

The Conceptualization and Measurement of Adaptive Skill

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Overview of Theory Advancement Session

- A presentation of the assumptions underlying two approaches for studying adaptive skill (rational-objectivist and functional-perspectivist)
- A brief summary of recent research results obtained using the two approaches
- Presentations of overall conclusions from each approach
- A discussion between/ among the panel members and audience
- The presentations are interlocking - we will switch back and forth between presenters
- Time limit = 80 minutes

Adaptive Skill Defined

Adaptive skills are competencies that enable people to manage themselves in relation to the demands of conformity and/or change in particular situations. Adaptive skills are acquired in the course of life experience, particularly early childhood, on practically a subconscious level. They are integrated as the values, attitudes, and manner of responding to the physical, social, and environmental circumstances in which persons find themselves. (Fine, 1989; Fine & Cronshaw, 1999)

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Why Studying Adaptive Skill Is Important

- They are part of a larger theoretical framework (FJA theory) that has proven very fruitful in practical and scientific endeavor
- Adaptive skills are the *sine qua non* for the productive engagement of all other skills in the workplace
- An understanding of adaptive skill and its measurement has resulted in the development of valuable tools and methodologies for workplace intervention (e.g., Performance-Oriented Structured interview)

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Two Paradigms for Conceptualizing and Measuring Adaptive Skill

Werner and Altman (2000) present a general comparison of four world views (thought systems) for psychology: Trait, Interactional, Organismic, and Transactional.

We will focus our attention on the Interactional Approach (which closely parallels normal science in I/O Psychology) and the Transactional Approach (a variant on which we will call Functional- Perspectivism)

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The Rest of Session

- Dara examines the assumptions underlying the Interactional Approach
- Perng Yih examines the assumptions underlying the Functional-Perspectivist Approach
- Greg reviews his recent research on adaptive skill using the Interactional Approach
- Perng Yih reviews our recent research using the Functional-Perspectivist Approach
- Audience questions and discussions

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Interactional Perspective Overview

Greg A. Chung-Yan
Dara B. Chappell

Interactional Perspective

Unit of Analysis

- The person and the physical environment in which they exist are treated as separate entities
 - e.g., Problem solving (cognitive ability test) & organizational constraints (lack of supplies)
- The person and the environment are separate entities that can interact with each other
 - $PS \times OC = \text{Productivity}$
- Psychological phenomena are reducible

Observers

- Observers (e.g., researchers) are separate, objective and detached from the phenomena
- Equivalent observations should be obtained from different observers (e.g., inter-rater reliability)
- Classical measurement approaches are designed to reduce/account for error

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Time and Change

- Change is not intrinsic to either the person or the environment
- Change can result from the interaction between the person and the environment



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Causation

- The emphasis is on 'Efficient Cause'
 - Antecedent-consequence relationship
- One component of the phenomenon systematically effects change in the other

Example



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Other Issues

- The dimensions of adaptive skills can be identified and measured
- Findings can be generalized and laws of relationships established
- Objective is to predict and control the phenomena (positive interventions, selection systems, ...)

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Functional - Perspectivist Approach

Steven F. Cronshaw
Perng Yih Ong

Functional-Perspectivism

Unit of Analysis

- Person and context are co-joined symbiotically and are mutually defining
- The functional interdependencies of person and context are recognized
 - e.g., $\text{Productivity} = f(\text{person}, \text{context})$
- Takes a holistic perspective of viewing person and context as one system (i.e., p-in-c and c-surr-p)

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Observers

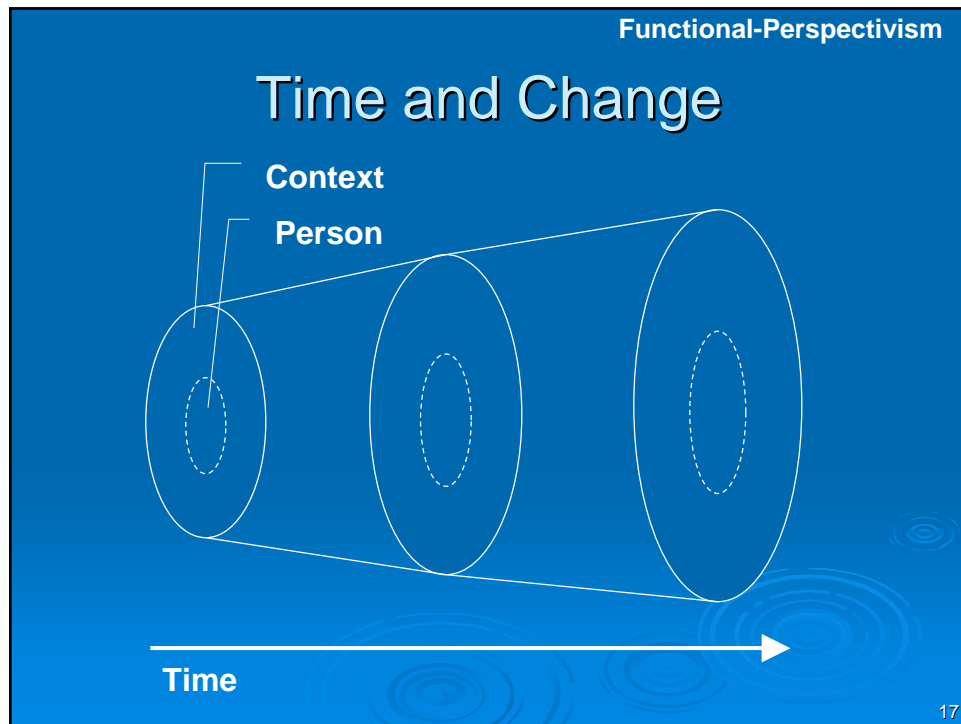
- Observers (e.g., researchers) cannot be separated from the phenomena under study
- The researcher-as-observer must enter as fully as possible into the experience of the participant
- The embodied experience of the researcher is the fundamental basis for 'valid' measurement
- Measurement focuses on holistic experience, judgment, and perspective of the researchers

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Time and Change

- The p-in-c system is:
 - self-organizing
 - in constant flux/ transition
- Direction of change is emergent
- Direction of change cannot be reduced to simple and/or interactional effects
- Change is a joint function of the person and the context

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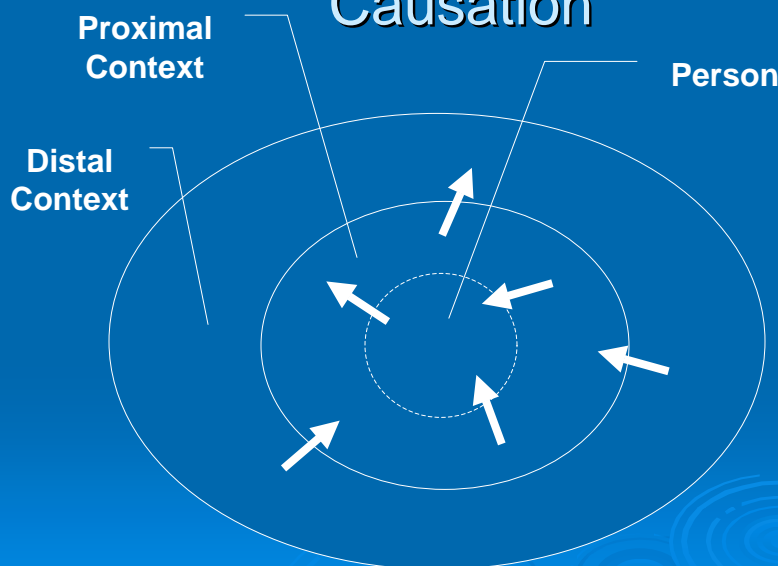
- Functional-Perspectivism
- ## Time and Change
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Causation

- The emphasis is on 'formal cause'
- Dynamic forces are studied within the gestalt of the concatenated ecological concept (i.e., p-in-c)
- Aspects of the system perform a mutually defining role in determining the shape, patterning, and form of p-in-c at a specific time

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Causation



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Other Issues

- Focus is on forces determining actions, events and encounters
- Objective is to have a holistic understanding of the phenomenon
- Modus tollens is the underlying logical model

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Interactional Study Overview

- Format
 - Unit of Analyses, Observers, Time & Change, Causation
- Workplace Adaptation
 - How people behaviourally and emotionally adjust to their work environment
- Study
 - Adaptive skills & Work stress

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Unit of Analysis

- Constructs to be measured
 - Adaptive Skills (person)
 - Demands/stressors (environment)
 - Strain & job-related outcomes (adjustment)
- Each are considered to be static, stable entities

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Observers (Validity & Reliability)

- Assessment is consistent across test administrations
- Items within dimensions are internally consistent
- Items cover content domain
- Self-report measures make “observers” irrelevant

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Observers (cont'd)

Reductionism: Adaptive Skill Measure

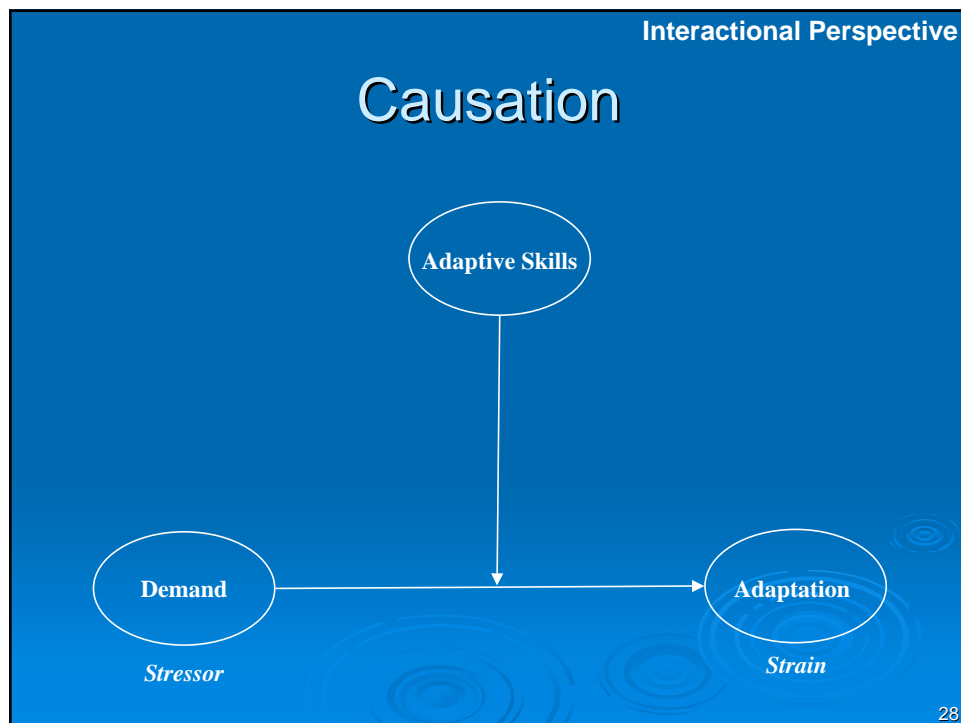
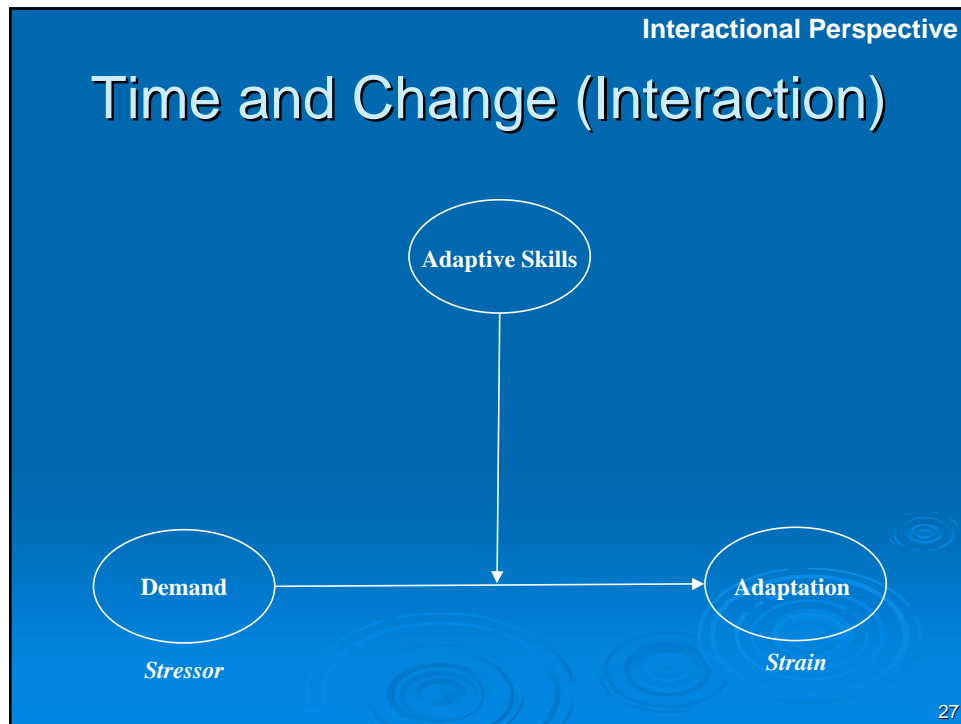
- Questionnaire Development
 - Cronshaw & Jethmalani (2005)
 - mental planning, initiative, flexibility, conflict management, assertiveness, leadership, continuous learning, ethical awareness, adaptability to change, empathy, impulse control, and teamwork
- EFA (N=427) Work Adaptability Measure (WAM) dimensions
 - Openness to Change
 - Taking Charge
 - Cooperation with Others
 - Decisiveness/Decision-making
- CFA (N=271)

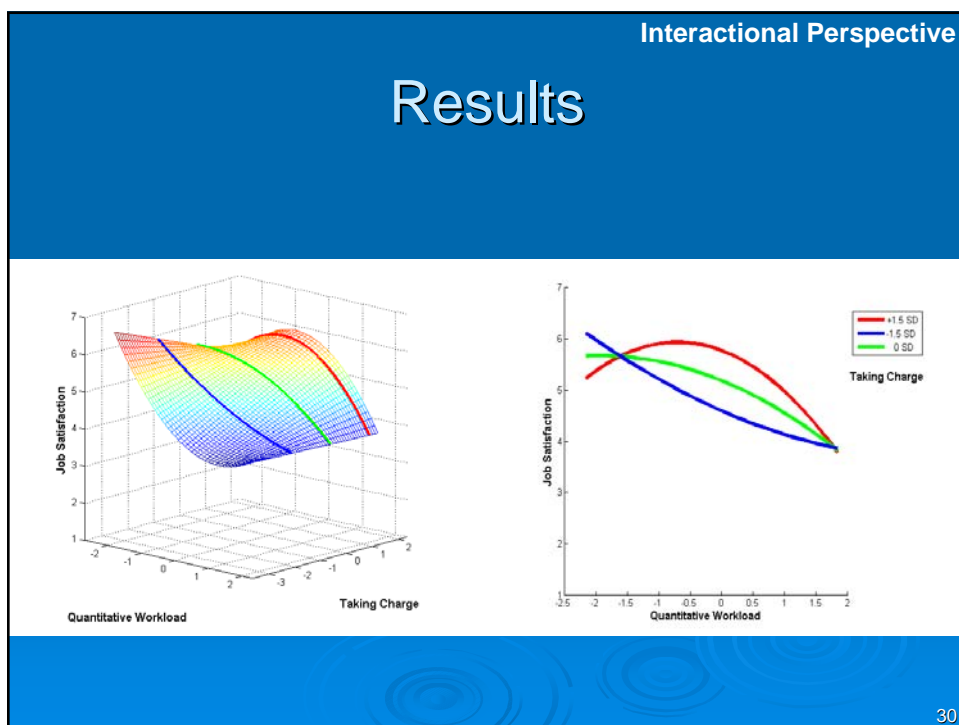
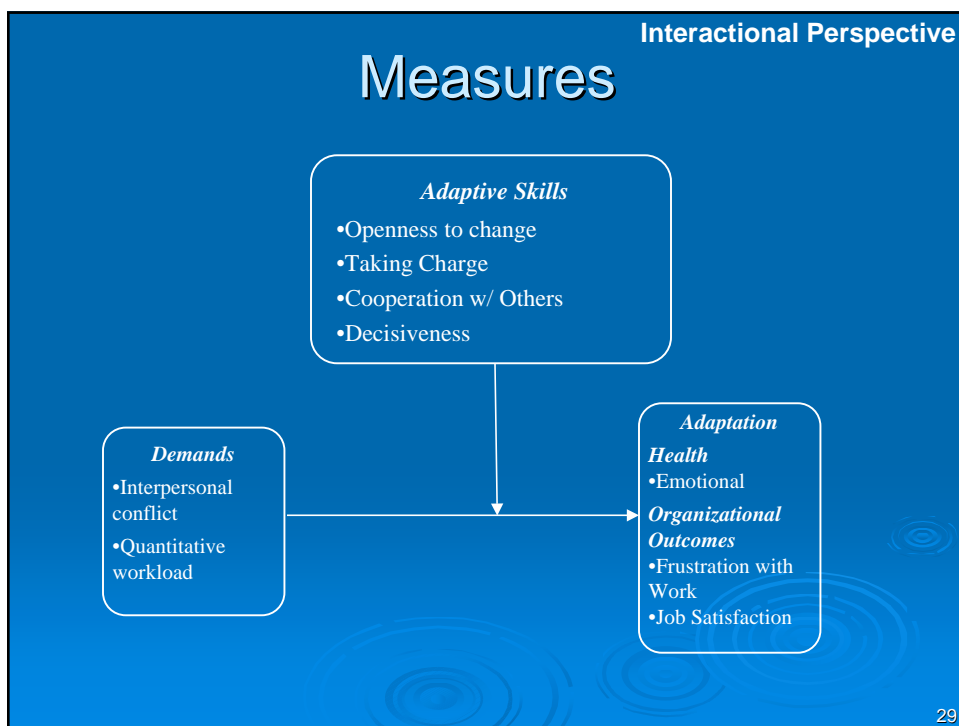
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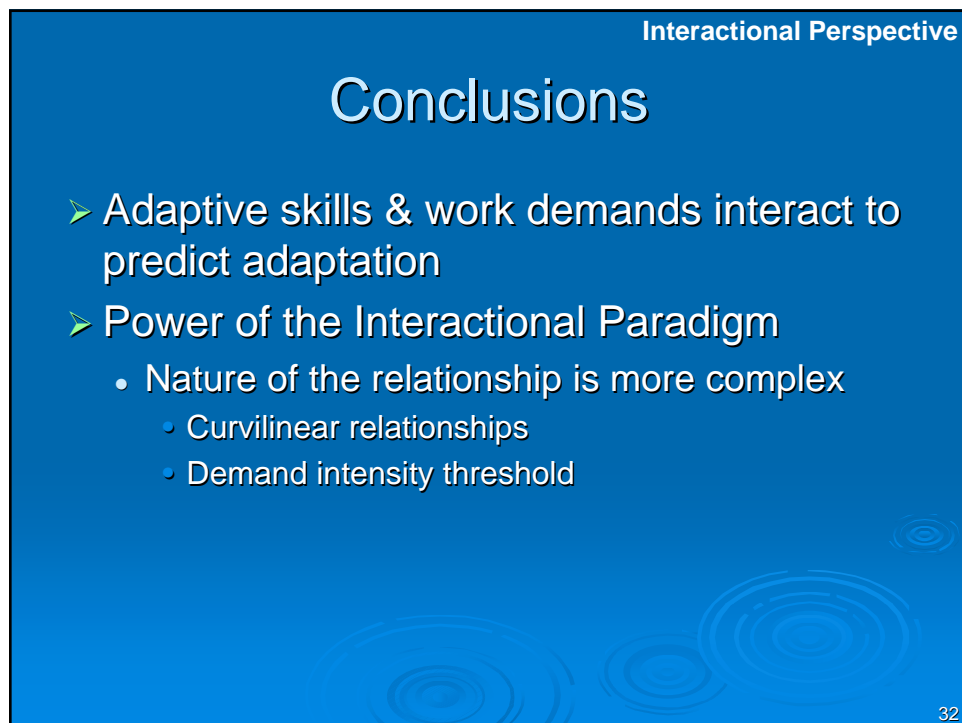
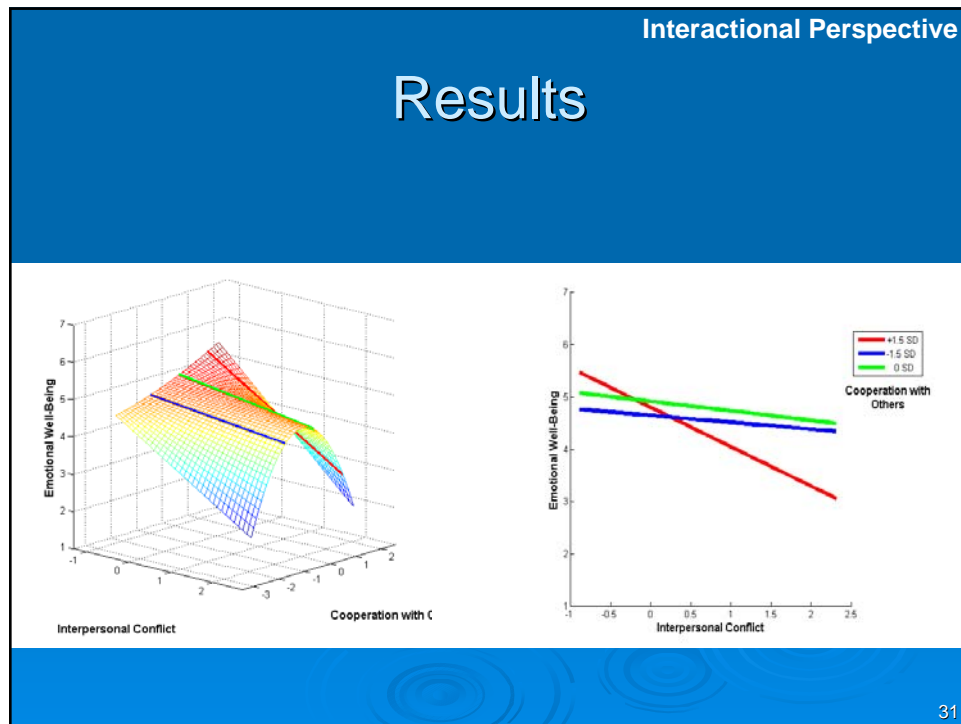
Time and Change (Interaction)

- Adaptive skills and adjustment to the environment
 - Adjustment and stress model
 - Stressor → Strain
 - Stressor vs. Demand
 - Environmental Demands x Personal Adaptive Skills → Adaptation

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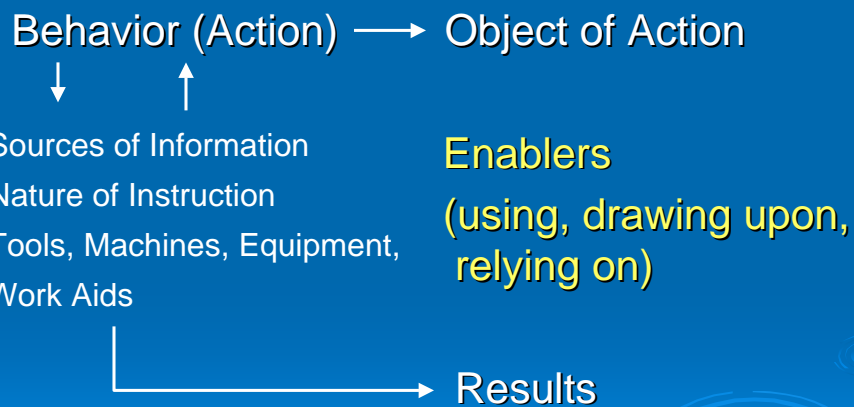
Functional-Perspectivist Study Background

- Relied heavily on definition of adaptive skills from Fine's Functional Job Analysis (Fine, 1955; Fine & Cronshaw, 1999)
- Focuses on the "enablers" from the generic task statement
- Draws heavily from the Things, Data, People taxonomy as described in FJA (Fine, 1955; Fine & Cronshaw, 1999)

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Functional-Perspectivism

Generic Task Statement (FJA)



From Fine & Cronshaw, 1999

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Unit of Analysis

- Uses Performance-Oriented Skills Modeling (a derivative of FJA)
- Skills modeling begins with defining the adaptive skills
- Adaptive skills are understood in terms of packets of performances
- These "packets" of adaptive performances are theoretically grounded and are logically, rather than statistically, derived

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Functional-Perspectivism

Observers

- Assessment through the Performance-Oriented Interview (POI)
- The POI is a finely balanced “guided conversation” facilitated by a highly trained/ experienced interviewer
- Interview questions are introductory points to the on-going conversation
- Response scoring is conducted with strict reference to performance-anchored rating scales (PARS)

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| | | |
|-----------------------------------|--|---|
| Example Interview Question | Tell me about a time when you saw one or more people having problems and experiencing stress while attempting to fit into the workplace because they had too little information or knowledge. Describe the situation and what you said and did. | |
| | Performance-Anchored Rating Scale | |
| Constructive Assertion ← | 5 | Accurately reads source of co-worker problem (e.g., he/she does not know standard operating procedure) Volunteers to provide information without being asked Goes beyond work assignment in providing information Does not show hesitation or discomfort in providing feedback Provides information even though this does not have a direct positive effect on own work Asks other(s) if they wish and desire assistance Provides information complete enough to assist the other in adapting to, and functioning in, the workplace Communicates information in a non-threatening and clear manner Listens carefully to questions and provides complete, timely information in response Repeats information as many times as needed to ensure understanding Follows up later to ensure that instruction has been understood and properly used |
| Reactive Engagement ← | 3 | Provides information to coworker(s) when asked to Provides information as an expected part of work assignment Provides information where it will have a positive impact on his/her own work Presents information in lecture mode without checking for the understanding of the other(s) May delay in responding to concerns and questions raised by the person Takes actions that focus more on the productivity/efficiency nature of the situation than the well-being of the person |
| Dysintegrative Maladjustment ← | 1 | Leaves other(s) to sink or swim Keeps to him/ herself Walks away from requests for information Derogates others for not having knowledge OR for seeking information Sees lack of knowledge of others as a personal failing or sign of incompetence Refuses direct requests by other(s) for information OR Deliberately withholds information / provides erroneous information as a means of sabotaging other(s) |

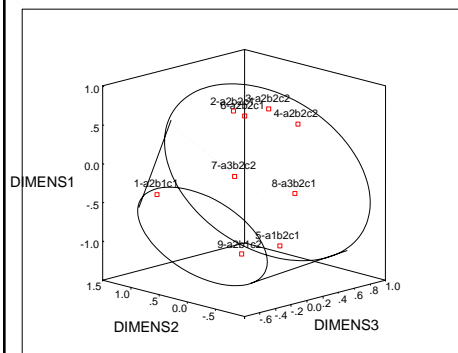
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Time and Change

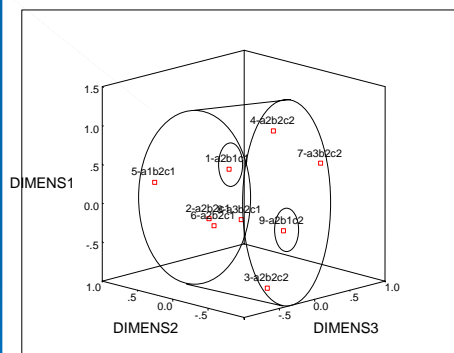
- Adaptive skills comprise a gestalt of dynamic structure (i.e., the workspace) that changes over time (i.e., the workspan)
- Dynamic exchange of energy within the workspace
- Dynamic change requires the understanding of the shifting psychological and social forces that are historically situated in time and space

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Time and Change



21 - 30 age group



31 - 40 age group

Taken from Cronshaw, 2005

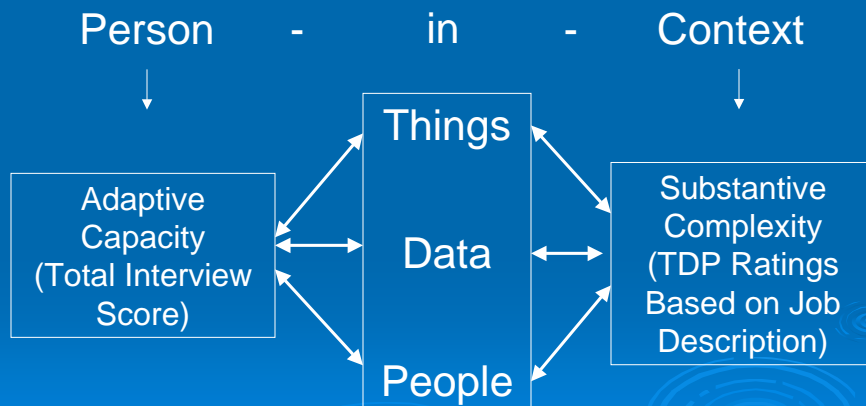
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Causation

- Worker performance standards become co-extensive with the definition and operationalization of the adaptive skills
- There is no distinction between “KSA’s” and criterial performance
- Dynamic structure of adaptive skills includes 3 behavioral functionalities:
 - Locus (TDP),
 - Focus (Inward-directed vs. Outward-directed), and
 - Purpose (Agentic vs. Accommodative)

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TDP as the Central Organizing Principle for understanding the relationship between functional and adaptive skills



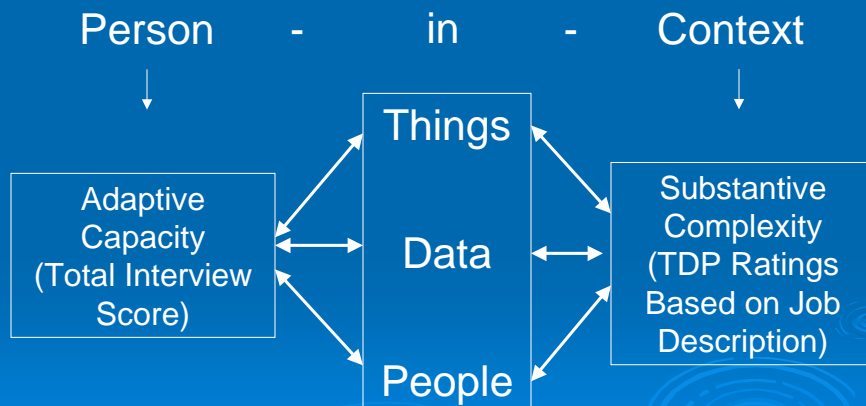
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Other Issues

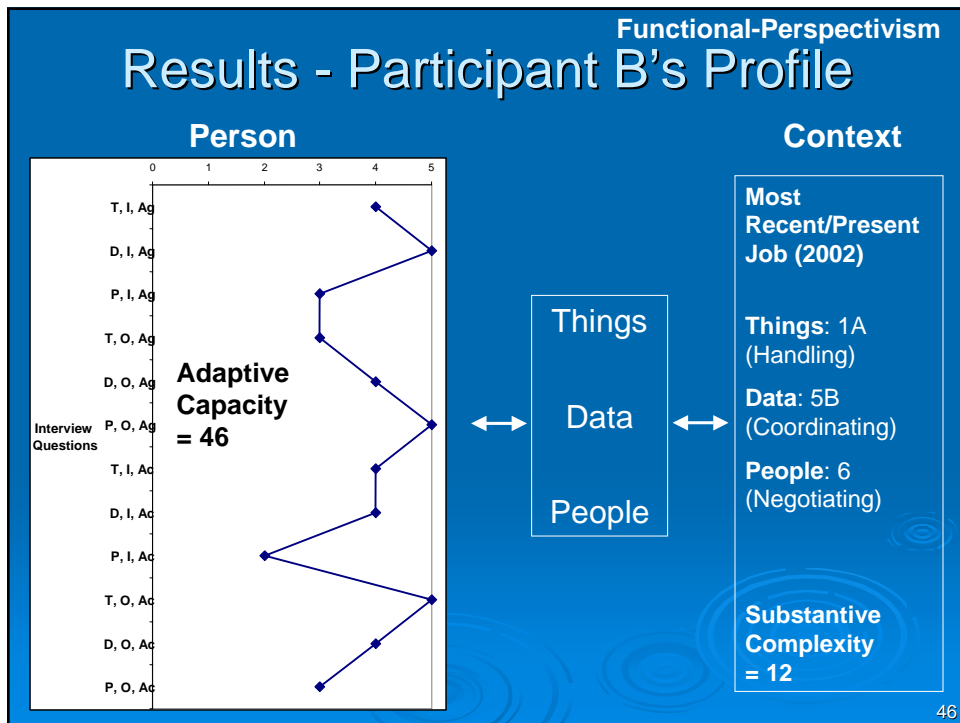
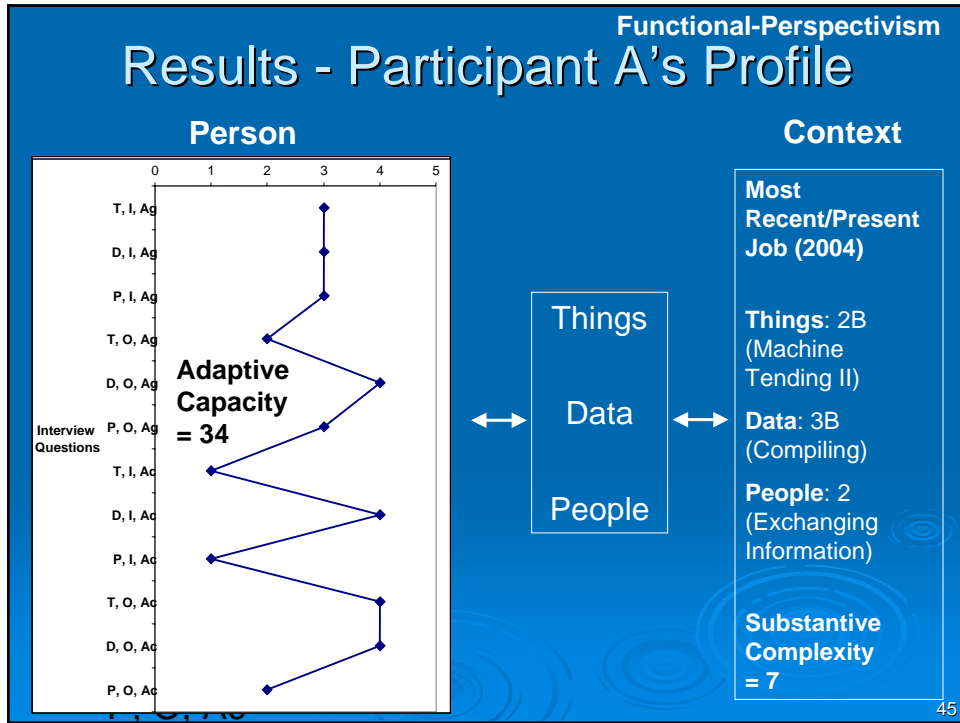
- Events must be construed broadly (include reports of both internal and external events)

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TDP as the Central Organizing Principle for
understanding the relationship
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Preliminary Findings

- Empirical results do not disconfirm the FJA proposition that expression of functional skills (TDP) in the workplace is resourced by adaptive skill
- Adaptive skill is dynamically structured by locus, focus, and purpose
- It is unclear whether the dynamic structure adaptive skill becomes more or less “compact” over time

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Practical Implications

- Relevance of the information collected is readily recognized and accepted by workers, managers, and practitioners
- Allow the use of practical and common sense validation approach (e.g., experiential and ecological validation)
- Allow for the application for highly integrative interventions

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Advantages

- Subject to scientific methods from the physical sciences
- Control and relatively unambiguous interpretation
- Efficient use of resources
- Interventions are generalizable

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Advantages

- Gestalt, holistic, integrative approach
- Focus on understanding generative mechanisms in terms of real ontology
- Greater focus on explanation versus prediction
- Ecological validation
- Experiential validation

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Thank You!