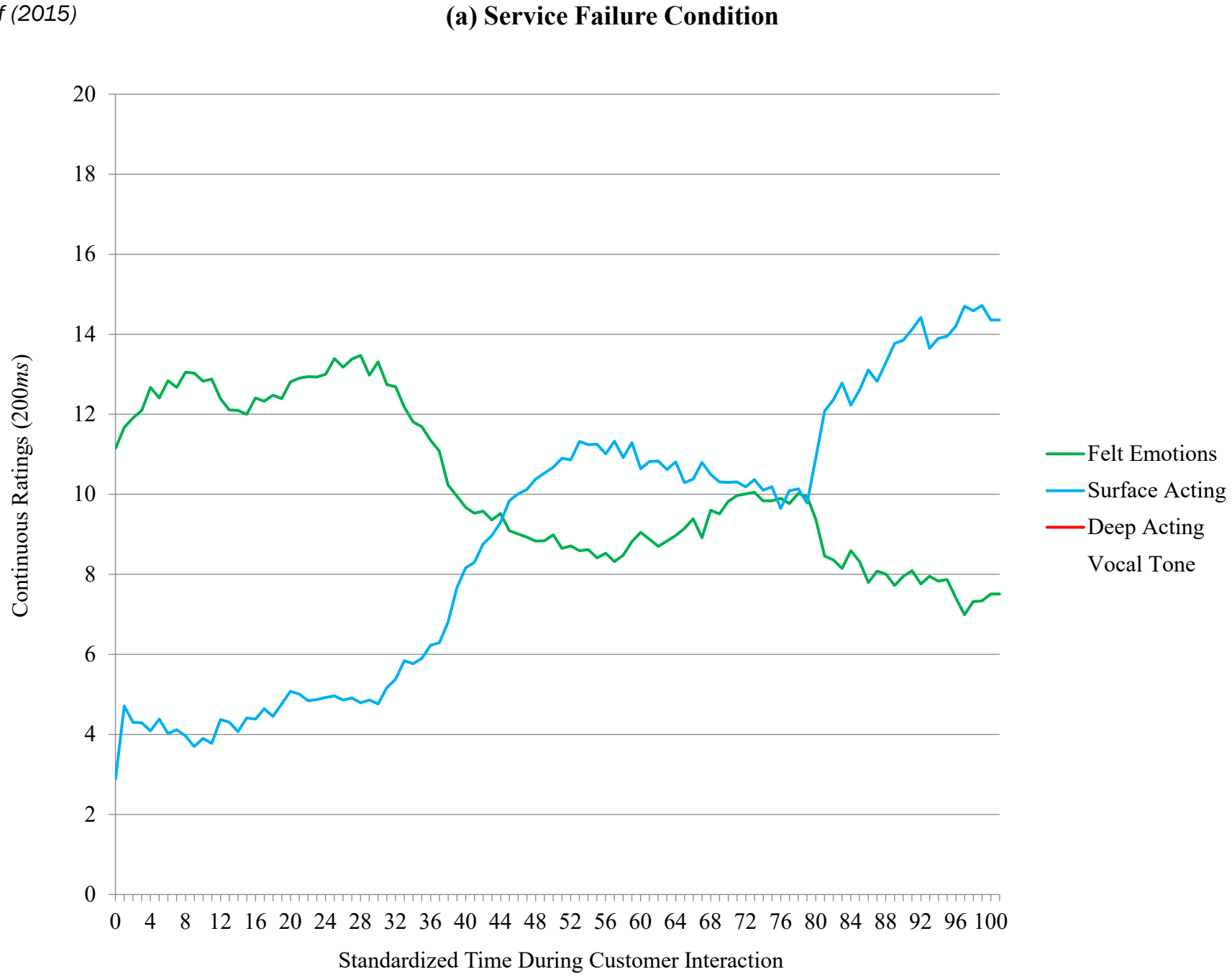


Very Negative				Negative				Neutral				Positive							Very Positive
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

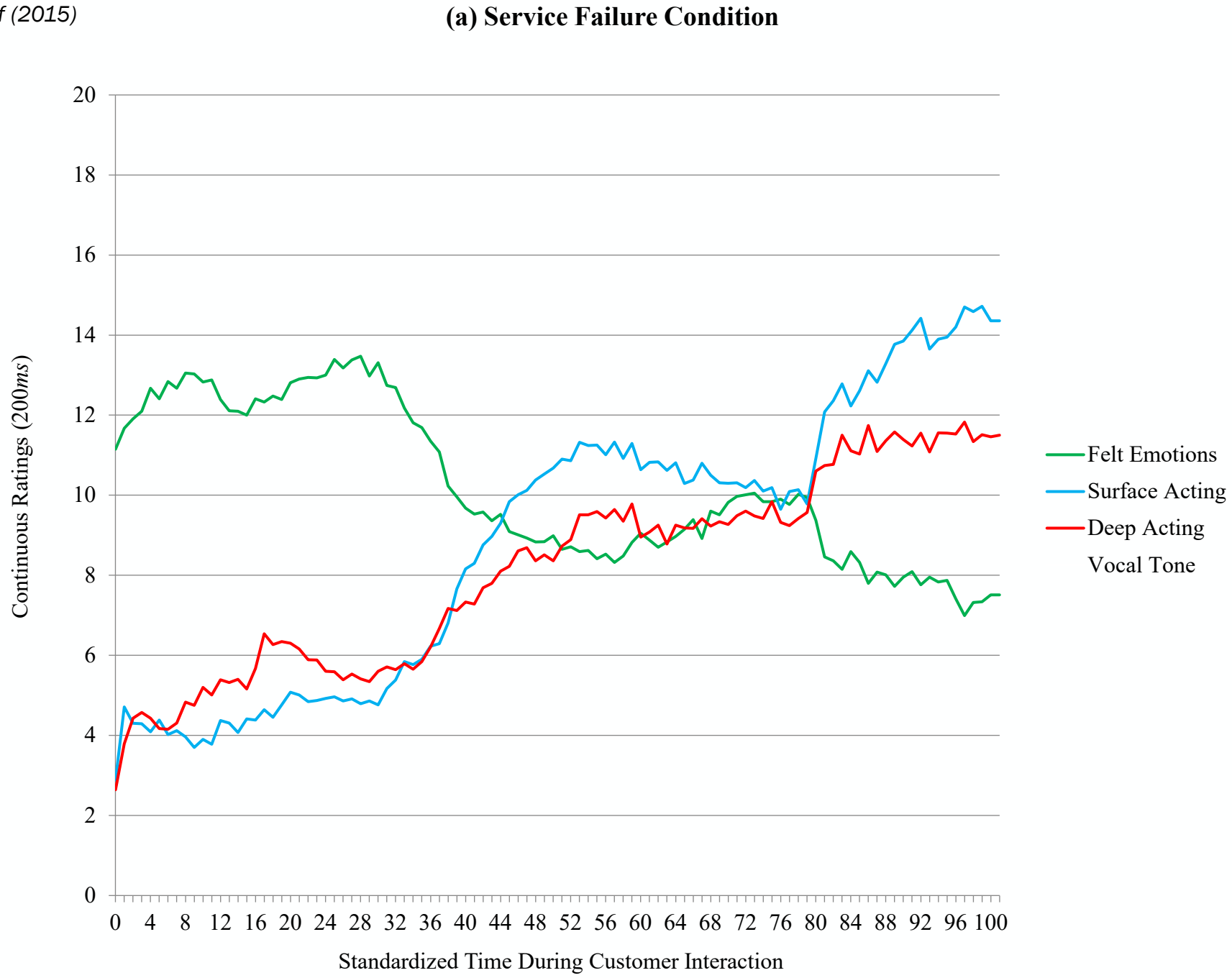
Click '**A**' to begin the audio.

From Gabriel & Diefendorff (2015)

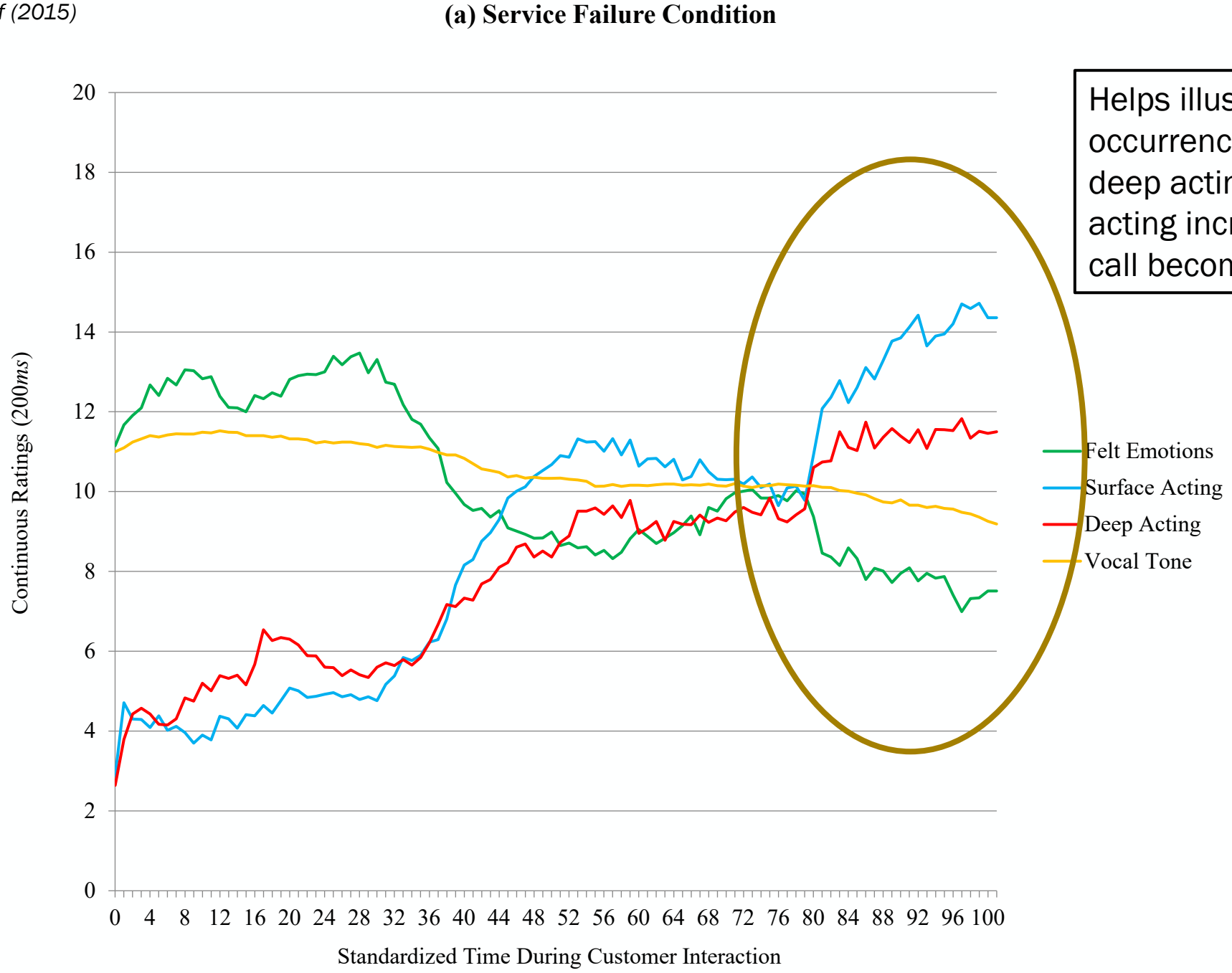
From Gabriel & Diefendorff (2015)



From Gabriel & Diefendorff (2015)

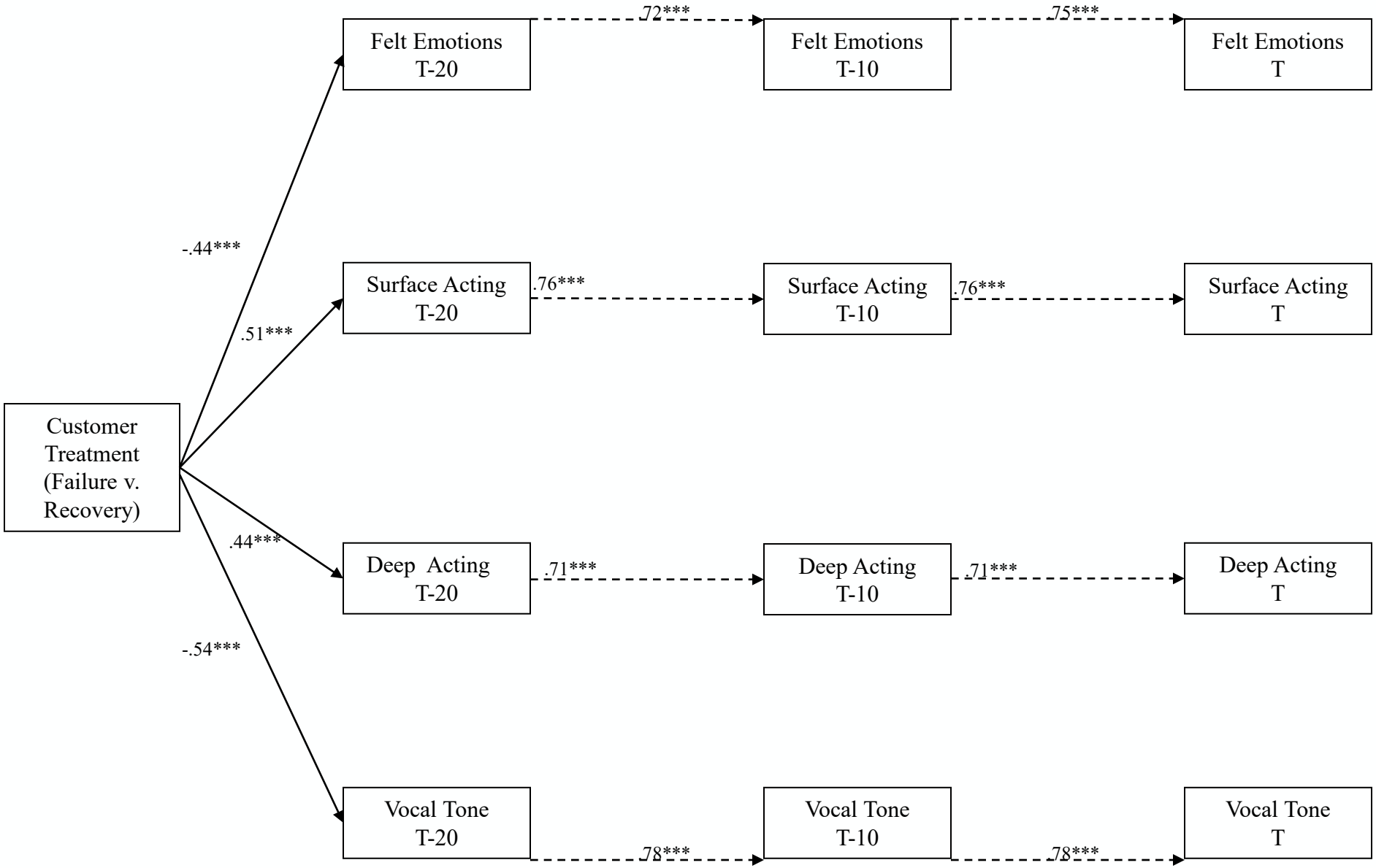


From Gabriel & Diefendorff (2015)



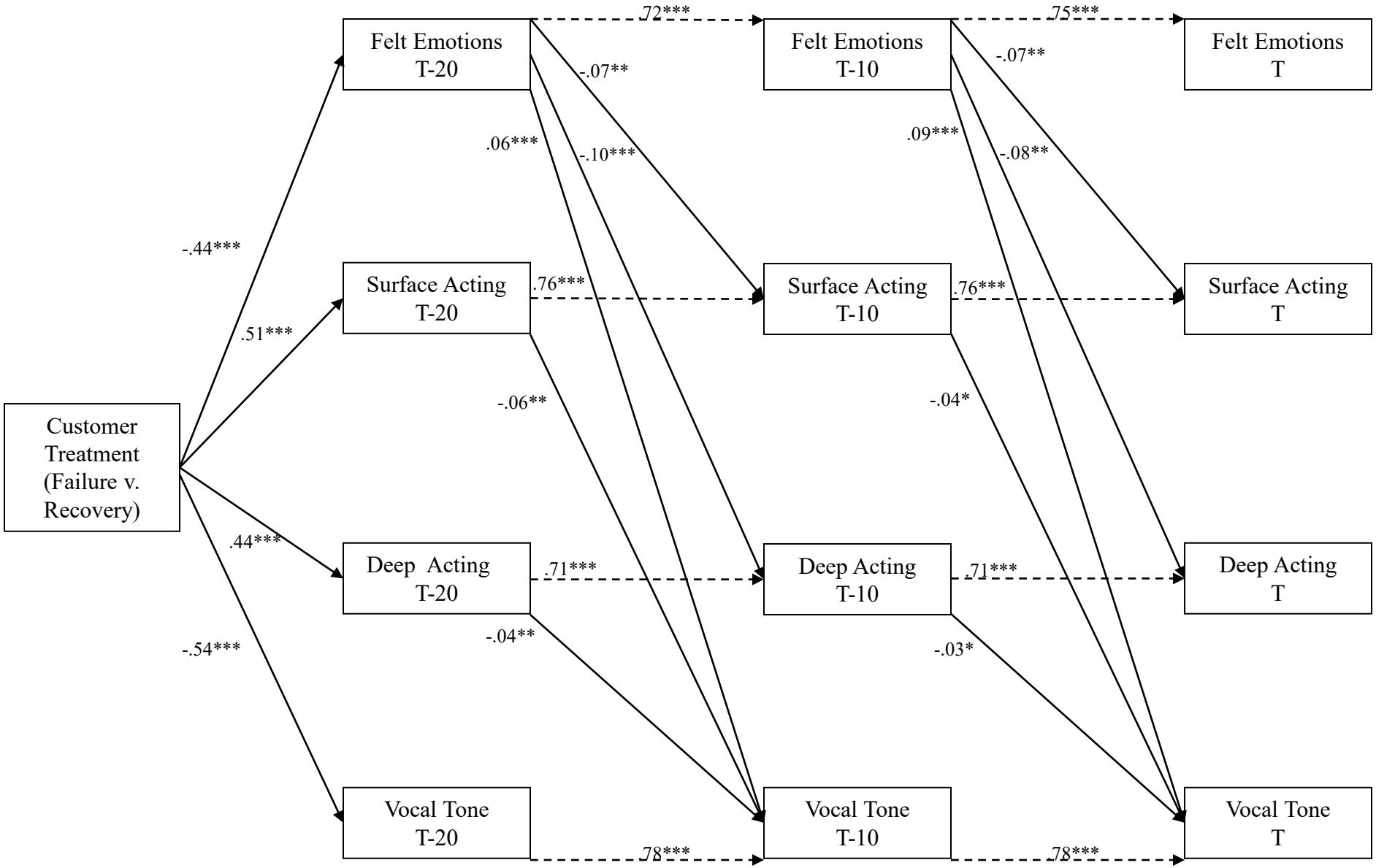
Helps illustrate the co-occurrence of surface and deep acting, with surface acting increasing as the call becomes more uncivil.

From Gabriel & Diefendorff (2015)



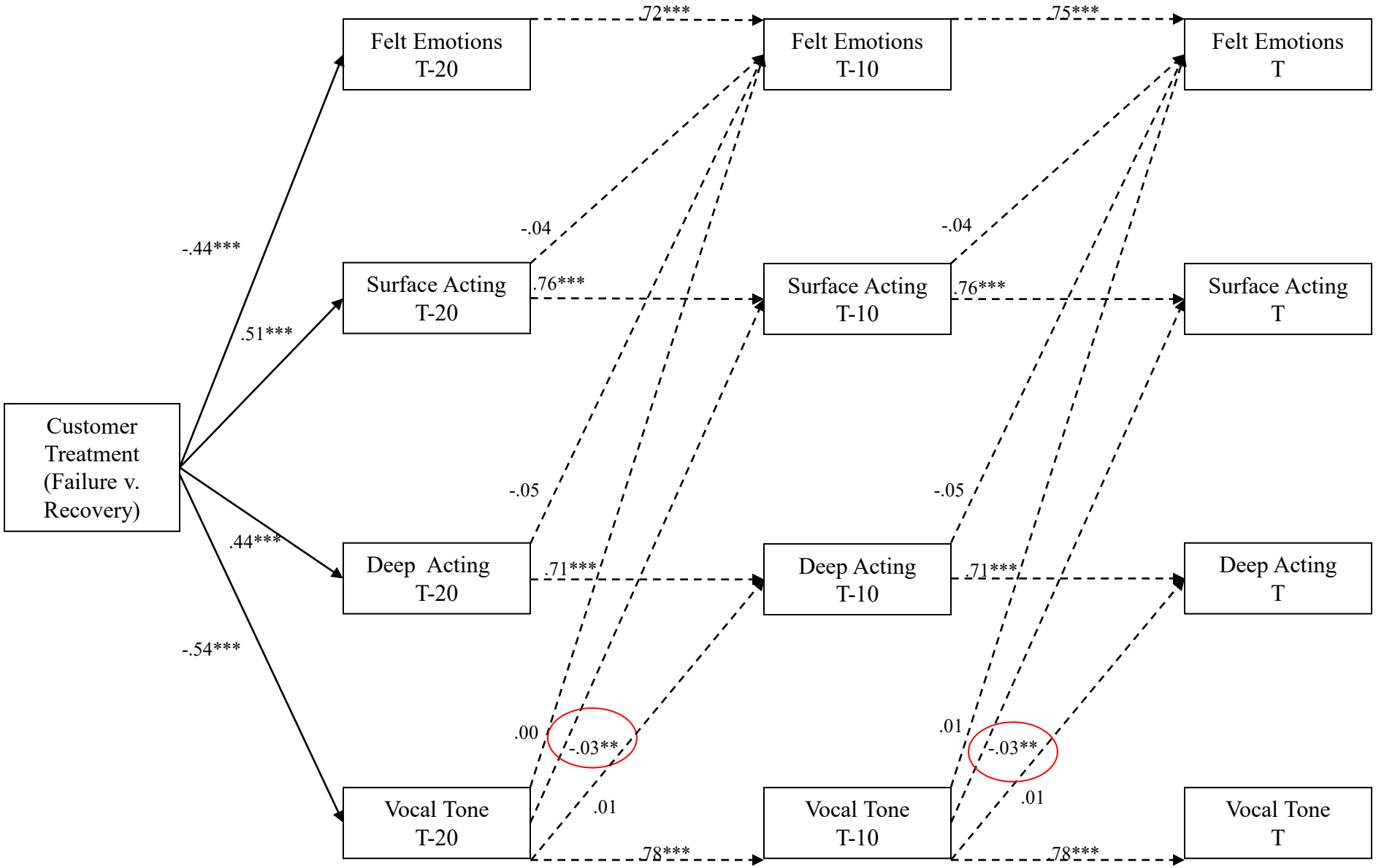
Started by modeling auto-regressive effects and study condition.

From Gabriel & Diefendorff (2015)



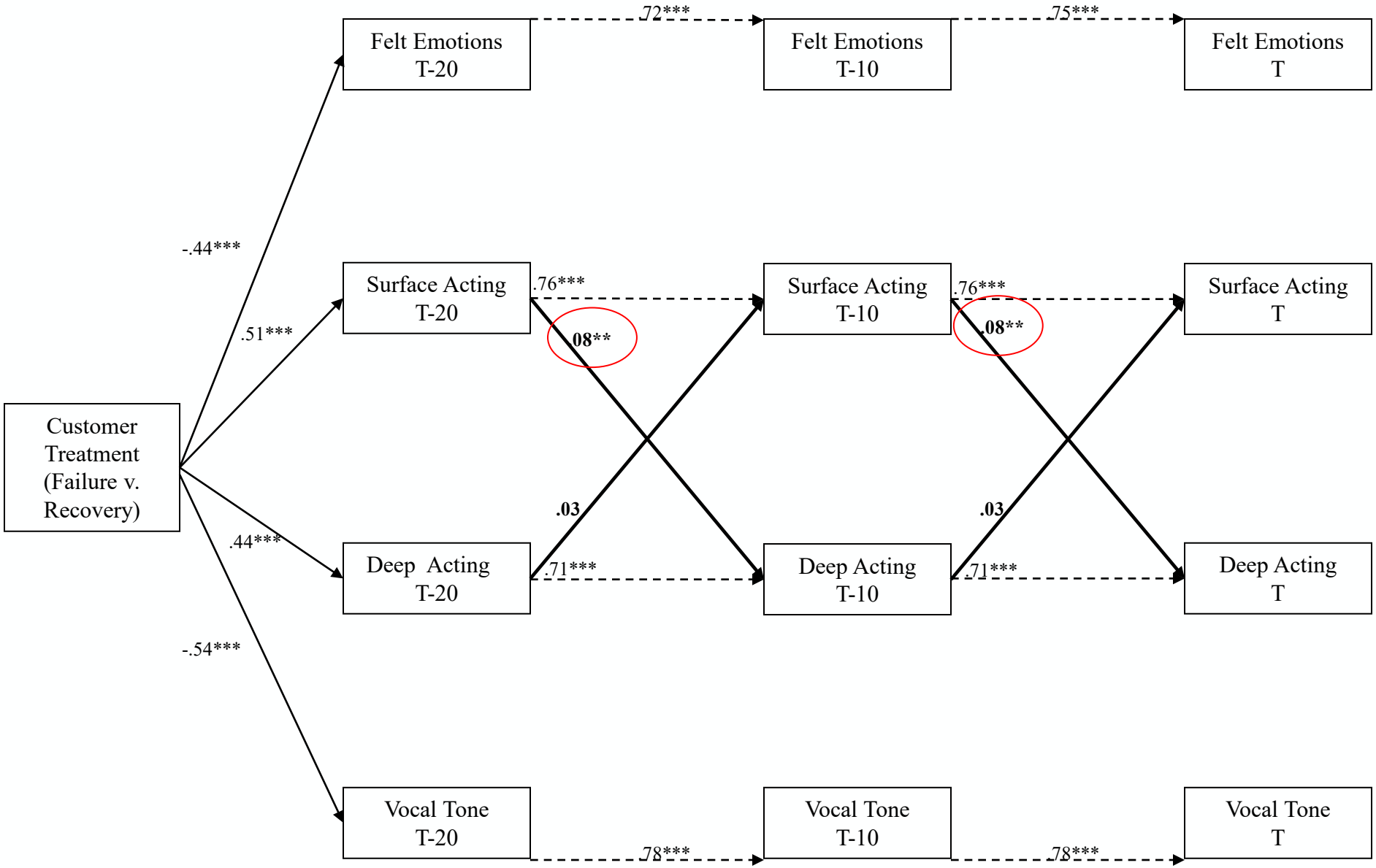
Added causal effects, such that felt emotions → emotion regulation → vocal tone.

From Gabriel & Diefendorff (2015)



Also considered reverse causal effects (e.g., vocal tone → emotions or regulation)

From Gabriel & Diefendorff (2015)



Finally, we considered causality amongst surface acting and deep acting.

How Are We Studying Emotions? Conjoint Approaches

- ✓ Well-suited to compare people with *different constellations of indicators*
  - ✓ Models latent group membership that accounts for differences on a set of profile indicators
  - ✓ Unit of analysis is the *person* rather than the *variable* – emphasis is on how variables combine *conjointly* and *within people*
  - ✓ Aligns with the applied side of research – understand a person *holistically* (De Fruyt, 2002)

- ✓ **Why not just use moderated regression?**
  - ✓ Variable-centered methods with many higher-order interactions can be very difficult to interpret: Cronbach referred to it as entering a "hall of mirrors." (Cronbach, 1975)
  - ✓ Models artificial groupings of people (e.g., +/-1 SD around the mean) rather than naturally-occurring ones (Morin, Morizot, Boudrias, & Madore, 2011)
  - ✓ Variable-centered analytical lens can fail to identify important relations between profiles and covariates (Gabriel, Daniels, Diefendorff, & Greguras, 2015)

How Are We Studying Emotions? Conjoint Approaches

- ✓ Analytic Technique: Latent Profile Analysis (LPA) – see Wang & Hanges (2011)
- ✓ Analysis is conducted in Mplus and R

- ✓ Things to note:
  - ✓ It's inductive! (This is both fun and terrifying…)
  - ✓ Variables that are included in the profiles are called "indicators"
  - ✓ LPA is probabilistic, meaning that each person has a % chance to belong to each profile
  - ✓ Can model antecedents and outcomes of profiles
  - ✓ Can work with both person-level or daily assessments of core constructs (profiles of people vs. profiles of days/weeks/months)
  - ✓ Should have theoretical rationale for both (a) variables in profiles and (b) possible profile structures (e.g., engaging in "thought exercises" prior to analysis)

Example of Pre-Analysis Thought Exercises

Diefendorff, Gabriel, Nolan, & Yang (2019)

Table 1
Theoretical Emotion Regulation Event Profiles

Hypothetical profile name and description	Customer behavior	Employee felt affect	Emotion regulation	Anticipated well-being outcomes
(A) Pleasant Nonacting: Positive event with low regulation (prototypical emotional labor event)	Civil	Low NA High PA	Low Regulation	Highest Well-Being
(B) Pleasant Acting: A positive event with high regulation	Civil	Low NA High PA	High Regulation	High Well-Being
(C) Unpleasant Emotional Deviance: A negative event with low regulation	Uncivil	High NA Low PA	Low Regulation	Low Well-Being
(D) Unpleasant Acting: Negative event with high regulation (prototypical emotional labor event)	Uncivil	High NA Low PA	High Regulation	Lowest Well-Being
(E) Mixed, Unfazed Nonacting: Customer/affect mismatch with low regulation	Uncivil	Low NA High PA	Low Regulation	Moderate Well-Being
(F) Mixed, Customer-Based Acting: Customer/affect mismatch with high regulation	Uncivil	Low NA High PA	High Regulation	Low Well-Being
(G) Mixed, Mood-Based Deviance: Customer/affect mismatch with low regulation	Civil	High NA Low PA	Low Regulation	Moderate Well-Being
(H) Mixed, Mood-Based Acting: Customer/affect mismatch with high regulation	Civil	High NA Low PA	High Regulation	Low Well-Being

Note. NA = negative affect; PA = positive affect. The current list provides examples of possible event-level emotional labor portraits. This list is not meant to be exhaustive.

Example of (Multilevel) Latent Profile Structure

Diefendorff, Gabriel, Nolan, & Yang (2019)

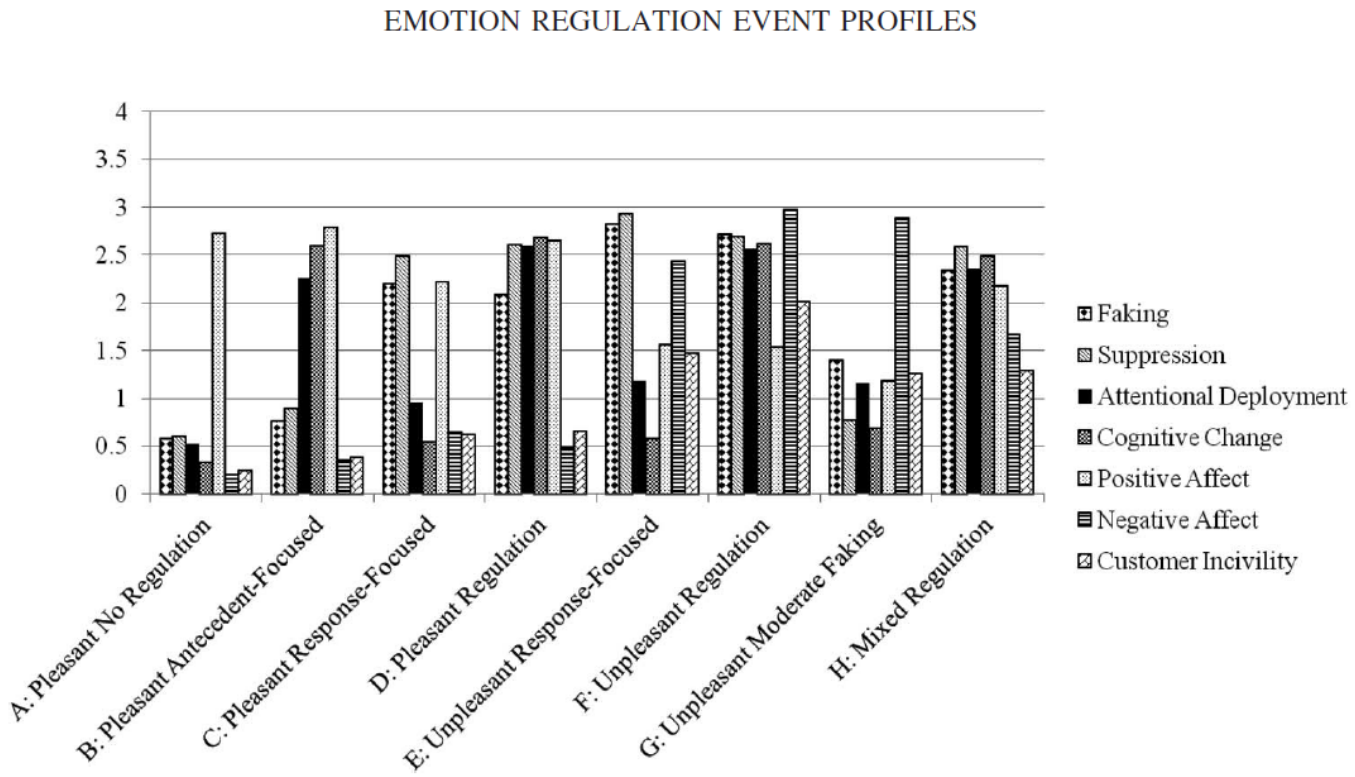
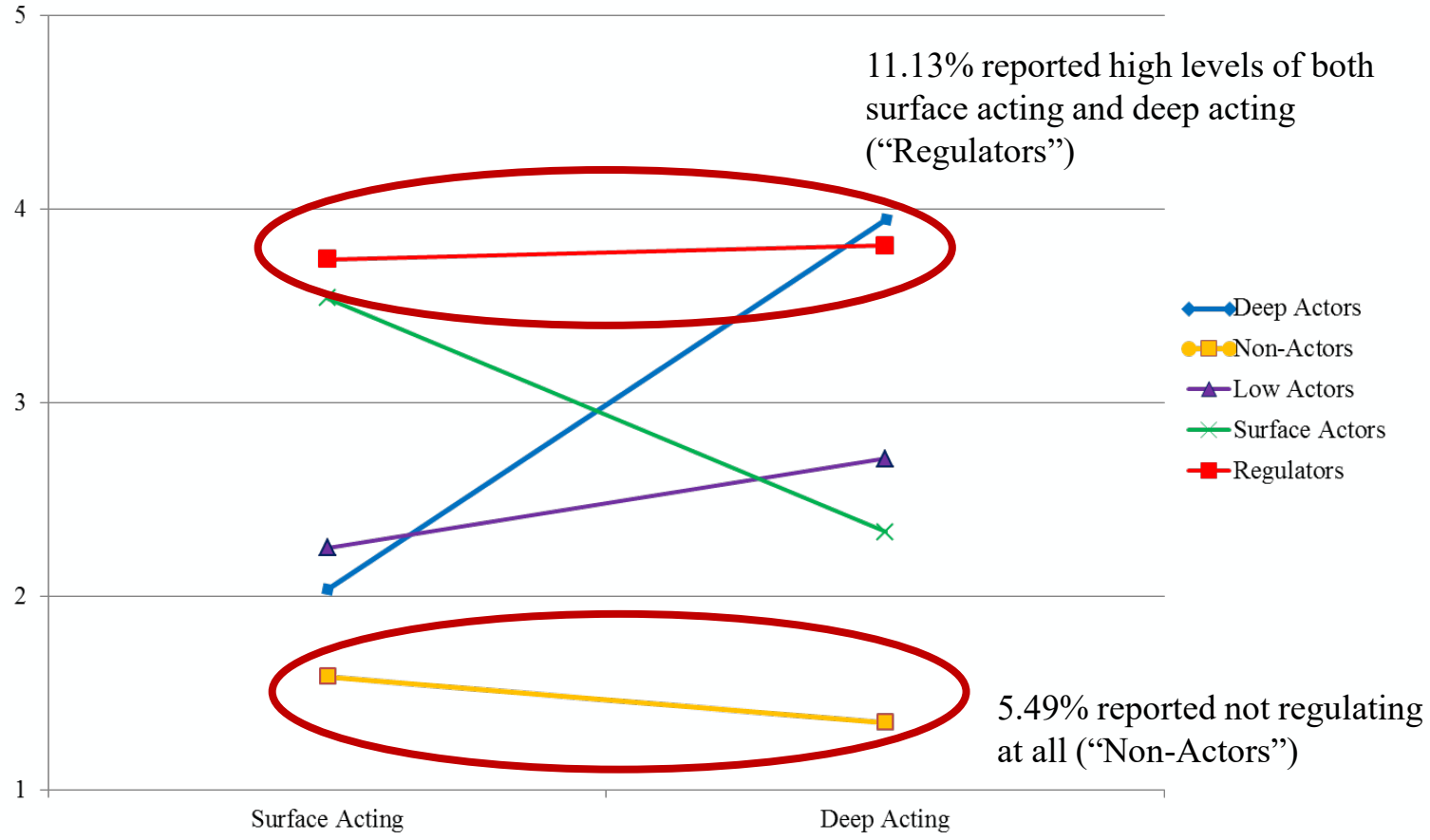


Figure 1. Multilevel latent profiles of emotional labor. Values on the *y*-axis represent the mean levels per latent profile for each profile indicator (e.g., customer incivility, emotion regulation, felt positive and negative emotions). All profiles indicators were recoded to be on the same 0–4 scale.

Example of Latent Profile Structure

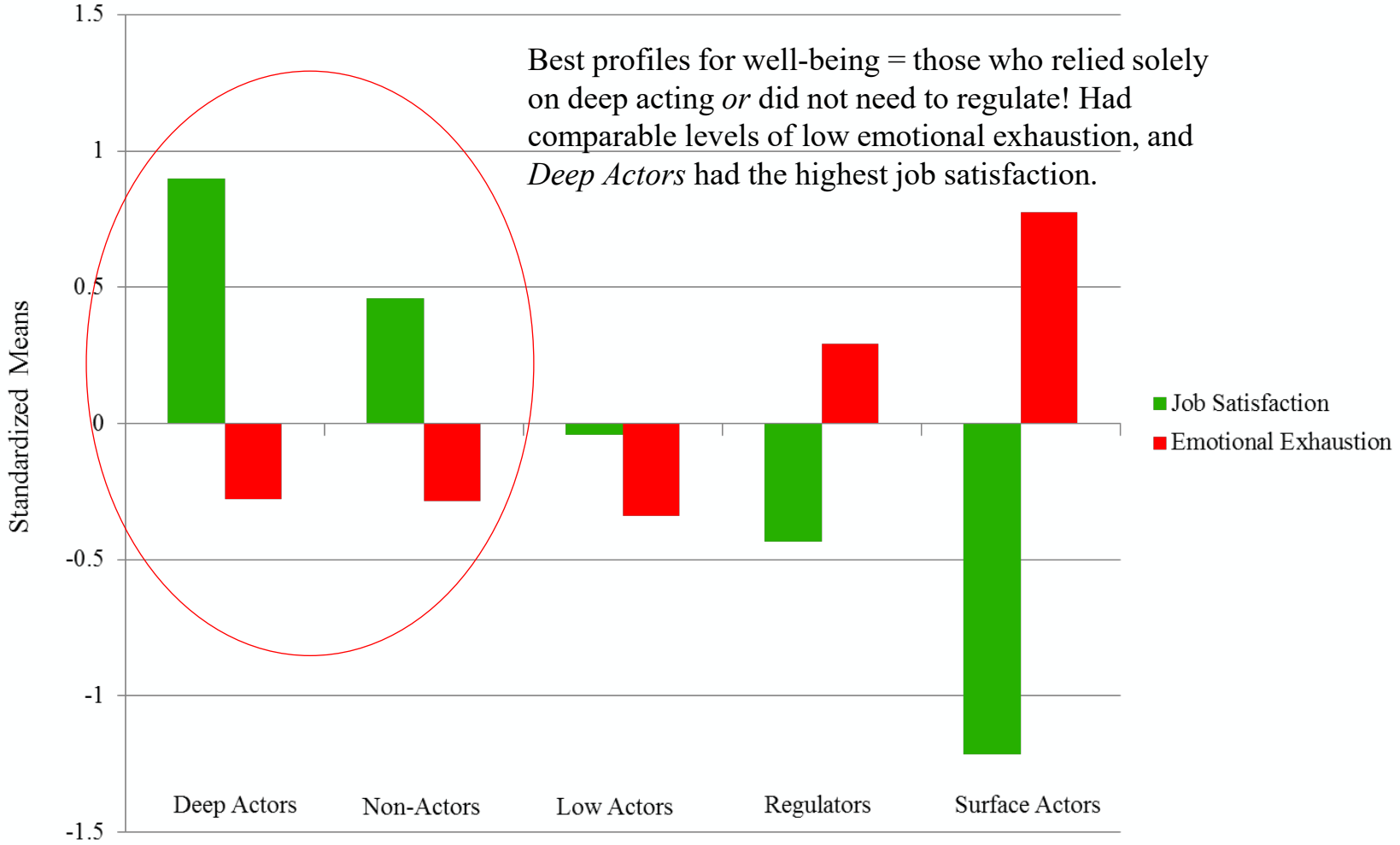
Gabriel, Daniels, Diefendorff, & Greguras, 2015 – Study 1



Note. 1 = strongly disagree; 3 = neither agree nor disagree; 5 = strongly agree

Example of Latent Profile Outcomes

Gabriel, Daniels, Diefendorff, & Greguras, 2015 – Study 1

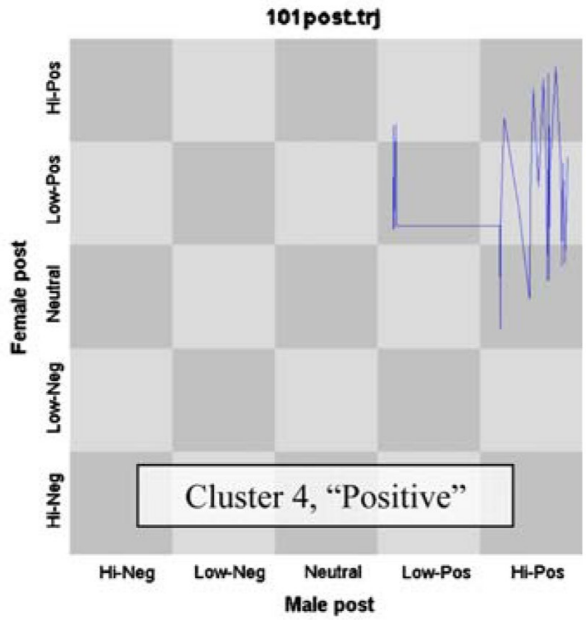


What's Next?

Gabriel, Thapa, Dutli, & Tay (forthcoming)

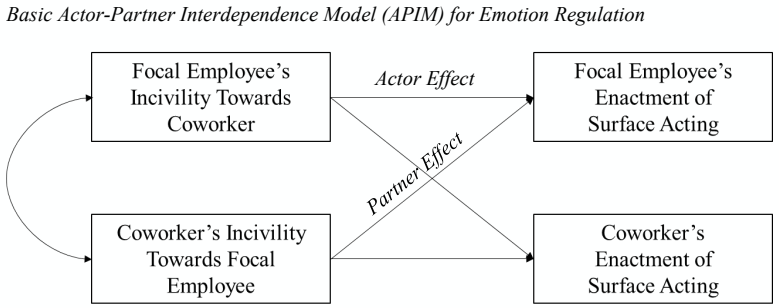
Dynamic

✓ **Oscillator/state space models** (Gardner & Wampler, 2008; Reed et al., 2015)



Dyadic

✓ **Actor-Partner Interdependence Models** (APIM; Krasikova & LeBreton, 2012)



Conjoint

✓ **Fuzzy set qualitative comparative analysis** (fsQCA; Fiss, 2007; Gabriel et al., 2018)

Outcome	*Emotional Exhaustion*		*Absence of Emotional Exhaustion*	
Configuration #	*1a*	*1b*	*2a*	*2b*
Attribute				
Attentional Deployment				●
Cognitive Reappraisal	●			
Suppression	■	■	⊗	⊗
Faking	●	●	⊗	⊗

Thank You

Email: asgabriel [at] purdue.edu

Allison Gabriel, Ph.D.
Thomas J. Howatt Chair in Management and
Faculty Director of the Center for Working Well at...

PURDUE UNIVERSITY | Mitch Daniels School of Business