19th Advanced Course

Thinking, Reasoning, and Development

30 June – 2 July 2010

Wednesday afternoon, June 30, 2010

15h 30   **W.F. Overton**, Temple University
*Dual-Systems and the Development of Reasoning:
Competence—Procedural Systems*

Abstract:
Dual-system, dual-process, accounts of adult cognitive processing are examined in the context of a self-organizing relational developmental systems approaches to cognitive growth. Contemporary adult dual-process accounts describe a linear architecture of mind entailing two split-off, but interacting systems; a domain general, content free "analytic" system (System 2) and a domain specific highly contextualized "heuristic" system (System 1). In the developmental literature on deductive reasoning, a similar distinction has been made between a domain general competence (reflective, algorithmic) system and a domain specific procedural system. In contrast to the linear accounts offered by empiricist, nativist and/or evolutionary explanations, the dual competence-procedural developmental perspective argues that the mature systems emerge through developmental transformations as differentiations and intercoordinations of an early relatively undifferentiated action matrix. This development, whose microscopic mechanism is action-in-the-world, is characterized as being embodied, nonlinear, and epigenetic.