# Post-Formal Stages in Religious, Faith, and Spiritual Development? Empirical Findings from Research on Moral Judgment, Religious Reasoning, Religious Belonging, and Decision-Making using the Model of Hierarchical Complexity

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## Post-Formal Stage and Religious, Faith, and Spiritual Development

- **For some decades, models of faith (Fowler) and religious judgment (Oser & Gmunder, Reich) development have held that post-formal stages of reasoning about religious questions can be identified in some adults.**
- **These models, closely linked to Kohlberg's conceptions in the domain of moral reasoning development, largely failed to convince on empirical grounds, until more recently.**
- **The Model of Hierarchical Complexity (Commons) and recent research applying the MHC to religious cognition demonstrates the existence of post-formal stages in this domain, and shows meaningful relationships to moral judgment, religious affiliation, and the relative conservatism of religious groups. Intensive interviews provide further insight into what post-formal stage reasoning "sounds like" up close.**
- **There may be interesting implications for education, clinical intervention, and pastoral care as well as for theory and research.**

## The Model of Hierarchical Complexity

- The MHC (Commons 1998) presents a framework for scoring reasoning stages in any domain as well as in any cross cultural setting. Scoring is based not upon the content or the subject material, but instead on the mathematical complexity of hierarchical organization of information. A subject's performance on a task of a given complexity represents the stage of developmental complexity.
- The MHC is rooted in the Theory of General Stage Development (Commons, 1984), describing a sequence of hard stages varying only in their degrees of hierarchical complexity.
- 14 Stages have been validated in the model, including Piaget's substages, applicable across domains
- 70 studies, of which there are now about 10 which (Day, 2008, 2011; Day, Commons, Bett, & Richardson, 2007; Day, Richardson, & Commons, 2009; Ost, Commons, Day, Lins, Crist, & Ross 2007), consider religious cognition
- Potential criticisms regarding the risk of arbitrariness of stage definition are addressed by the Theory's, and Model's, grounding in mathematical models, and information science methods, re increments, gaps, and constitution of hierarchy in complexity of tasks.

## The MHC Corrects and Improves upon Piaget and neo-Piagetian Models in this Domain

- **Higher order actions defined in terms of lower ones; higher includes lower**
- **Higher order complexity actions order lower ones, higher more powerful**
- ***MHC ADDITIONS***
- **Ordering of lower by higher is *non-arbitrary, predictable, measurable in valid and reliable ways***
- **Task and performance are *separated***
- ***All tasks* have an order of hierarchical complexity**
- ***There is only one sequence of orders* of hierarchical complexity (linearity)**
- **All orders of hierarchical complexity are *equally spaced***
- **There are *gaps* between orders of hierarchical complexity**
- **Stage is identified as the *highest order* of complex *task* solved**
- **There are gaps in *Rasch Scaled Stage of Performance***
- **These Rasch gaps are also *equally spaced***
- **Performance stage is different from task area to task area; *decalage is normal***
- **Given actions A and participant S peforming A , stage of S on A is highest order of actions A completed by participant S Stage (S, A)=max {h(A) / A**

## Table 1. Orders of Hierarchical Complexity

| Order | Name Complexity |
|---|---|
| 0 | Calculatory |
| 1 | Sensory & Motor |
| 2 | Circular Sensory-motor |
| 3 | Sensory-motor |
| 4 | Nominal |
| 5 | Sentential |
| 6 | Preoperational |
| 7 | Primary |
| 8 | Concrete |
| 9 | Abstract |
| 10 | Formal |
| 11 | Systematic |
| 12 | Metasystematic |
| 13 | Paradigmatic |
| 14 | Crossparadigmatic |

## MHC and Religious Cognition

- 2007 Day & Commons: Jesus Sayings Questionnaire
  With Ost and Bett, established that subjects' statements could be rated using MHC criteria. First evidence of distributions at concrete, formal, systematic, and metasystematic orders in RC using the MHC.
- 2008: Day; ***Religious Cognition Questionnaire: Pastor-Parishioner Scenario***; Day, Richardson, Commons present results of empirical research with theology students in Belgium and the UK, establishes links between MJ and RCMHC stages, tests hypotheses of "dumbing down" effects of religion on moral problem-solving, furthers evidence for post-formal stages; forms groundwork for hypotheses on relationships amongst conservatism, educational milieu in higher education, and MHC Day: ***Journal of General Evolution*** article.
- 2009: Day, Richardson, Commons; Day elaborates these hypotheses, shows relationships between religious conservatism and low MCH RC scores, religious liberalism and higher scores, confirms systematic and meta-systematic orders even amongst young adults, esp. liberally religious and agnostic students in highly selective universities in England and the USA.
- 2011 Day in ***The Postconventionnal Personality. Estudios de Psicología : Special Issue/Monograph : Socio-Cultural Approaches in the Psychology of Religion, 15;***
- 2012 Day in ***The Oxford Handbook of Adult Development and Learning & The Journal of Constructivist Psychology.***

## Finding the Relationships Among Religion and Stage Using the Model of Hierarchical Complexity and Rasch Analysis

- People understand problems and problem-solving methods differently, as has previously been shown by research in cognitive complexity, moral judgment, and religious judgment.
- This is shown by their relative preferences for problem-solving methods
  - They choose from 6 methods scaled for increasing hierarchical complexity
- Participants rated the quality of discussions on a 1 to 6 scale
- A Rasch analysis produced person and item stage scores
- These were regressed against the hierarchical complexity of each story item

## Instruments and Measures

- Moral Judgment:
  - *Socio-Moral Reflection Measure-Short Form*
    - (Gibbs, Basinger, & Fuller)
- Religious Judgment:
  - *Religious Judgment Questionnaire*
    - (Day)
- Hierarchical Complexity of Religious Thought:
  - *Religious Cognition Questionnaire: Pastor-Parishioner Scenario*
    - (Day)
- Valid and reliable instruments

## Pastor Parishioner Scenario involving 6 vignettes:

- ***Concrete, Abstract, Formal, Systematic, Metasystematic Stage Representations Validated for Complexity using Rasch Analysis***

**- Pastor Brown offers a solution based on his colleagues' advice, religious tradition, and the authority of the Bible, and his experience as a pastor. Brown says that others who are friends propose such solutions and the methods involved in effecting them. A colleague is invited to offer his views, who concurs with Brown and offers a similar explanation again about the method. With great concern, Brown asks if the parishioner would like to hear a third person explain the method as it applied in their life. Brown tells the parishioner that these people had good results with that method. Brown instructs the parishioner to use this solution, which includes prayer, and Bible study, and fits the sense of their religious tradition. The parishioner thinks seriously about what Brown has said. Feeling that Brown knows best, the parishioner prepares to use the solution proposed. Concrete Stage in the MHC**

**Pastor Allen speaks with the parishioner to assess the problem. During the conversation, Allen offers a method of prayer, Bible study, and wisdom from their religious tradition Allen deems, based on pastoral experience, and evidence from research, effective in making the kind of decision the parishioner is facing. Allen presents other methods as well, and discusses the advantages and disadvantages of each as well, including not using any of the methods described . Allen, seeking to understand the parishioner's needs and concerns, asks and answers many questions. Allen also tries to assess whether the things the parishioner is saying match the parishioner's nonverbal behavior; body language, etc. Allen asks if the parishioner is ready to make a choice based on the elements involved, as they have discussed them. Feeling Allen knows best, the parishioner decides to try the method. Metasystematic Stage in the MHC**

## Post-Formal Stages in Religious Cognition: Intensive Interviewing

- **2009, 2010 Day: Intensive interviewing with subjects scoring at metasystematic stage on the MHC Religious Cognition Measure: Pastor-Parishioner Scenario**
- **Interviewees interpret the words *belief, commitment, belonging,* consistently framing these in the language of *living as if something were true, and imagination; of engagement with a meaningful set of categories in words, texts, liturgical forms, and gestures;***
- **Consider truth questions as non-dichotomous where interpretation is concerned, more pre-occupied with the *consequences of casting one's life in a particular imaginative frame or set of practices* than with the *content* of specific beliefs, affirmations, doctrines.**
- ***Sense of communion with others who live in this frame of complexity* transcending particular religious traditions, and including agnostics and atheists; accent on *process, dialog, and discovery*.**
- **Hypotheses: 5-Facor Model High on openness to experience, need for cognitive stimulation, correlations with post-orthodox religiosity in Ricoeur, Wulff, Hutsebaut et al's 4-Quadrant Model**