

Comparing Stage Theories: How The Stage Parts Of All Stage Theories Map into the Model of Hierarchical Complexity

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Purpose and Outline of Paper

- The purpose of this paper is to examine the extent to which a number of current stage theories will map into or be subsumed by the Model of Hierarchical Complexity
- The stage theories to be considered include:
 - Theories with generators such as
 - Fischer
 - Pascual-Leone
 - Theories with just stage scoring
- To compare theories, one can show that aspects of the other theories map into MHC and that MHC cannot map into them

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Purpose [and outline] of paper (continued)

- Different aspects of theories that make mapping possible or not possible will be considered
- Extraneous features of theories will also be discussed
- It will be shown that the MHC
 - Subsumes other theories
 - Has fewer assumptions than other theories
 - Does not confound performance and task characteristics
 - Does not need to have a psychological theory integral to the model

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What does it mean to say that one theory “maps” into another theory?

- Using elementary function theory, one system maps into another when
 - Every element in the first maps onto an element of the second
 - There is a function that does this
 - Finding transformation of Stage generators that map into the MHC stage generator
- To find a function, the stage theory has to have a stage generator
 - Mapping of function means one can find a transform of the stage generator that meets the three axioms of the MHC
 - Otherwise the best one can do is to map every element
- Mapping of elements means that one can find a function that maps the defined stage scores into the MHC stage scores.

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Mapping into the Model of Hierarchical Complexity

- Stage assessments and stage theories have two parts
 - The first part is the stage part
 - This part can be examined to see to what extent it maps into the MHC
 - When there is a stage generator
 - The stage part should map perfectly
 - When there is no generator
 - Only the stage elements and definitions map
 - The second part of these theories is that they may also have domain content and context
 - They score things or words in language
 - This requires them to have a scoring scheme
 - There are definitions for the stages
 - They score the items and they are in a given order
 - OR, they give them a single task
 - They may lack a stage generator

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- Only Pascual-Leone and his followers give separate tasks at multiple levels
- Joseph Rodrigues' (1989, 1993) version of Selman has a stage generator
- But for the most part Stage theories just have people score responses
 - This is done with a scoring manual
 - The rules for making up a scoring manual are not transparent
 - [But it is known that such scoring manuals almost always result from post-hoc classifications of responses of participants]

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Stage Theories That Only Have Response Scoring

- The problem is that the response scoring confounds content, context and stage
 - Only generator stage theories can be content free and context free
 - The cost of having the content is it makes the theories less general
 - They only apply to the questions asked and the content and context given
- For these, there is no stage generator
- These are often domain specific
- Examples include Kohlberg, Kegan and others
- Mixed stage theories like Loevinger do not map very well but see Cook-Greuter for an exception

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Response Scoring Theories and the MHC

- The parts of these theories that do not map into the MHC are the domain, content and context
- Because they do not have generators, it is impossible to map into the 3 axiom MHC generator
- But what one can map is the sequence into the MHC sequence
- One can score the scoring scheme including the stage definitions
- An example of this is shown next

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Kohlberg and Colby's 1987 MJI and traditional Selman's Perspective

- Kohlberg and Colby's 1987 MJI and traditional Selman's Perspective taking stages map for the middle to higher stages
 - MJI Stage 2 = MHC stage 7
 - MJI Stage 2/3 = MHC stage 8,
 - MJI Stage 3 = MHC stage 9
 - MJI Stage 3/4 = MHC stage 10;
 - MJI Stage 4 = MHC stage 11
 - MJI Stage 4/5 = Is the relativistic step 4 in transition
 - MJI Stage 5 = MHC stage 12

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What About The Extra Parts Of Just Scoring Stage Theories?

- Are they really stage theories?
 - Do they identify what gets coordinated at each stage as Inhelder and Piaget required?
 - Do they show what the relationships are between the lower stage actions to be coordinated?
- They are mostly just sequences of issues of content and what people are described as doing on a single task
- Their performances are classified and ordered into “stages”
- They mix stages and substages
 - Jaques is the most important case of this

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Theories That Do Map Into The MHC

- A number of theories, particularly those with stage generators will map into the MHC
- These include:
 - Fischer
 - Pascual-Leone
 - Case
- Even these theories, however, include features that either:
 - Add extra complications to the theory such as a psychology of stage or level
 - These may not allow them to be general enough

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Fischer's Skill Theory

- The best original stage theory by far was Fischer's Skill Theory (1980)
 - It predates the forerunner of the MHC, the General Stage Model (Commons & Richards, 1984 and 1984b).
- It maps into MHC
- The mapping is "into" and not "onto" because
 - Adding the sentential stage 5 is not a problem
 - But to do so, the tiers have to be removed to allow for the sentential stage 5
 - Without the tiers, it is possible to move Fischer's mappings into an n dimensional mappings thus corresponding to n orders of hierarchical complexity
 - Nor is adding the postformal stages 13, 14, and 15
 - Note that Systematic Stage 11 and metasystematic Stage 12 were present
- Additionally, the separation of stage of performance from task hierarchical complexity is added in MHC
- All of these changes make the mapping into and not onto
 - Fischer maps into MHC, but not vice versa

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Conclusions

- The content and context of response scored only stage theories do not map into the MHC
- Because the MHC does not specify a content and context, it cannot map the content into any of these stage schemes
- response scored only stage theories cannot only map the sequence and MHC scoring of their definitions of stage into the MHC
- Because of the weakness of the axioms, the MHC contains all the stage like aspects of the other stage theories
 - It is easy to show the exact relationship with generator bases theories
 - They all map easily into the MHC with minor tweaks

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- All the slides that follow this one have information on them that has to some extent or another been included up above

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Comparing All Stage Theories

- Stage theories that have stage generators are the most completely mapped into the Model of Hierarchical Complexity
 - [a stage generator is a mechanism that allows for the [a priori] generation of all possible stages]
 - Only generator stage theories can be content free and context free

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The Stage Part of Stages map into the Model of Hierarchical Complexity

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- Only for the MHC, there is no psychological theory necessary
 - Performance and task properties are not confused
 - Even the ones that do have generators, such as Pascual Leone and Fischer have more assumptions mostly of a psychological nature