

Empirical Modelling in relation to Concurrency

Centre focus: concurrent systems

Questions:

- How to make sense of a concurrent system?
 - How to develop a concurrent system?
 - What is the relation between the experiential concrete and logical abstract perspectives?
 - How can we practically go about moving between one perspective and the other?
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Near focus: programming as modelling

Propose to use MWDS to capture state in sense-making ... to build artefacts as construals that "embody understanding"

- What can the semantics of MWDS be?
- How can we generalise from the 1-agent to the multi-agent perspective?

Can approach understanding this topic by reinterpreting programming as concurrent systems modelling ...will do this specifically with reference to programming noughts-and-crosses - the OXO model.

Propose a semantics for MWDS that is rooted in thinking about construals (Gooding, 1990) within a philosophical framework of Radical Empiricism (William James, 1910).

Backdrop: artefacts and logic for computing in the wild

- Software development
Harel - Play-in scenarios, Beck - XP, Brooks, Loomes
 - Conceptual frameworks for computing and AI
Brian Cantwell-Smith, Winograd and Flores, Vincenti, Brödner
 - Tensions between theory and practice in CS
Ridley, Papadimitriou, Hartmannis, Wegener
 - The human and social context
Linklider, Norman, Andy Clark, Wright and McCarthy
 - Other applications
Papert - constructionism, McCarty - humanities computing, Hirschheim - information systems, Feynman - virtual science
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Index to the Concurrency lectures:

1. A perspective on concurrent systems
 2. Empirical Modelling for the Single Agent
 3. Concurrent Systems Modelling: Agentification, Artefacts, Animation
 4. The LSD notation for domain analysis and description
 5. EM for concurrency: the roles of LSD and the ADM
 6. The Abstract Definitive Machine
 7. The ADM in computer-based modelling
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