Discussant: "The Knowledge-Creation Perspective on CSCL Tools"

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The Model of CSCL Research

- It takes a village: an international collaboration
- It takes a prolonged effort: decades of research cycles
- It takes:
  - theory development,
  - technology design,
  - pedagogic innovation,
  - experimental interventions,
  - analytic diversity,
  - reflection across projects

K-P Labs

- The Knowledge-Practices Lab
  - Led from Helsinki & Oslo
  - Epistemic Artifacts, Activity Theory, Social Practices
  - Including many universities and companies in Europe

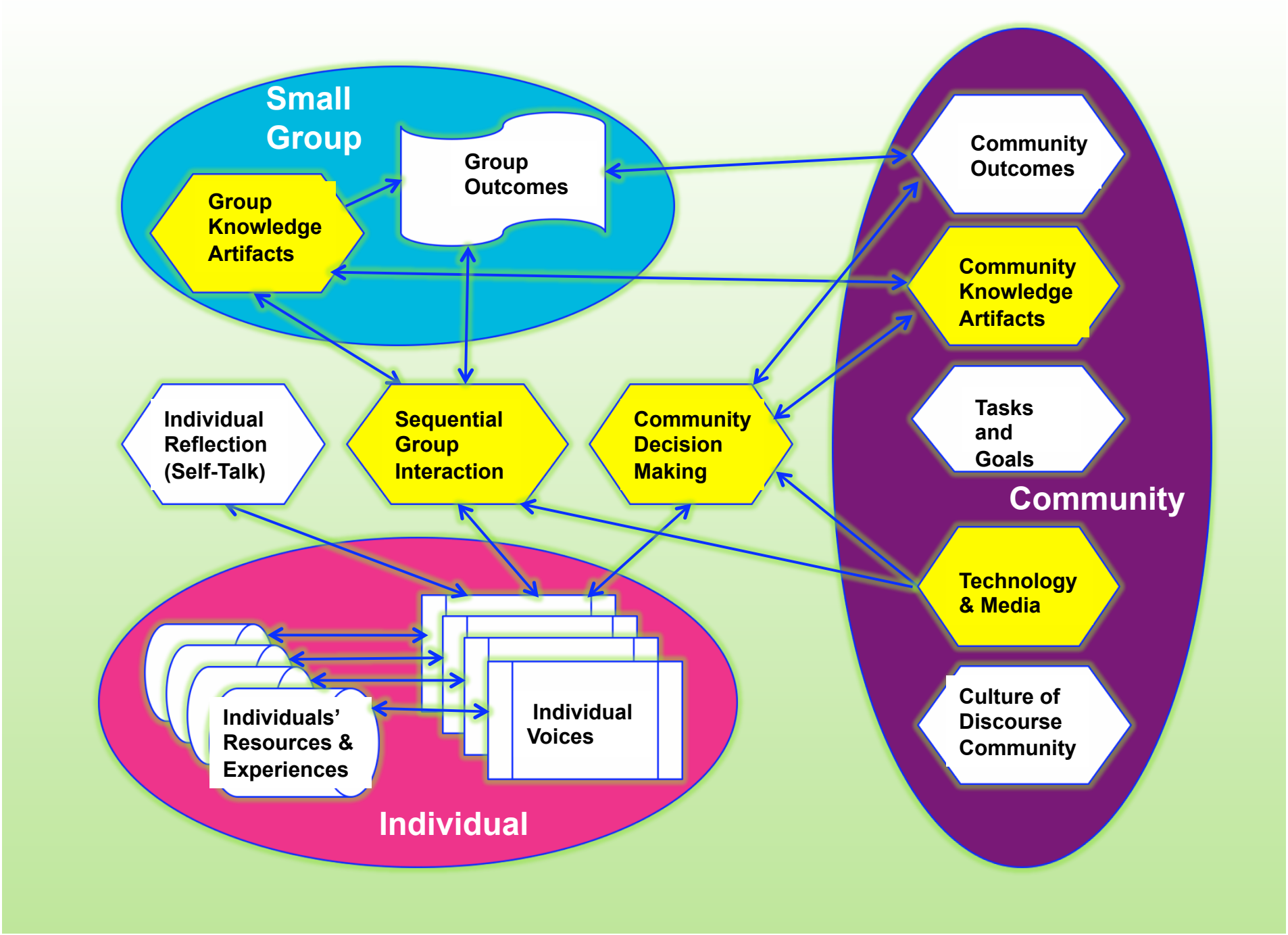
- An EU funded project
  - 5 years
  - Millions of Euros
  - Follow up to ITCOLE

Challenges

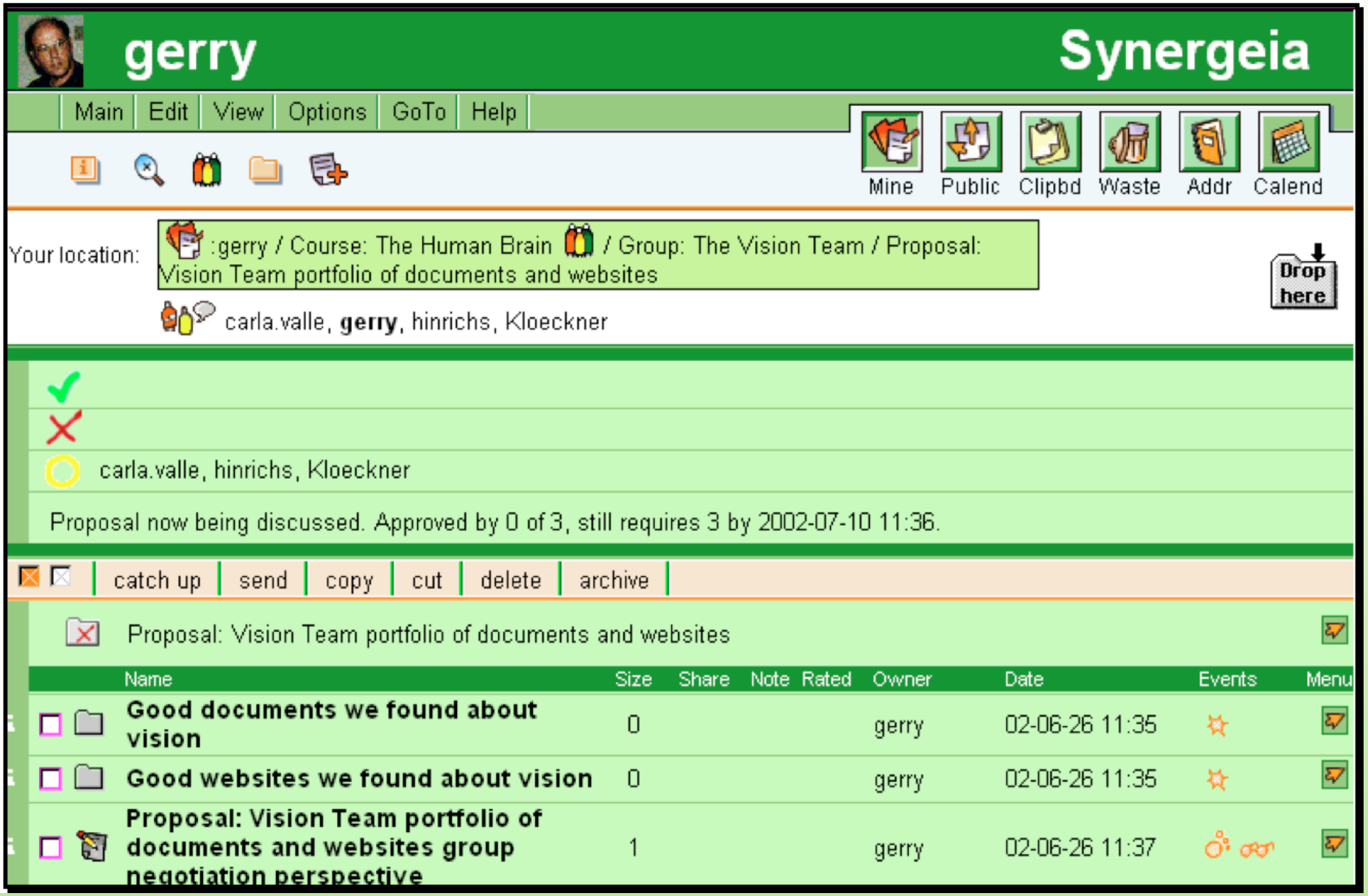
- ***Theoretical challenge***: **"Trialogic Knowledge Creation" (Hakkarainen) as a third way in addition to Knowledge Building (Bereiter & Scardamalia) and Activity Theory (Engeström)**
- ***Design challenge***: **To build tools that demo the theoretical difference**
- ***Experimental challenge***: **To analyze and assess the difference the tools make**

Theoretical Challenges

- What is the nature of knowledge objects?
  - What have we learned new
  - Compared to "epistemic artifacts", "cognitive artifacts", "refinable ideas", "group cognition", etc.
- How are they generated and maintained?
  - How are they created by people interacting?
  - How are their meanings shared within groups?
  - How are their meanings learned by newcomers?
- Are there really networks of artifacts, not isolated objects?
- How are projects accomplished by means of the production, selection and assembly of knowledge objects?


Small Group
Group Outcomes
Group Knowledge Artifacts
Community Outcomes
Community Knowledge Artifacts
Tasks and Goals
Community
Individual Reflection (Self-Talk)
Sequential Group Interaction
Community Decision Making
Technology & Media
Culture of Discourse Community
Individuals' Resources & Experiences
Individual Voices
Individual

Support for Negotiating Objects



Design Challenges

- How can an integrated environment support:
  - Production and refinement of knowledge objects for small groups and the larger community of practice?
  - Sharing, understanding and use of knowledge objects?
- What are the design implications for:
  - Learning design?
  - Software design?
  - Project design?
- Complexity control – tradeoff of functionality
- Adoption in work – use in building knowledge

Experimental Challenges

- How can you research these challenges?
- Design-Based Research iterative cycles
  - Prototypes of software environments
  - Multiple usage scenarios
- How do you analyze success and issues?
  - Collect the whole knowledge construction process, including the production, discussion about and use of the knowledge objects
  - Use multiple analysis approaches

Conclusion

- **We need to learn more from projects like this one**
- **We need to conduct more projects like this one.**
- **We need to build on projects like these – not start over each time**
- **We need to involve international partners, so the learning is shared world-wide**

For Further Information:

- ***"Group Cognition"* (2006, MIT Press)**
- ***"Studying Virtual Math Teams"* (2009, Springer, now in paperback)**
- ***Gerry Stahl's e-Library* (collections of papers free for iPad, Kindle, PDF or low-cost print-on-demand): GerryStahl.net/elibrary**

- **This paper: GerryStahl.net/pub/cscl2011discussant.pdf**
- **These slides: GerryStahl.net/pub/cscl2011discussant.ppt.pdf**

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