Outline

# A Call for Empirical Process Data Structures in OB and HRM Research and Practice (title of manuscript; opening statement section; we introduce the manuscript in this section)

* + What do we use data for? (first paragraph)
  + What types of data do we typically collect and evaluate? (second paragraph)
  + What types of data do we fail to collect? (third paragraph)
  + What will readers learn from this manuscript? (fourth paragraph)

# Typical Empirical Data Structures in OB and HRM Research and Practice (section; level 1 header; this section provides an overview of typical empirical data structures found in OB and HRM)

## Cross-Sectional Observational and Experimental Data (sub-section; level 2 header)

* + - Distinguished by a single snapshot measuring affect, cognition, behavior, or social relations

### Multilevel Data (sub-section; level 3 header)

* + - * Distinguished by nested data structures

## Panel Longitudinal (Repeated Measures) Data (sub-section; level 2 header)

* + - Distinguished by multiple snapshots measuring many units

### Time Series Data (sub-section; level 3 header)

* + - * Distinguished by observing many snapshots generally measuring only a few units

# Empirical Process Data Structures (section; level 1 header; this section provides an overview of empirical process data structures)

## Distinguishing Empirical Process Data from Typical Empirical Data Structures in OB and HRM (sub-section; level 2 header)

* + - Sequences of actions, thoughts, feelings, communications, or events capturing work as it happens instead of status updates of states
    - Focus on actions and work instead of aggregated and often perceptual and memory-based inputs, processes, and outputs

## Benefits of Empirical Process Data (sub-section; level 2 header)

* + - Finer-grained representation of processes
    - Empirical study of self-organization and emergence
    - Mapping of nested time structures (strategies for a performance episode composing a project, a set of performance episodes composing a project, a set of projects)
    - Investigation of process strategies

# Collecting and Analyzing Empirical Process Data (section; level 1 header; this section provides and overview of how to actually collect and analyze empirical process data)

## Process Data Collection Technologies (sub-section; level 2 header)

* + - Already present for decades: e-mails, calendars, documents, chat messaging
    - Video recordings: virtual or live meetings
    - Databases of employee work activities
    - Sociometric badges

## Process Analytics (sub-section; level 2 header)

### Descriptive Computations (sub-section; level 3 header)

### Workflow Networks with Process Maps (sub-section; level 3 header)

### Event Models (sub-section; level 3 header)

### Process Clustering (sub-section; level 3 header)

### Computational Models (sub-section; level 3 header)

# An Analytical Example of Empirical Process Data: Tracking the Work of Basketball Teams (section; level 1 header; this section provides an example of how to collect empirical process data and perform basic analytics on empirical process data)

## Example of Work Process Data for Basketball Teams (sub-section; level 2 header)

## Example of Work Process Analytics for Basketball Teams (sub-section; level 2 header)

# A Future with Empirical Process Data Structures in OB and HRM (section; level 1 header; this section concludes with the benefits of collecting and analyzing empirical process data)

* + Deeper, stronger tests of theory
  + Developing empirical process knowledge
  + Evaluating organizational work strategies
  + Improving the daily lived experience of employees