

1. Intellectual Development: Case and Fischer



Intellectual Development: Case and Fischer

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2. Common Features in Case and Fischer



Common Features in Case and Fischer

- No structures as a whole; build structures from the bottom up (thus eliminate the decalage issue)
- Recursive sub stages (4 sub stages per overall stage)
- Hierarchical integration (more specific than Piaget)
- Systematic role for maturation
- Important role for instruction (and environmental influences more generally)
- Automatization as a source of consolidation

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3.

Beginnings for Case



Beginnings for Case

- See that there is a problem
- Set a goal to solve the problem
- Come up with a way to try to solve the problem

(Note that these are functional invariants)

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4.

Beginnings for Case (more technical version)



Beginnings for Case (more technical version)

- Set goals
- The capability to activate schemes to pursue these goals
- Ability to evaluate success of results in relation to your goals
- Ability to rework or rearrange sequences of schemes to reach your goals
- Ability to remember which sequences worked to achieve specific goals (pp. 27,28)

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5. Case's Four Ways to Progress in Cognitive Development...



Case's Four Ways to Progress in Cognitive Development

(loose analogues to Piaget*)

- Problem solving (equilibration)
- Exploration (experience)
- Imitation (social transmission)
- Mutual regulation (social transmission)

*Not included in this list: Maturation

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6. BEST for Robbie Case's Theory



BEST for Robbie Case's Theory

B Ability to set goals and try to achieve them: this ability is applied in four ways:

- Problem solving
- Exploration
- Imitation
- Mutual regulation

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7.

Case BEST (continued)



Case BEST (continued)

E Consolidation of vectors into systems

S Four recursive stages with four substages each:

- Sensori motor
- Relational
- Dimensional
- Vectorial (same ages as Piaget)

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8.

Case BEST, cont.



Case BEST, cont.

T Maturation of memory + operational practice leads to increases in STSS and greater efficiency of processing within the constraints of an of an existing optimal level (e.g., Sensori motor)

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9. Fischer's Transformation Rules



Fischer's Transformation Rules

- Substitution
- Focusing
- Compounding
- Differentiation
- *Intercoordination

*Intercoordination is a marker for a shift to a new skill level (Fischer, 1980)

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10. BEST for Kurt Fischer's Theory



BEST for Kurt Fischer's Theory

- B** Ability to become more skillful
- E** Principles (system of abstract systems)
- S** Three recursive stages with four substages each:
 - Sensori motor
 - Representation
 - Abstraction
 - Final stage extends into young adulthood

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11.

Fischer BEST, cont.



Fischer BEST, cont.

I Optimal levels + transition rules:

- Substitution
- Focusing
- Compounding
- Differentiation
- Intercoordinaiton (new level)

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12.

Dynamic Systems: Features



Dynamic Systems: Features

- Self organization (instead of intentionality a la Piaget)
- Emergence (to account for novelty)
- Phase transitions (substitutes for disequibration)
- Attractors (as close to stage as the theory gets, but attractors are never static and not predetermined)

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13.

Dynamic Systems: BEST



Dynamic Systems: BEST

- B** Generally avoids placing a specific point where processes begin.
- E** Generally also avoids specifying a particular end for development.
- S** No stages per se; attractors represent relatively stable periods that are highly probably, but not inevitable.
- T** Emergent novelty, sometimes relatively sudden in a phase transition, all part of a process of self organization

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