

The Study of Process in Organizational Research

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I. Process: Conceptual Foundations

"A process is a coordinated group of changes in the complexion of reality, an organized family of occurrences that are systematically linked to one another, either causally or functionally.

A process consists in an integrated series of developments unfolding in joint coordination in line with a definite program.

Processes are correlated with occurrences or events:
Processes always involve various events, and events exist only in and through processes."

Nicholas Rescher (1996)

"A pattern that is seen in reference to time is called a process."

Monge, Farace, Eisenberg,
Miller, & White (1984)

I. Process: Conceptual Foundations

Characteristics of Processes:

- They involve change
- They unfold over time
- They are composed of series of events

I. Process: Conceptual Foundations

Characteristics of Processes

- They maintain self-identity through internal complexity that persists over time
- They may be *owned* by some agent or *unowned*
- Their generative mechanisms may evolve over time



I. Process: Conceptual Foundations

Two means of conceptualizing process:

- Ontologically: As part of the fabric of (social) reality
- Epistemologically: As one lens to apply in the study of (social) reality



II. Process Ontology

Four Positions

1. Process is primary

All things are processes

2. Process has priority over substance

Processes engender, determine, and characterize things, but there are real things out there

Source: Rescher (1996)



II. Process Ontology

Four Positions

3. Substance has priority over process

All processes derive from the doings and compartments of things

4. Substance is primary

Substance is all there is. Processes and changes are simply a matter of how things appear to certain (mind-equipped) substances

Source: Rescher (1996)



II. Process Ontology

The great divide

- The world is made of things (positions 3 & 4)
- The world is made of processes (positions 1 & 2)

(Positions 1 and 4 are the most difficult to maintain.)

II. Process Ontology

Ideal Type Process Motors

- Life Cycle
 - Logical, Natural, Institutional variants
- Teleological
 - Intentional, Sensemaking variants
- Evolutionary
 - Classical, Lamarckian variants
- Dialectical
 - Hegelian, Tension variants

II. Process Ontology

Composite Theories

- More than one model may operate in a given case
- Theories of processes as hybrids of ideal types
 - Multiple sequence model of decision development:
 - Life cycle model of ideal decision schemes for groups
 - Teleological model of member's attempts to deal with problems and difficulties that arise drives movement through phases
 - Dialectical theory of relationships
 - Dialectical model of tensions (macrolevel)
 - Teleological model of partner behavior in response to tensions drives choice of response (microlevel)

III. Process Epistemology

Two Different Modes of Inquiry

- Variance Approach
- Process Approach

Source: Mohr (1982)
Poole et al (2000)

III. Process Epistemology

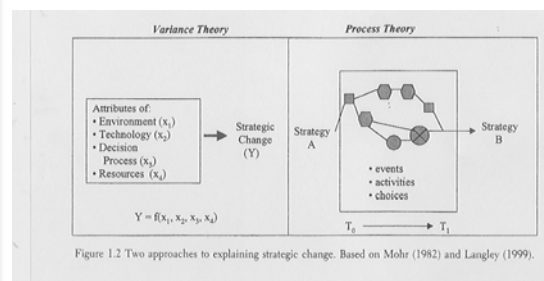


Figure 1.2 Two approaches to explaining strategic change. Based on Mohr (1982) and Langley (1999).

III. Process Epistemology

A. The Variance Approach: Key Assumptions

- Focus on fixed entities with variable attributes (variabilization of phenomena)
- Satisfactory explanations are based on necessary and sufficient causality
- Satisfactory explanation is based on efficient causality

III. Process Epistemology

A. The Variance Approach: Key Assumptions (continued)

- The generality of an explanation depends on its ability to apply uniformly across a broad range of cases & contexts
- Monotonic, "well-behaved" causal flow through hierarchical levels

III. Process Epistemology

B. The Process Approach

- Diverges from variance approach:
 - » In terms of explanatory model
 - » In how data is conceived and gathered
 - » In analysis
- Akin to historical and biological reasoning
- May diverge from historical tradition:
 - » It often seeks to generalize
 - » It often seeks to test or apply hypothesized theories

III. Process Epistemology

B. The Process Approach

Commonalities of Process and Variance Approaches:

- Usually seeks generalization
- May employ quantitative methods
- Explains via generative mechanisms

III. Process Epistemology

B. The Process Approach: Key Assumptions

- The world is composed of entities which participate in events and which may change as a result.
- Satisfactory explanations are based on necessary causality
- Satisfactory explanations are based on final and/or formal causality combined with efficient causality

III. Process Epistemology

B. The Process Approach: Key Assumptions (continued)

- Generality of explanations depends on their versatility.
- Temporal ordering is critical to the outcome.
- Explanations include layers of causation operating at different levels and temporal scales
- Causes are often not "well-behaved".

III. Process Epistemology

B. The Process Approach: Methodology

- Multiple Observations Over Time
- Identification of Events
- Linkages/Connections among Events
- Recognize/Test Narrative Patterns
- Evaluate Final/Formal Causality

IV. Approaches to the Study of Processes

Ontology
The social world is represented as being:

	Populated by Real Entities ("Things")	Constituted by Processes
Variance Approach	Variance studies of synoptic variables representing processes	Variance studies via modeling of processes
	Causal analysis of independent variables explaining dependent variable I	Dynamic models of complex adaptive systems IV
Process Approach	Process study narrating sequence of change events in organization	Process study narrating social construction
	Progressions of change (stages, cycles, etc) in the development of org. entity II	Qualitative process studies of emergence III

IV. Approaches to the Study of Processes

A. Case I: Using a Variance Approach in a World Comprised of Things

- Define variables that synoptinize processes
 - Convert process into a variable, e.g. implementation, persuasion
 - Process synopses can serve as dependent or independent variables
- Causal explanation using traditional statistical methods or case studies
- Examples:
 - Walsh: Studies of comprehensiveness of strategic planning process
 - Meyer & Goes (1988): Degree of assimilation of innovations

IV. Approaches to the Study of Processes

A. Case I – Comments

- + Enables rigorous test of hypotheses about processes
- + Fits within established modes of research and discourse
- Synopses elide aspects of processes
- Difficult to study process itself and how it unfolds over time

IV. Approaches to the Study of Processes

B. Case II: Process Study in a World Comprised of Entities

- Characterize communication processes in terms of stages, steps, states, sequences and properties of sequences
 - Sequences or their properties can serve as explanans or explanandum
- Examples:
 - Phasic Analysis
 - Poole: studies of decision development
 - Nutt: Studies of implementation of strategic decisions

IV. Approaches to the Study of Processes

B. Case II: Process Study in a World Comprised of Entities (cont)

- Examples:
 - Case Studies
 - Leonard Barton: Study of adoption of technological innovations
 - Mintzberg, Raisinghani, & Theoret (1976)

IV. Approaches to the Study of Processes

B. Case II – Comments

- + Explicitly defines elements of process
- + Enables us to study unfolding of process

- States, stages, etc. are themselves synopses
- Tension between defining process entities and fully processual approach

IV. Approaches to the Study of Processes

C. Case III: Process Study of Processual World

- Study of emergent processes
 - May be social constructionist
 - True to basic characteristics of processes
 - Focus on change as essential condition
 - Change in processes, as well
 - Try to avoid synoptic concepts
 - Several of Langley's strategies apply here

- Examples:
 - Narrative Histories
 - Pettigrew: Awakening giant
 - SCOT: Callon, Law study of scallop industry

IV. Approaches to the Study of Processes

C. Case III: Process Study of Processual World

- Examples:
 - Multiple Case Studies:
 - Denis, Lemothe, Langley (2001): Collective leadership and change (straddles 2 and 3)

 - Structuration (microanalysis)
 - Feldman: Routines in organizations
 - Poole, DeSanctis, Kirsch, Jackson: Structuration of GSSs and TQM teams
 - Orlikowski and Yates (2002): Structuring of time in organizations (see also Yakura, 2002)

IV. Approaches to the Study of Processes

C. Case III – Comments

- + Truest to processual view of communication
- + Stimulates us to rethink static concepts and develop novel theoretical vocabularies
- + Potential for theoretical advances

- Tendency to be self-fulfilling
- An irony: It still involves representation of processes that may reify them

IV. Approaches to the Study of Processes

D. Case IV: Variance Study of Processual World

- Construct models that represent generative mechanisms underlying process—simulate or characterize the process in dynamic terms
- Enables visualization of process or analysis of how it unfolds under different conditions—these often go beyond what we could think through qualitatively
- Qualitative features of the results of models are often more important than quantitative results

IV. Approaches to the Study of Processes

D. Case IV: Variance Study of a Processual World

- Examples:
 - Markov Models of decision making (Poole, Van de Ven,)
 - Analysis of temporally dependent data
 - *Time series, Time series regression, Event history analysis*
 - » Van de Ven and Polley (1992)

IV. Approaches to the Study of Processes

D. Case IV: Variance Study of a Processual World

- Examples:
 - Dynamic systems models
 - Dooley & Van de Ven (1999)
 - Event models that incorporate variance model terms
 - Baum & Rao (2004)
 - Agent based models
 - Larson & Lomi (1996)

IV. Approaches to the Study of Processes

D. Case IV – Comments

- + Allows us to apply rigorous analytical methods to build theory about what generates process into our models
- + Enables us to generate large sample of processes via simulation
- + More complex than Case I studies
- Reductionism and loss due to synoptizing the variables
- Representation of process may lose some detail
- Need new model forms—most current models (e.g. time series) were derived under variance assumptions
- Still does not capture multifarious nature of processes fully



IV. Approaches to the Study of Processes

E. Combining Variance and Process Approaches

- Use both approaches on the same dataset and link them
 - Saberwhal & Robey (1995)
 - DeSanctis & Poole: Studies of GSS impacts on group decision making and team processes



V. Theorizing Process

C. Retroduction To Composite Theories

- Conditions for Motors to Operate



VI. Thinking “Processually”

- Think in Deltas
 - Rate of change
 - Rate of change in change
- Think in Patterns
 - Temporal
 - Spatial
- Think Narratively
 - Sequence in time
 - Focal actor or actors
 - Identifiable narrative voice
 - “Canonical” or evaluative frame of reference
 - Context



VI. Thinking “Processually”

- Expect “Multiplicities”
- Focus on experience
 - Suspend categorization
 - Wittgenstein: “Look—don’t think”
- Place change in the forefront and question static constructs
- Learn modeling (e.g. Stella)




VI. Thinking “Processually”

- A Caution
 - The seductiveness of narrative



Questions or Comments?




Poole, M.S., Van de Ven, A. H., Dooley, K., & Holmes, M. (2000). *Organizational Change and Innovation Processes: Theory and Methods for Research*. New York: Oxford

Poole, M.S., & Van de Ven, A. H. (Eds.) (2004). *Handbook of Organizational Change and Innovation*. New York: Oxford




Supplementary Slides: To Be Used if Necessary



Methodological Requirements for Process Research


- Identification of Events: Typologies
- Characterize Event Sequences and Their Properties
- Identify Temporal Dependencies in Event Sequences
- Evaluate Hypotheses of Formal and Final Causality
- Recognize Coherent Patterns In Narratives
- Test for Ideal Type Change Motors



Why Bother?

All explanations involve stories...Unless we test/evaluate theoretical stories, we cannot trust our explanations


It is important to factor in the human hand in social processes



V. Theorizing Process

B. Composite Theories


- Motors may be situated at different levels
 - Nested motors
 - Entangled motors
 - Aggregated motors



V. Theorizing Process

B. Composite Models


- Motors may have different types of impacts on each other
 - Reinforcing
 - Dampening
 - Complex (nonlinear)



V. Theorizing Process


B. Composite Models

- Motors may have temporal relationships
 - Succession: One motor displaces another over time
 - Entrainment: External pacing factor causes coordination among motors
 - They may cycle: Alternating impacts of different motors



V. Theorizing Process

D. Time



II. Approaches to the Study of Process

A. Theory-Method Complex

Domain of Theory — { Substantive Assumptions
Mode of Explanation
Mode of Inquiry
Methodological Technique } — Domain of Methods