



Cornell University
ILR School

SHRM Research: Balancing Rigor and Relevance

Patrick M. Wright

William J. Conaty/GE Professor of Strategic HR

Leadership

School of ILR

Cornell University



HR Practices - Performance

- The relationship between comprehensive sets of HR Practices and Firm Profitability has been frequently demonstrated
 - Huselid (1995)
 - Delery and Doty (1996)
 - Guthrie (2001)



HR Practices - Performance

- How does this sound?

“Based on four national surveys and observations on more than 2,000 firms, our judgment is that the ***effect*** of a one standard deviation ***change*** in the HR system is 10-20% of a firm’s market value”

Huselid & Becker (2000) (emphasis added)



A Cautionary Tale

- The applied nature of our research encourages us to make statements encouraging certain policies or practices
- The scientific process requires that these statements have a reasonably high level of empirical proof
- Right now, our applied nature seems to be overshadowing our scientific rigor



Scientific Rigor Areas

- Reliability of our measures
- Validity of our measures
- Research Design
 - Common Method Variance
 - Causal Direction
- Multi-level approaches



Reliability

- Reliability deals with consistency over items, time, and raters
- Most of the Macro HRM research has reported internal consistency reliabilities of HR practice measures.
- Interrater reliability is a more appropriate reliability estimate



Interrater Reliability

- Interrater reliability of HR practice measures was found to be low (ICC1,k in the .1-.2 range) (Gerhart, et al., 2001)
- The low reliability of these measures has been replicated in numerous other studies (Wright et al., 2005)
- This has important implications for the effect size (from 20% increase to 80% increase)



Validity of HR

- Construct validity is essential to the scientific process, particularly for understanding substantive relationships
- Schwab (1980) quote



Construct Validity of HR Practices

- Becker and Gerhart (1996) found only one practice (training) that appeared across the studies on the HR – performance relationship
- Combs et al (2006) found a significant relationship between systems of HR practices and performance...however, they found considerable variance across studies in how HR practices were operationalized.



HR Operationalizations

- Operationalizations of HR differ by:
 - Practices measured
 - Level of architecture (principles, policies, practices)
 - Scale of measurement (y/n, %, extent, effectiveness)
 - Source of measurement (HR, manager, incumbent)
 - Scope of measure (job, class of jobs, all jobs)



HR Systems Architecture





Causal Direction

- Research Design
- Instrumental Variables



The Problem:

- How can we know the true causal direction in the HR-Performance Relationship?



Demonstrating Cause:

- Covariation
- Temporal Precedence
- Rule out alternative explanations

Cook and Campbell (1979)



Temporal/Causal Problems

- Most studies have not used designs to adequately infer causation in the HR-profitability relationship



What Designs are Used?

- Post-Predictive (Cross Sectional)
- Contemporaneous
- Retrospective
- Predictive

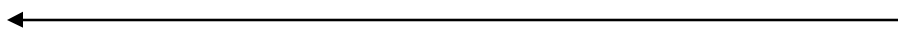


Post Predictive

T_0

T_1

Measures



X Performance

X HR

Performance – measured over past 3 years

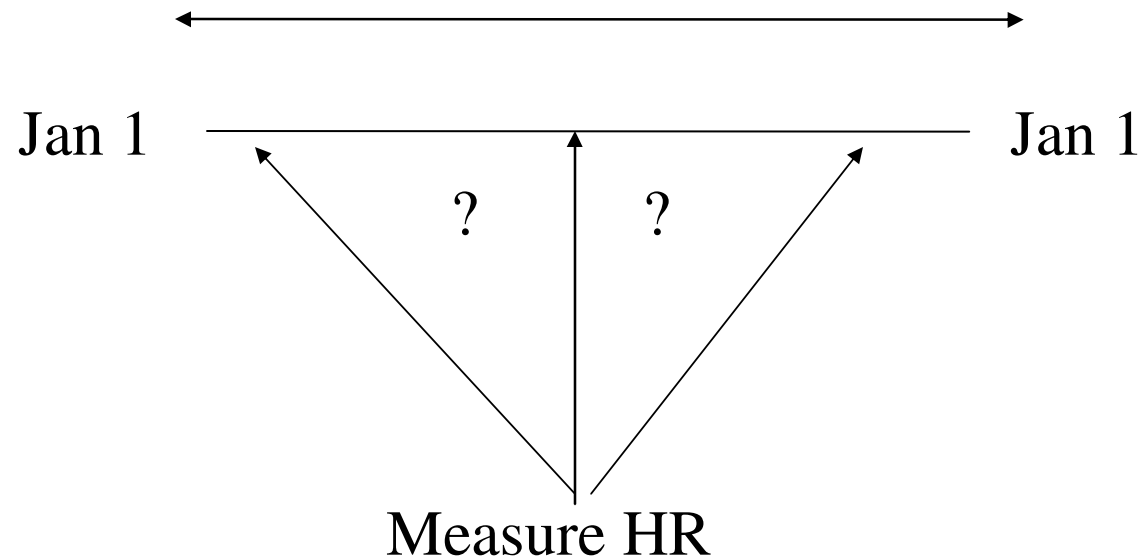
HR – What are current HR practices?

e.g., Delaney & Huselid (1996)



Contemporaneous

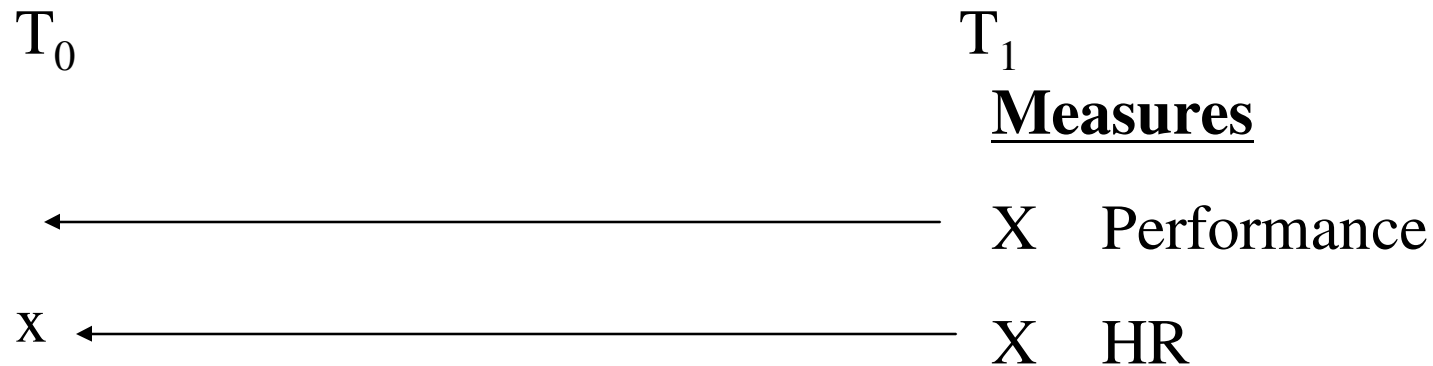
Measure of Performance



E.g., Delery & Doty 1996



Retrospective



Performance – measured over past year

HR – What HR practices existed at T_0 ?

e.g., Guthrie, (2000), Ichniowski et al. (2001)



Predictive

T_0

T_1

Measures

—————→ X Performance

HR X

Performance – time following HR measure

HR – What are current HR practices?

e.g., Huselid (1995), Youndt et al. (1996)



How Popular are These Designs?

- Review of 34 Studies on HR – Performance Relationship
 - Post-Predictive – 28 studies
 - Contemporaneous – 1 study
 - Retrospective – 2 studies
 - Predictive – 3 studies



Problem with Post Predictive

- Ignores Temporal Precedence
- Usually Fraught with Common Method Variance



Common Method Variance

- Definition
- Caused by:
 - Method
 - Implicit Theories
 - Mood
 - Culture/Climate/Shared Theories



Common Method Variance Solutions

- Statistical Tests
- Temporal Separation
- Split Samples



Statistical Tests

<u>Variable</u>	X	Y	Z
X	-		
Y	.05	-	
Z	.15	.10	-

True correlations: There are some, but not strong



Statistical Tests

<u>Variable</u>	X	Y	Z
X	-		
Y	.20	-	
Z	.30	.25	-

Inflated correlations: .15 Common Method Variance



Statistical Test

- Statistical tests assume that the common method factor washes out the other relationships
- To the extent that (a) there are true correlations among the variables, and (b) the common method factor is not profoundly greater, statistical tests will lead to the conclusion that CMV is NOT a problem



Temporal Separation

- The major problem with CMV is when respondents answer all questions using the same method at the same time (memory, implicit theory, mood, etc. all play in)
- Ostroff et al. showed that separating the times between taking different measures reduced the CMV problem
- The problem is practicality in macro HRM

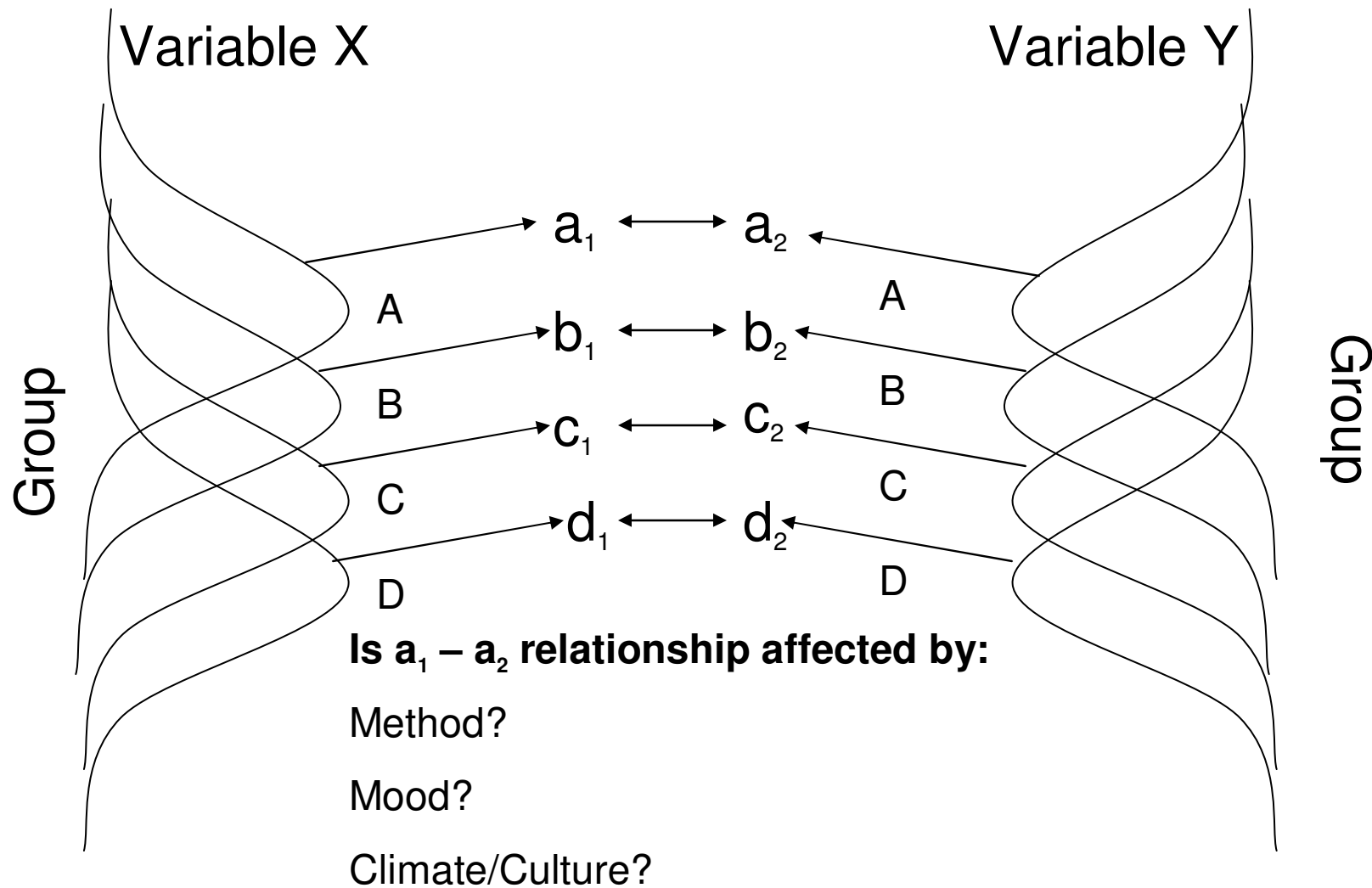


Split Samples

- Gerhart (2005; in press) suggests that split samples are the solution to common method variance in macro HRM research.
- His conclusion is based on work of Ostroff, Kinicki, & Clark, citing their study as an example of how to solve the CMV problem



Problem with Split Samples





Common Method Variance Conclusion

- Common Method Variance is a problem in all studies using a single respondent for all the variables.
- How much of a problem may depend on the nature of the variables
- Split samples seems to minimize, but not eliminate the problem



Causality

- We can't always design studies that enable us the temporal precedence control
- Even if we could, there is the likely possibility that the causal direction runs both ways.
- Instrumental variables have been suggested as a potential solution

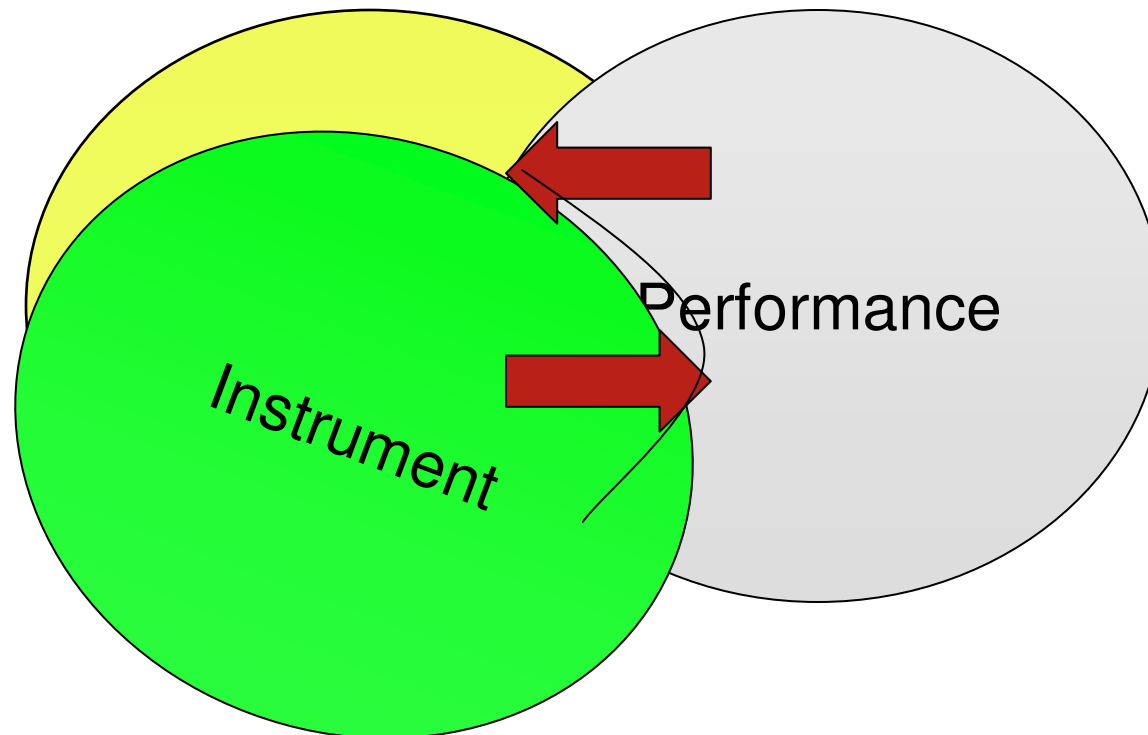


Instrumental Variables

- Instrumental variables are variables that are strongly related to the IV, but conceptually and empirically cannot be caused by the DV
- The basic idea is to use the instrumental variable to separate out the variance in the IV that is not caused by the DV, then use that variance to predict the DV



Instrumental Variables for Causality





Process

- Regress Instrument on HR Practices
- Compute a new HR score which is
$$\hat{HR}$$
- i.e., the predicted value of HR given the instrument
- Use \hat{HR} as the new predictor of Performance

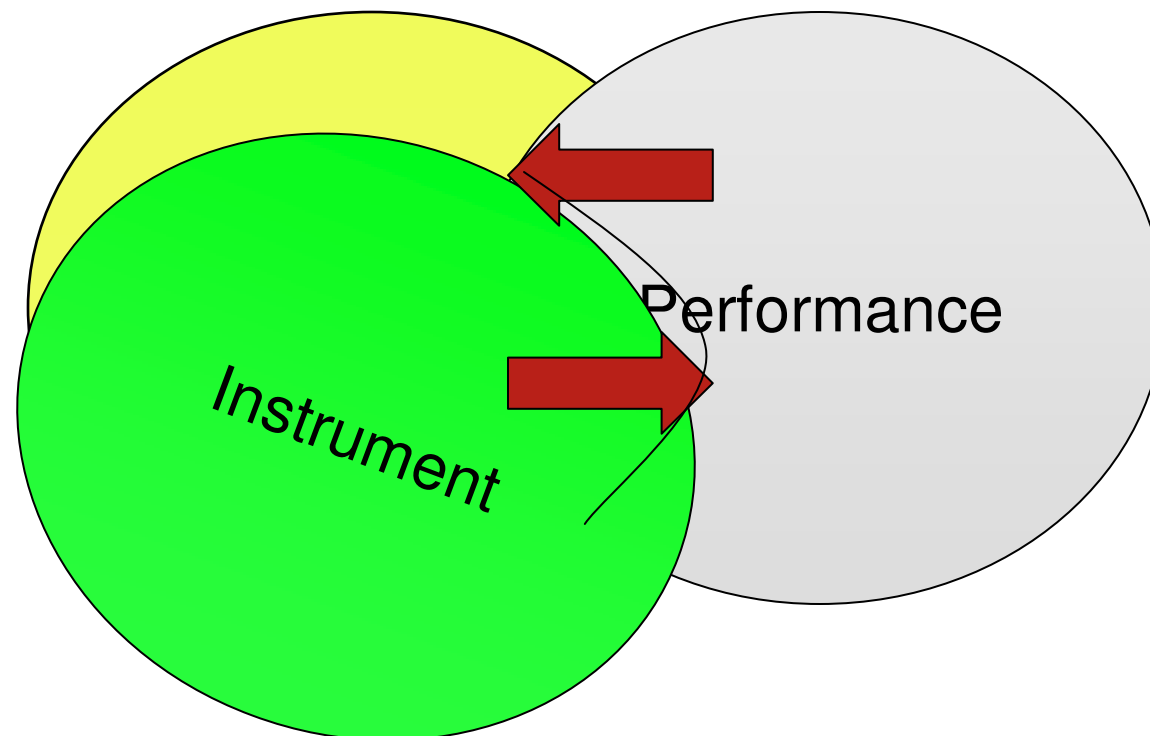


Use of Instrument Variables

- It eliminates any variance caused by performance, thus provides an estimate of the variance in HR ***causing*** performance
- The disadvantage is it may either under- or over- estimate the causal effect, depending upon how the instrument is related to both HR and performance



Instrumental Variables for Causality





Multilevel Approaches

- Variance as a scientific concept
 - Goal is to explain variance in interrelated variables
 - Types of Variance
 - True
 - Error
 - Systematic
 - Random
- Importance of Variance in Theory

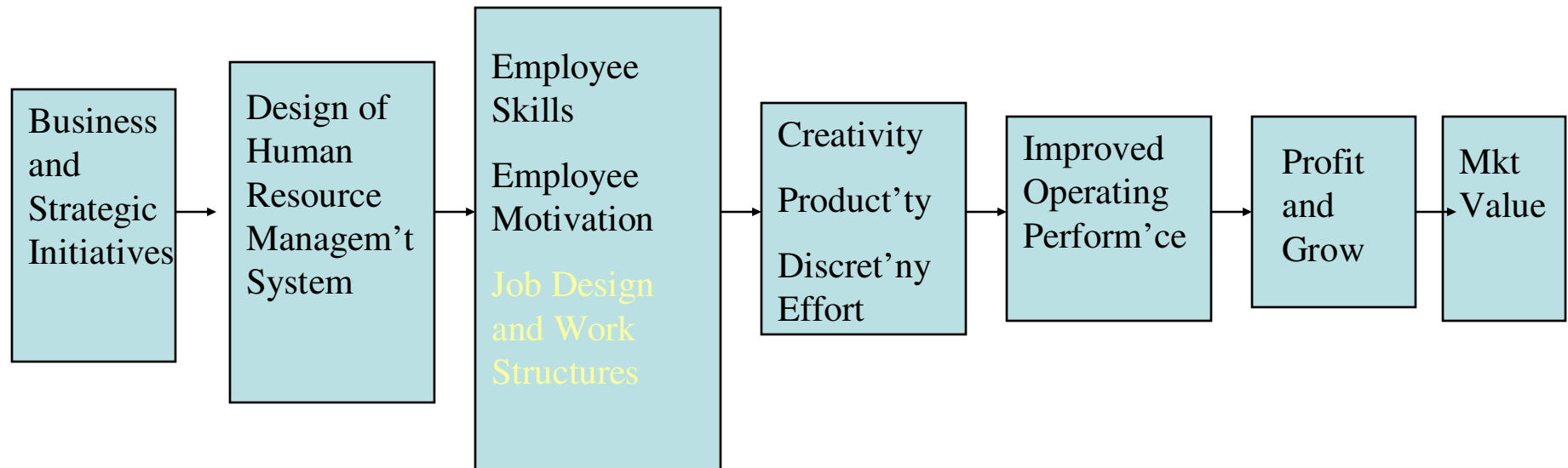


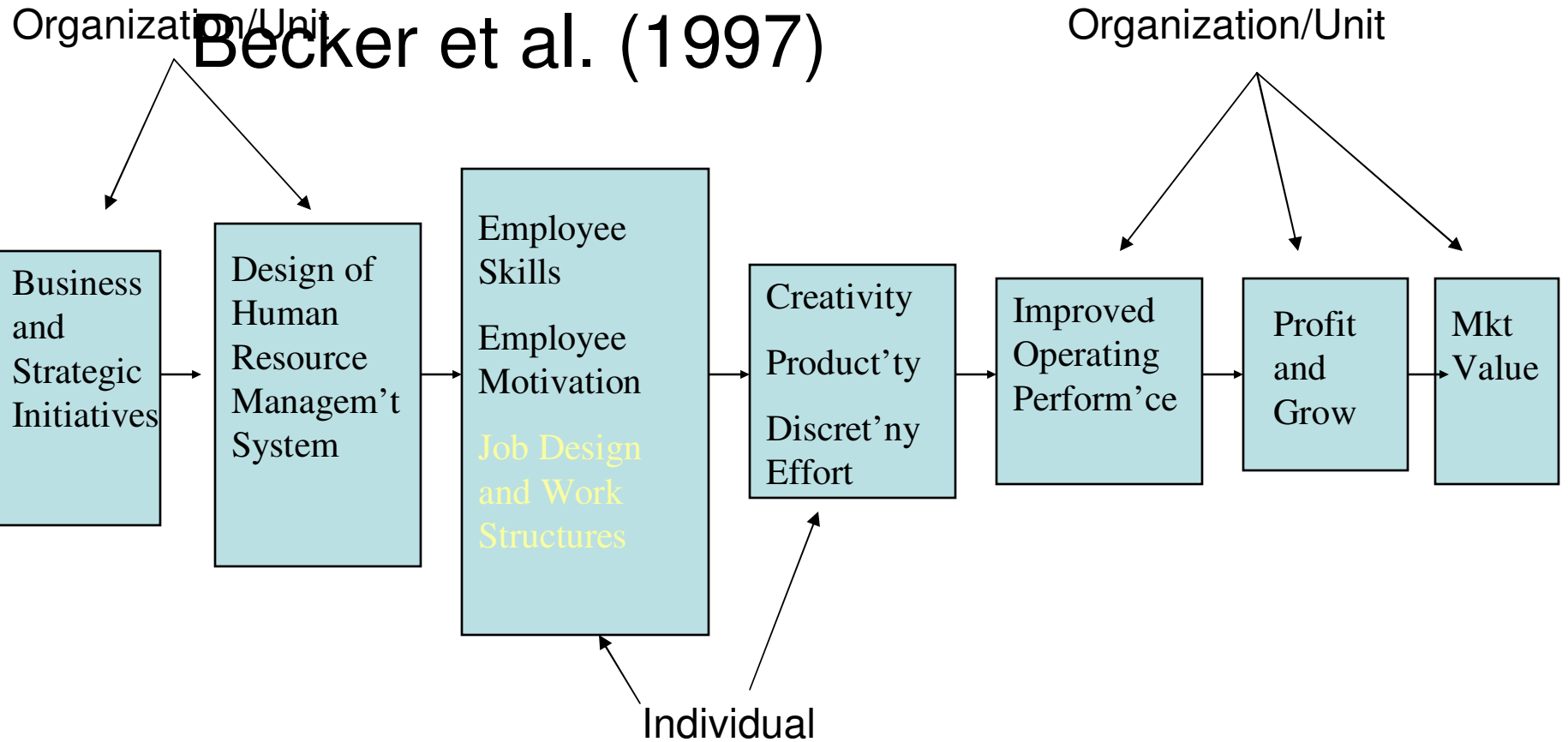
Variance and Levels of Analysis

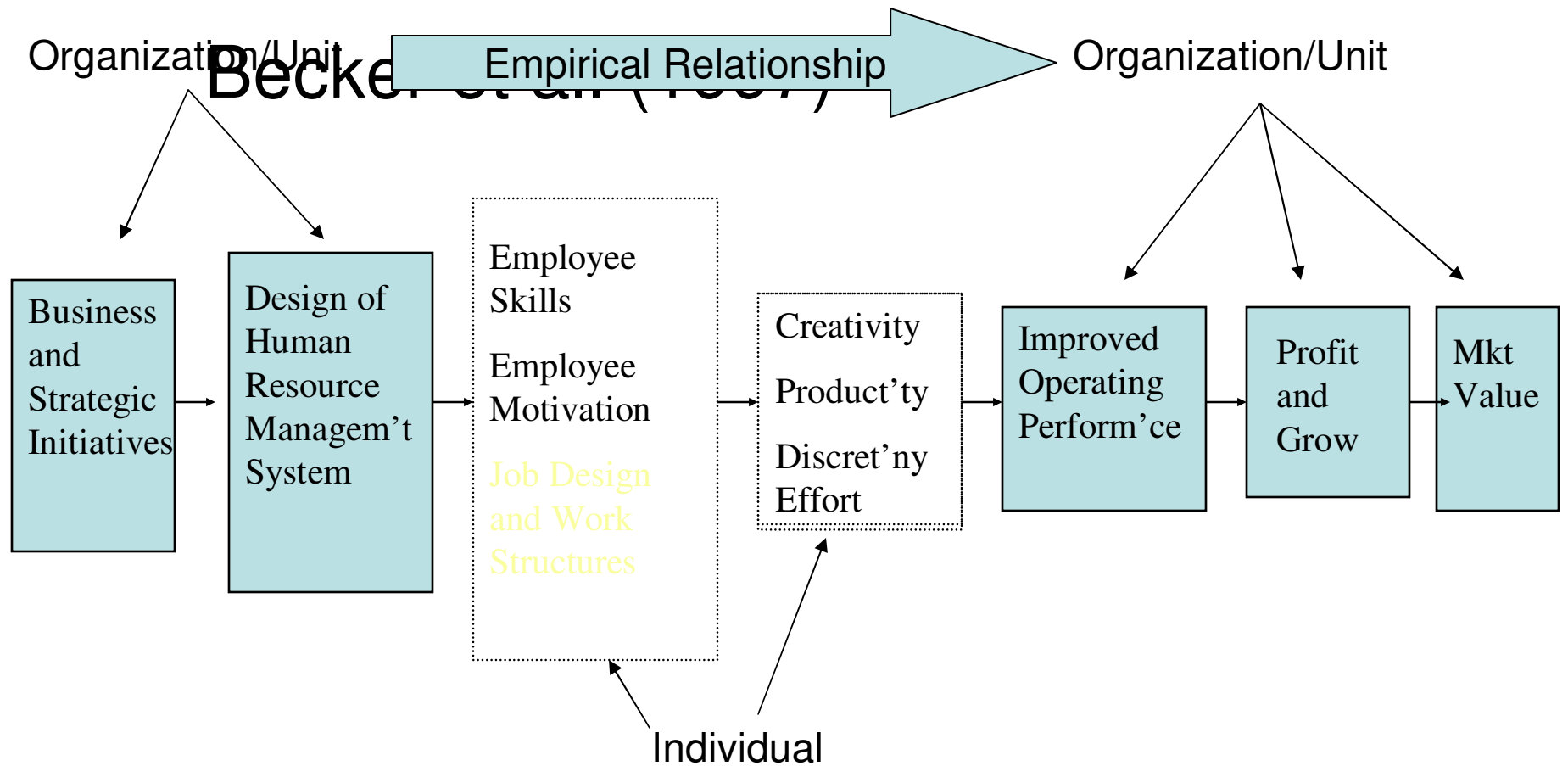
- Empirically, defining the level of analysis tends to assume constancy at other levels
- SHRM research focuses on organization or unit as the level of analysis, and assumes constancy at group/individual
- Research and theory in SHRM assumes, but ignores, individual level processes



Becker et al. (1997)









What we need:

- A basic model that illustrates the interplay of concepts across levels of analysis
- Use the linkages among these concepts as means for identifying OB theories that might be integrated into SHRM research/theory in order to improve our understanding



Figure 1: Process Model of SHRM

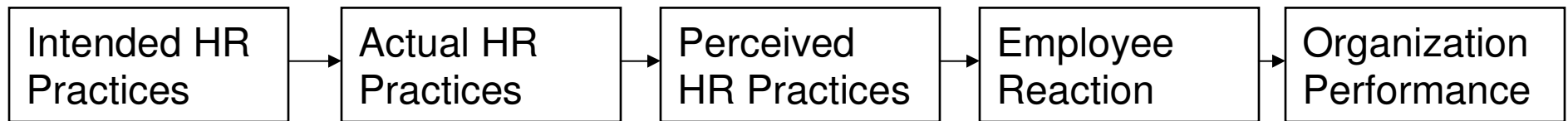
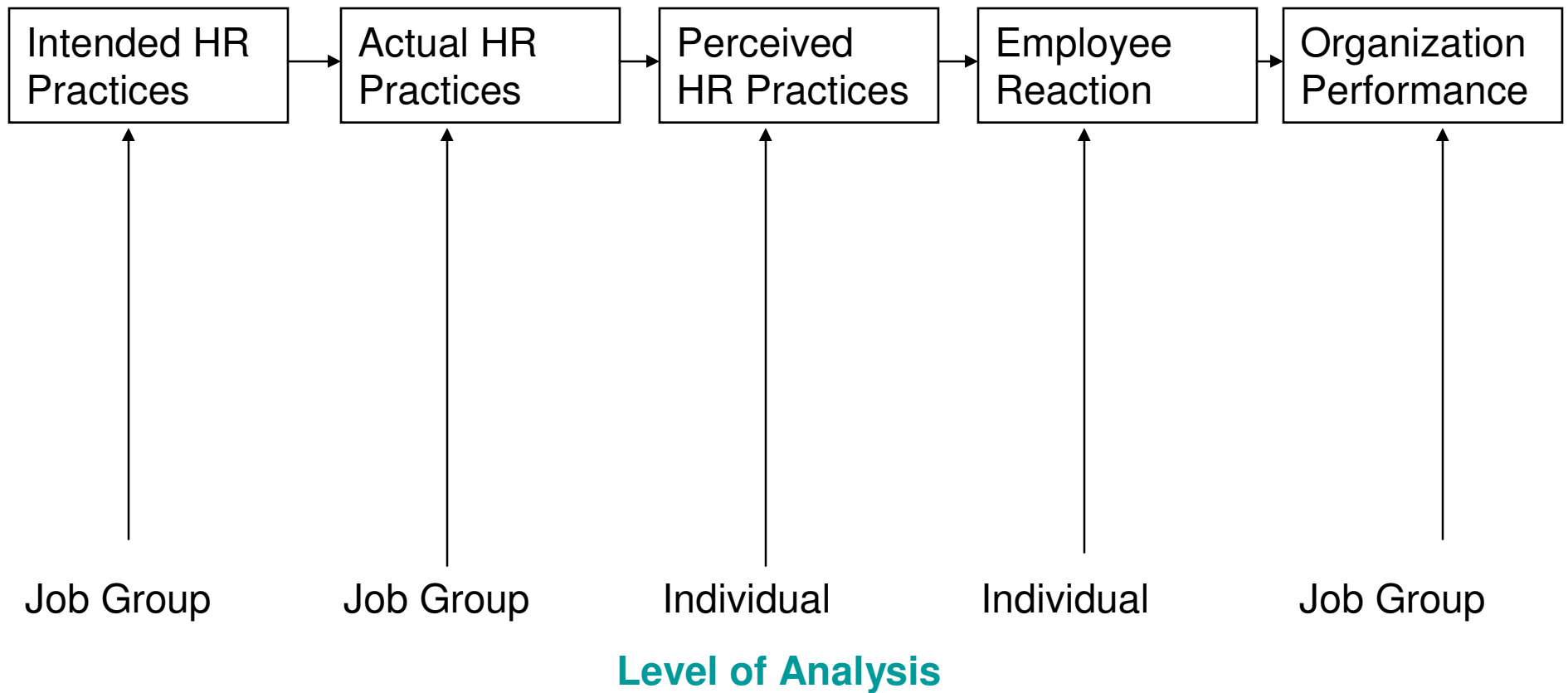




Figure 1: Process Model of SHRM





Within Firm/Unit Variance

None

Some

More

Even More

Some/None

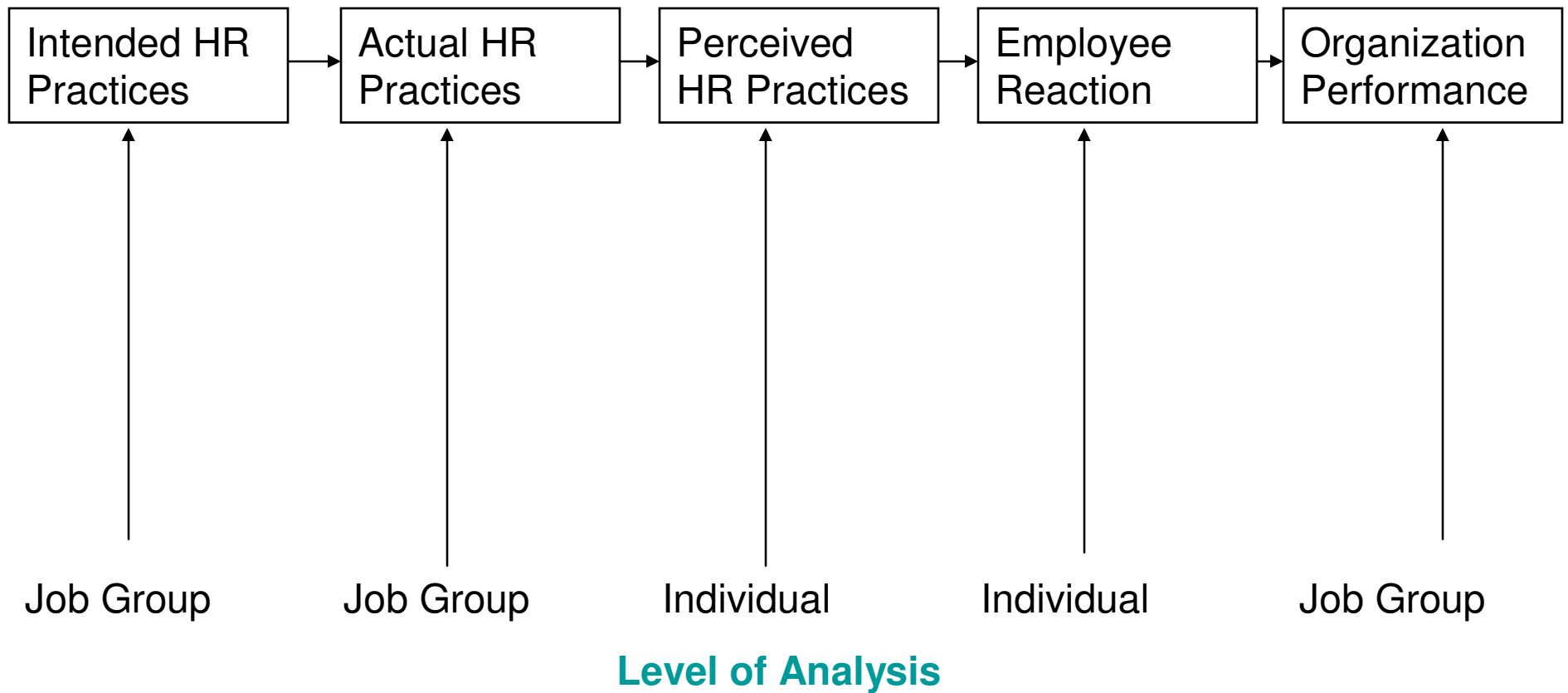




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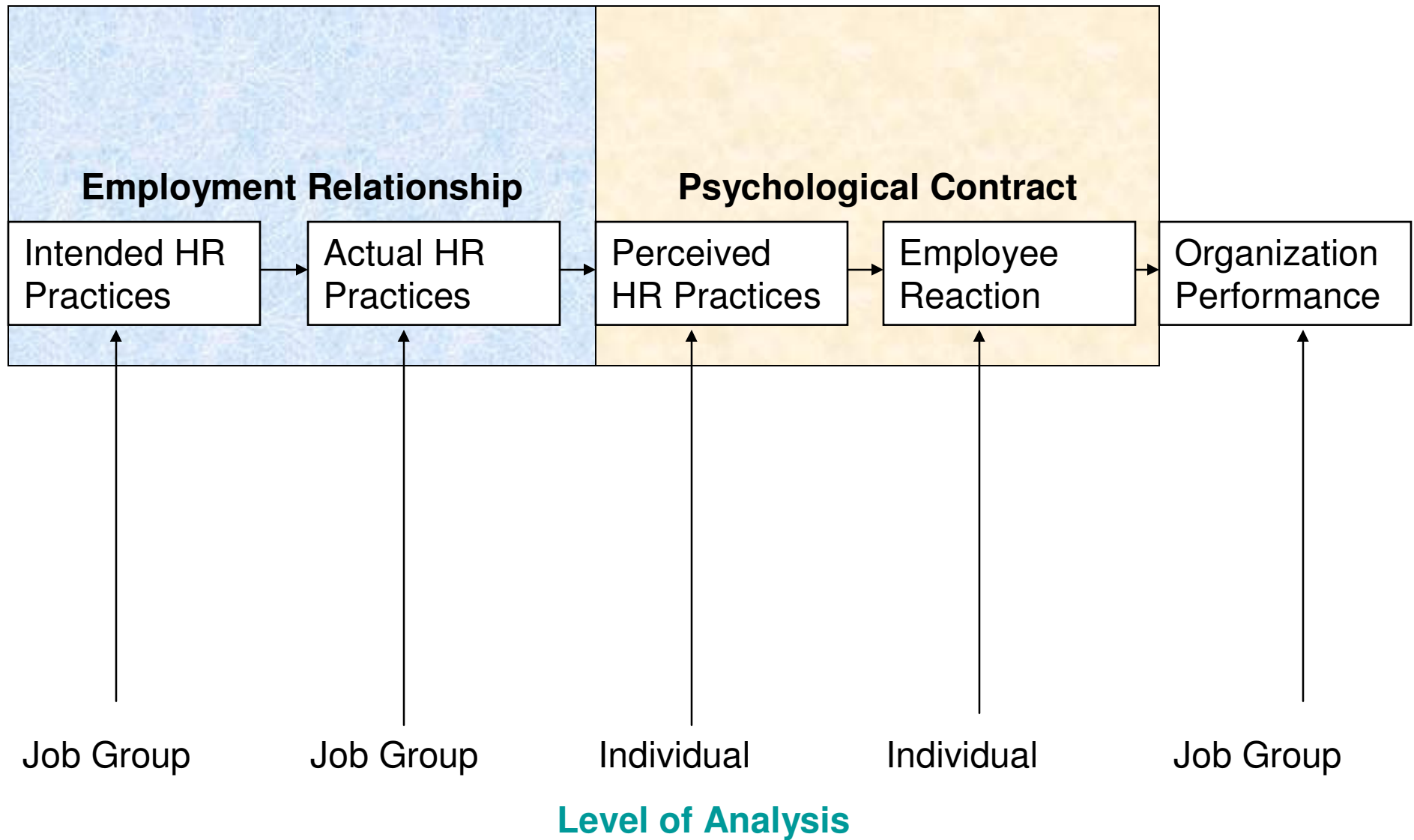
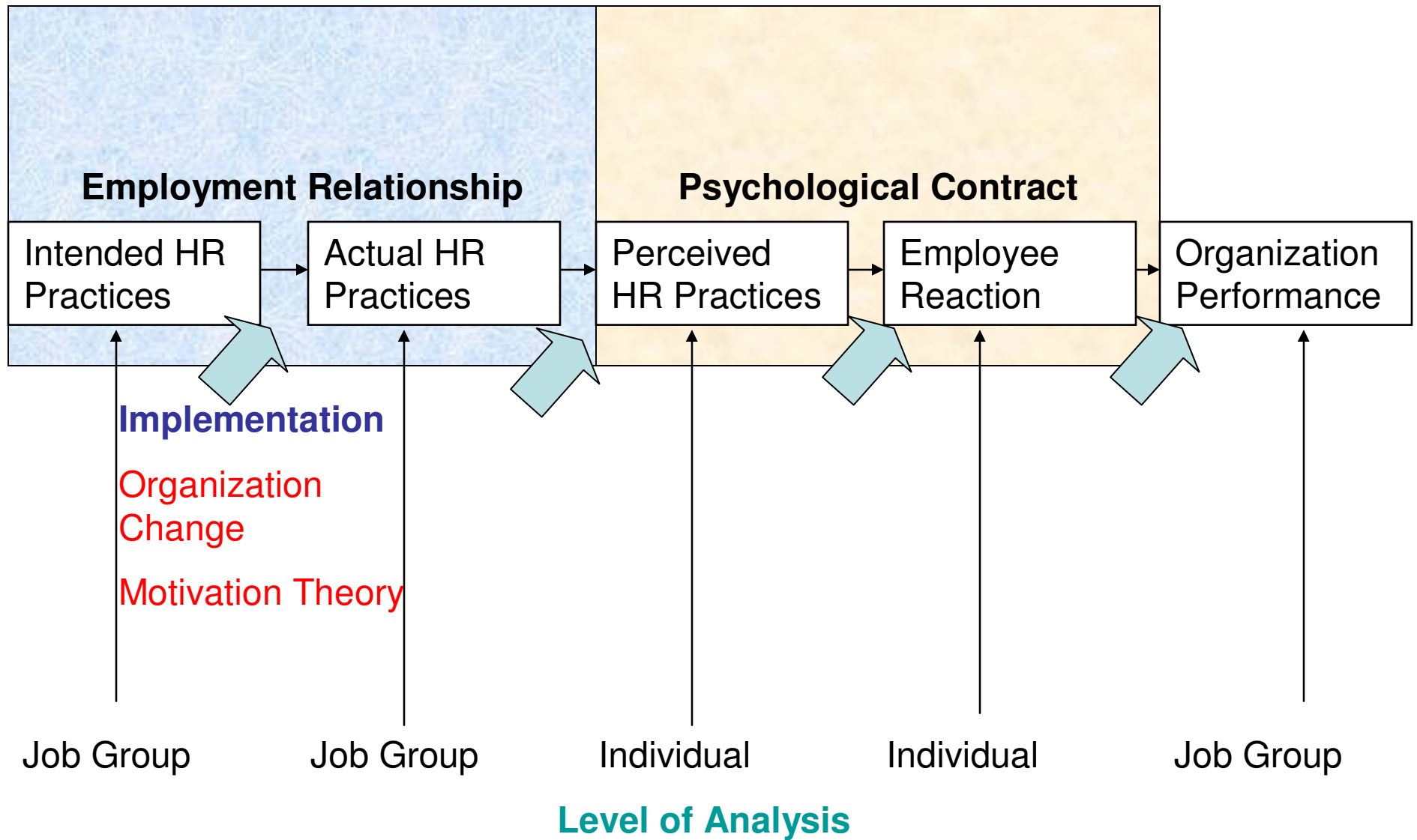


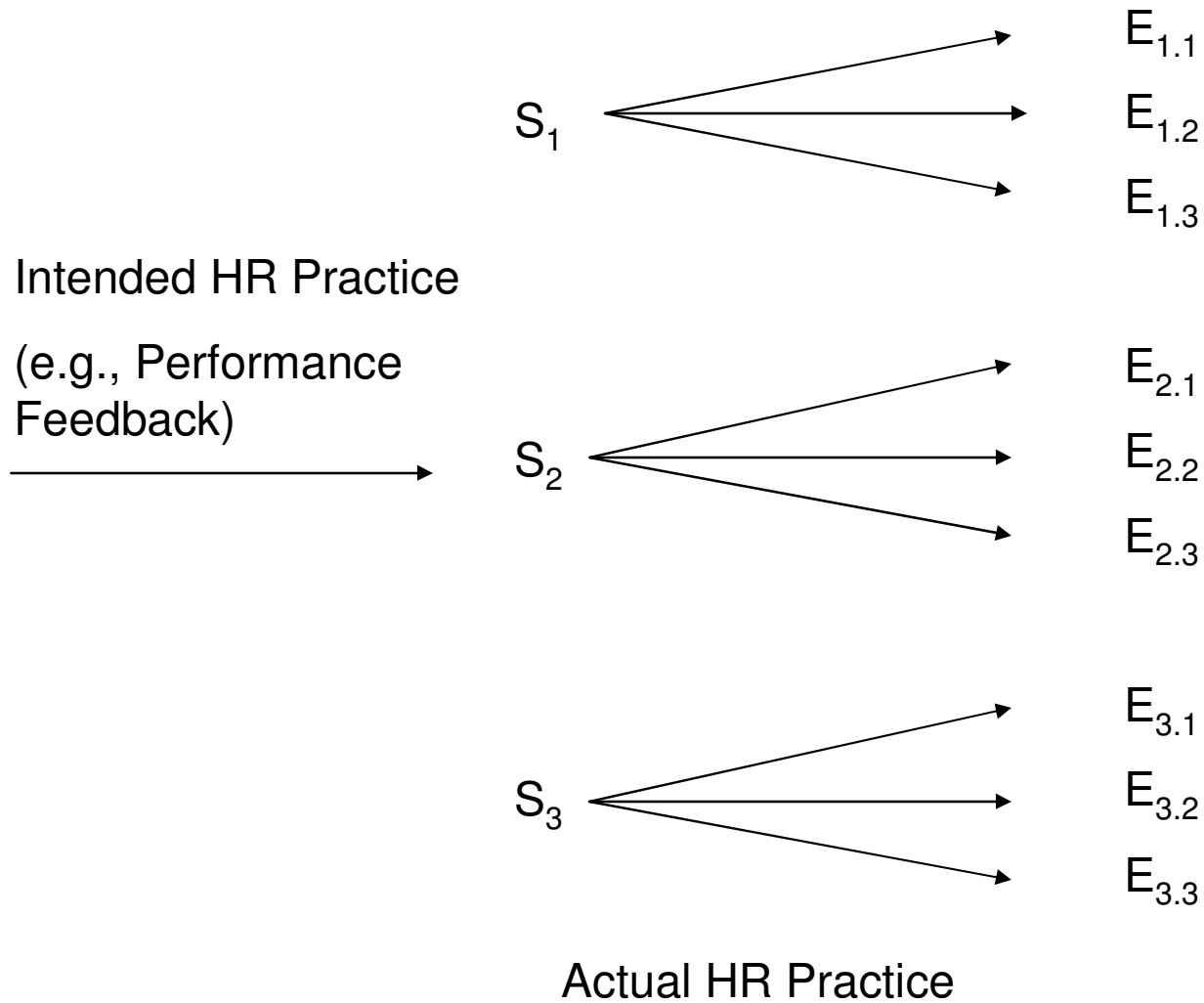


Figure 1: Process Model of SHRM





Job Group with Multiple Supervisors





Job Group with Multiple Supervisors

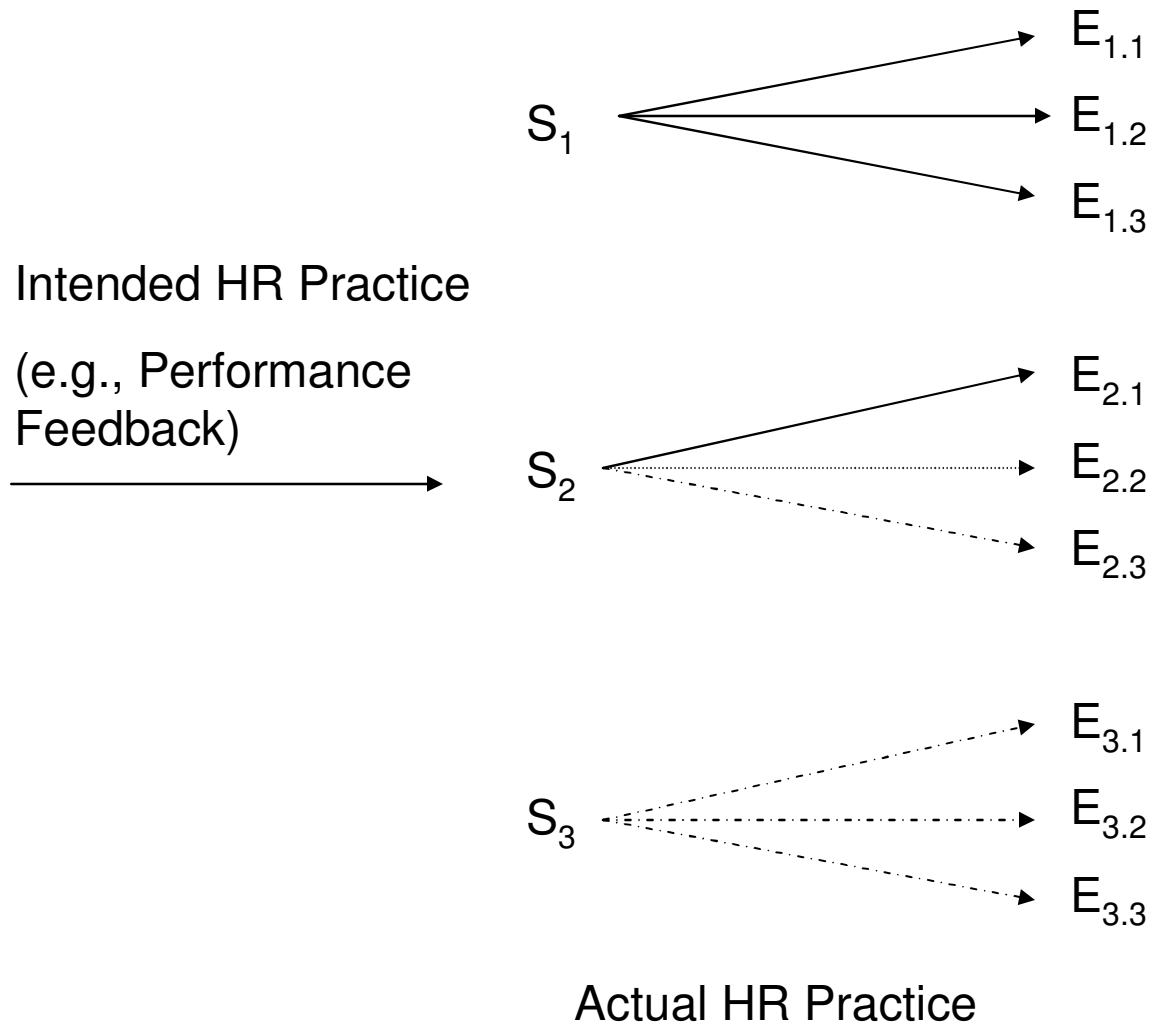




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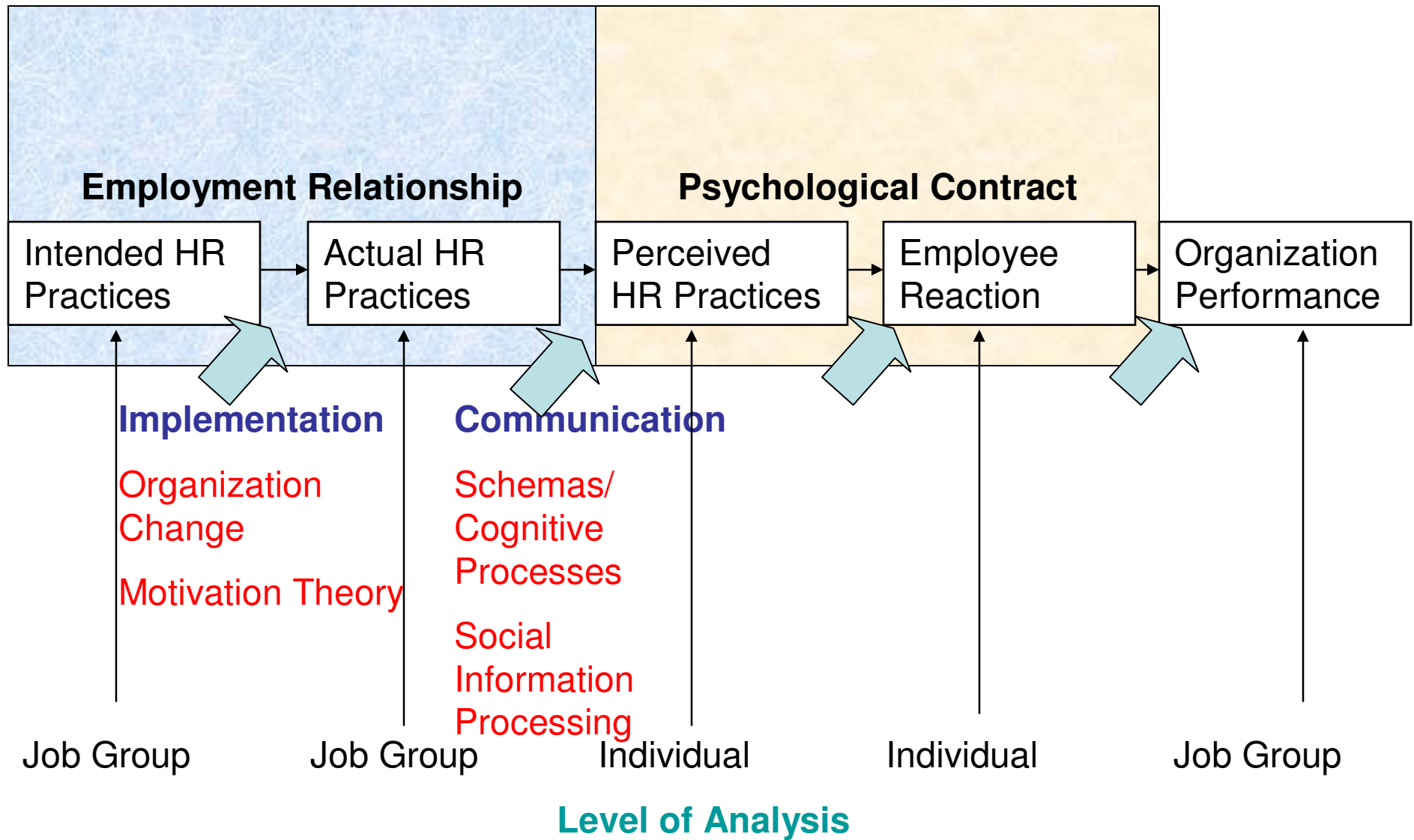
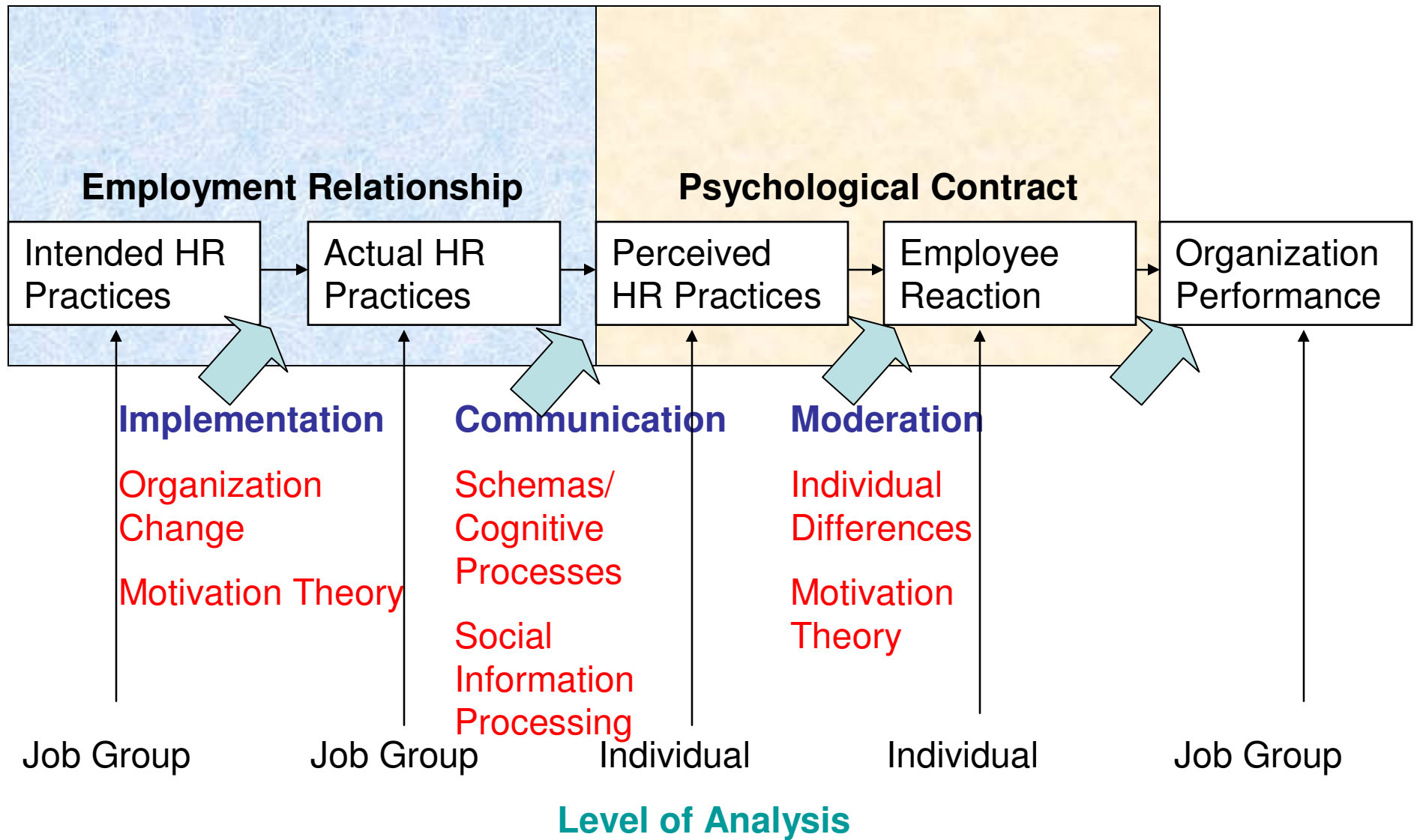


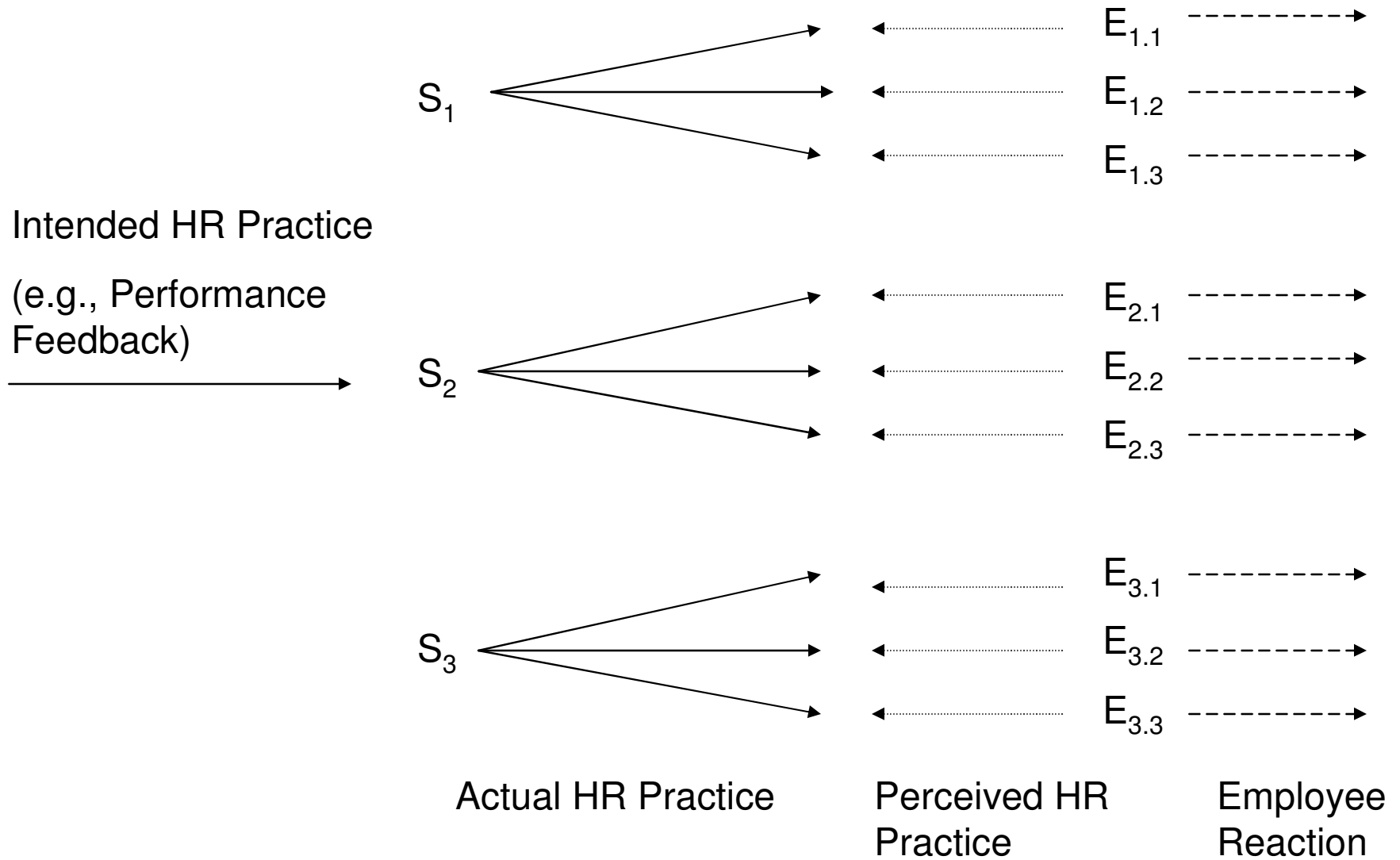


Figure 1: Process Model of SHRM





Job Group with Multiple Supervisors





Job Group with Multiple Supervisors

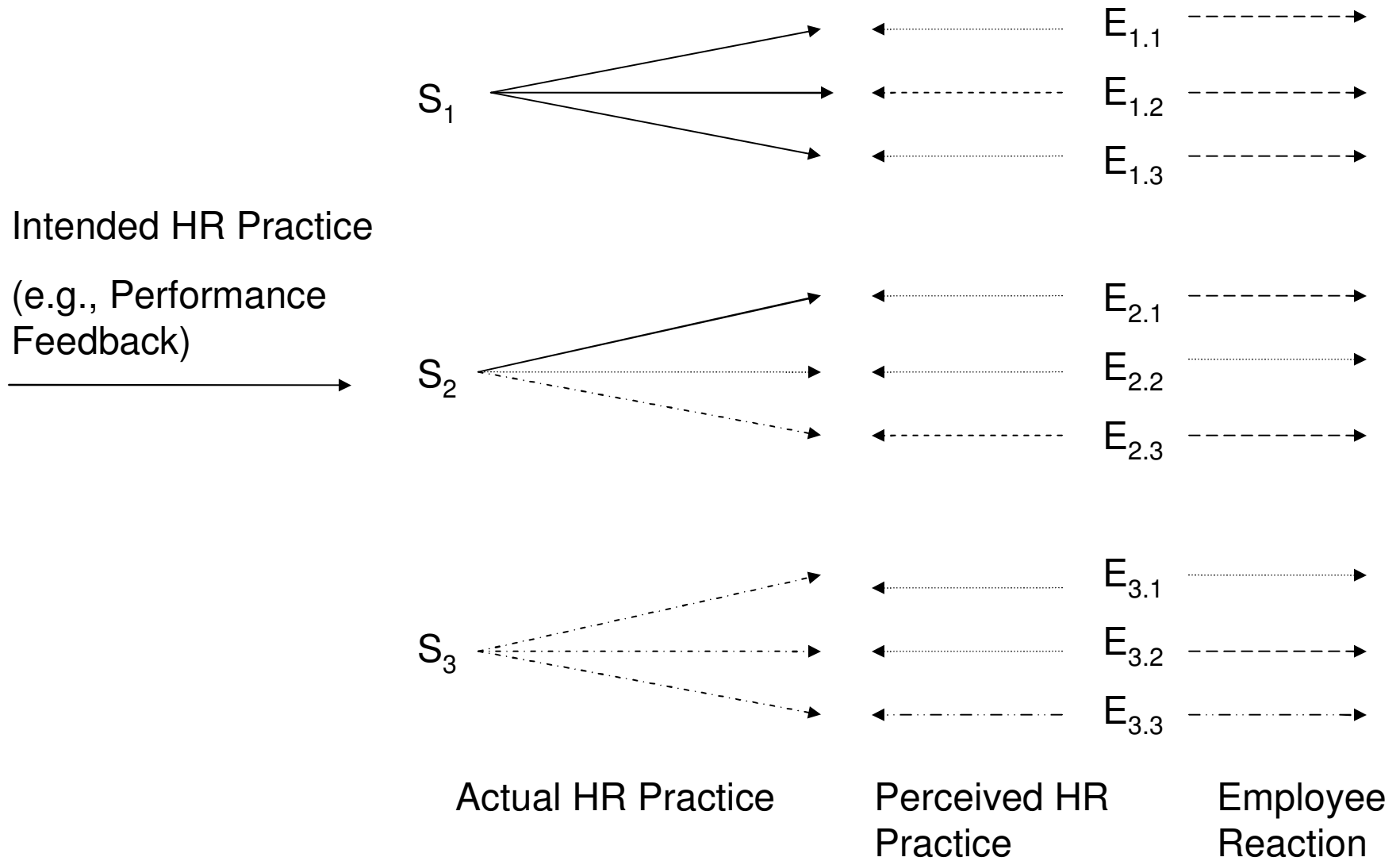
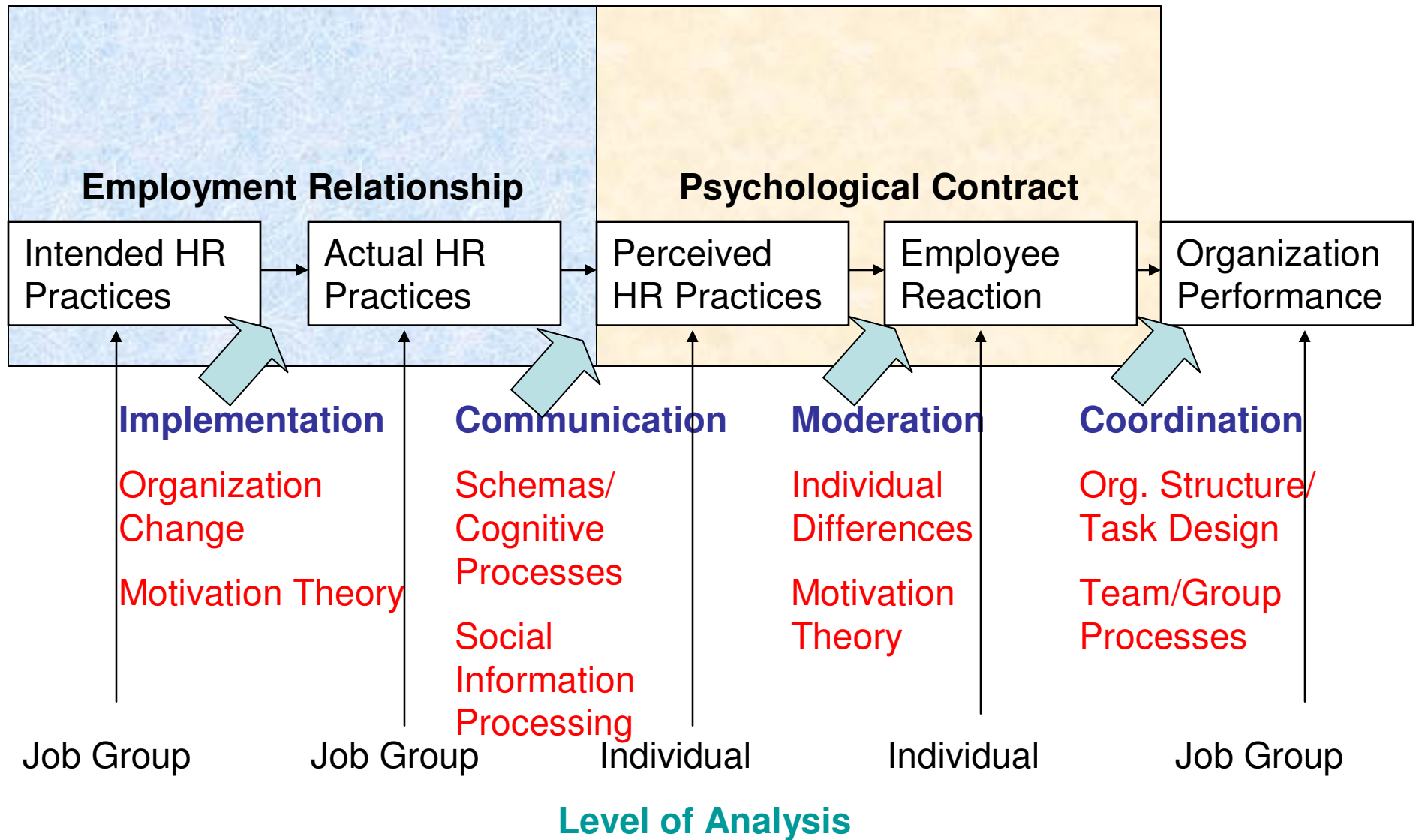




Figure 1: Process Model of SHRM





Research Implications

- Need for multi-level theories of SHRM
 - Grand theories that encompass multiple processes
 - Integration of existing theories across levels
- Need for multi-level research in SHRM
 - Assess and partition variance at different levels



Research Questions

- Are differences in HR practices differences in intended or actual practices (i.e., is it better design of HR strategies, or better implementation of HR strategies)?
- Does the Attraction-Selection-Attrition process help explain organizational differences in HR/Performance? (Consistent practices enable the process)?



Research Questions

- What role does time play in SHRM phenomena? (How long does it take for the system to have an effect?)
- To what extent do individuals enact the HRM systems in organizations? (Do recipients explicitly or tacitly influence the design or implementation?)



Conclusion

- Macro HRM research has become immensely popular
- The first generation research had some interesting revelations and pointed in interesting directions
- The next generation of research has to increase the rigor to ensure that the conclusions/implications are justified



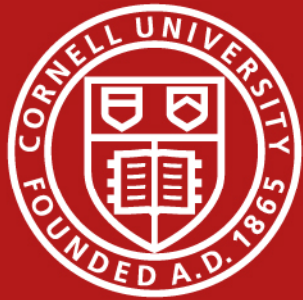
Cornell University
ILR School

Patrick M. Wright

Cornell University
ILR School
397 ILR Library Building
Ithaca, New York 14853

t. 607.255.3429
f. 607.255.1836
pmw6@cornell.edu

www.ilr.cornell.edu



Cornell University
ILR School