Wisdom is not the product of schooling but the lifelong attempt to acquire it.
- Albert Einstein

Participation: Notions and Challenges for Information Technologies

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ATLAS TAM Course - Spring 2000

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Social and Economic Implications of IT — Participation and New Forms of Civic Discourse

"*How can more than 261 million individual Americans define and reconcile their needs and aspirations with community values and the needs of the future? Our most important finding is the potential power of and growing desire for decision processes that promote direct and meaningful interaction involving people in decisions that affect them.* ***Americans want to take control of their lives***" (President's Council on Sustainable Development,1996, p.7).

PITAC Report: Transforming our Society and Our Thoughts and Approaches

- **beyond "gift wrapping":**
  - *"Old wine does not improve for being poured into different shaped bottles"— J. Bruner*
  - we use technology as an add-on to existing practices rather than as a catalyst for fundamentally rethinking participation and collaborating
  - examples from CU:
    - "webify our courses"
    - the "e-memo" fallacy

- **duality requiring a co-evolution:**
  - rethink participation in learning, working, and design activities in the context of new (computational) media
  - rethink computational media in the context of participation in learning, working, and design activities

Basic Notions from the Social and Behavioral Sciences

Views of the concept

As process

- Partaking in the activities of another individual or group – conversation, playing, designing, Learning, etc.
- Not always collaborative – conflict

As outcome Reason and motivation

- Fulfillment of goals/objectives whose attainment is difficult for the individual/group without such involvement
  Exit, Voice and Loyalty (Hirschman)
- Empowerment – from passive observer to active designer / helping folks help themselves
- Ownership of the problem – the Cole Neighborhood (Arias)

Nature of the concept

- **Contingent** (contingency theory – Hoffer, Galbraith)
  - Individual – competency, motivation, and control
  - Problem – wicked vs. tame (Rittel, Weber, Simon)
  - Organization design (Arias 1990)

- **Limits** – education (Gittell, 1980)
  - Can IT innovation extend them? How? (EDC, Leo Burd)

- **Paradoxical and challenging** – Informed participation
  - Beyond Access – CSCL paper

Sustainability of the concept

- **Contingent on two central attributes and a notion**

Reality –
actual vs. potential (e.g., the “suggestion box”)

Meaningfulness –
impact on the attainment of goal/objectives behind the resolution of the problem

Informed Participation –
challenge and paradox

Participation – role in organizational theory and management

- **Participation and organizational behavior**

  New views of employee behavior at the workplace (post Hawthorne era)

  Few concepts as closely related to human relations as participation (Dessler, ’79)

- **Participation and orgnizational change**

  Augments employee’s commitment and ownership to change (Lawler 1976)

- **Participation and organization condition**

  productivity - not always leads to better performance
  (Morse & Reimer ’56, Dessler ’79)

  satisfaction – mostly normative theoretical statements
  (Maslow ‘31, Cantril ‘65, Turner ‘76)

  organizational size - management science / ecological psychology
  (Baumgartel & Sobel ’59 to Francis & Milbourn ’80)
  (Manning theory – Barker ’64, Gump ’71)

Participation and community development

- **Citizen participation** – 1960's notion
- **Resident participation** - public housing and squatter settlements – (Turner '76, Francescato et al.'87, Arias '88)

Pruitt-Igoe, St. Louis

Las Cruces, Bogota

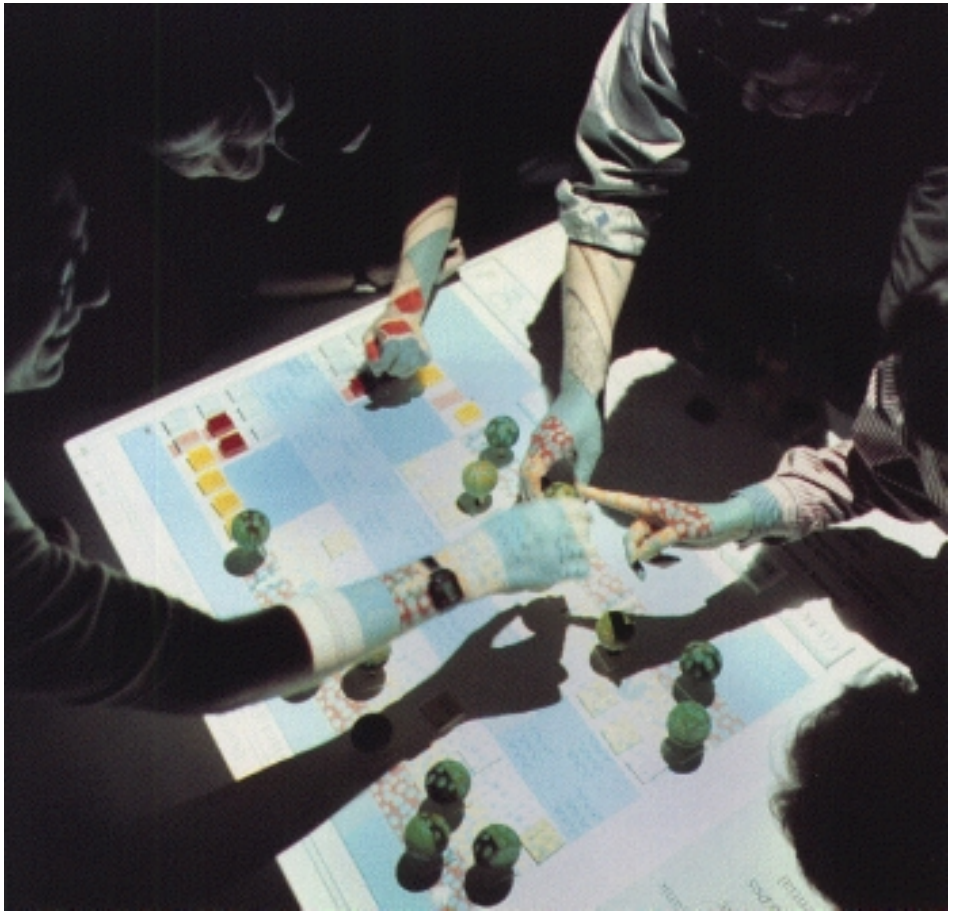
- **Informed Participation** – Beyond Access CSCL paper (Arias et al. '99)

Evolving New Technologies Supporting Informed Participation

Beyond human-computer human-human interaction

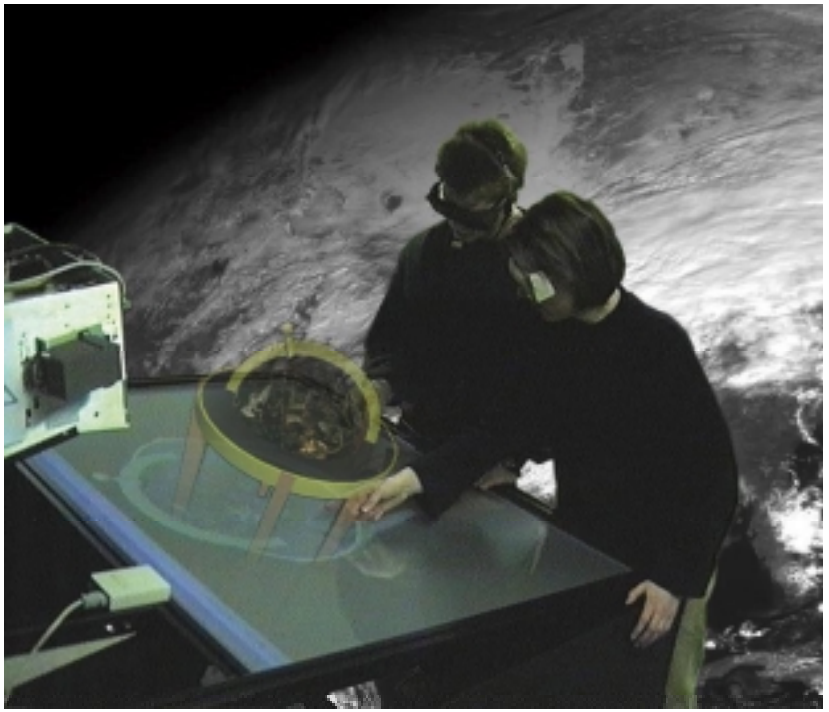
- Face to face
-
- Distributed – synchronous / asynchronous
-
- Physical-virtual objects
-
- Simulation
-
- Action-Reflection

The physical games



The InterSim- computational gameboard

The EDC- action, reflection and beyond



The Virtual Plane – EDC and virtual reality

Why – nature of participatory setting

- Mutiple stakeholders (multiple objective multiple criteria)
- Change
- Conflict
- Wicked problems (ill structures, ill behaved)
- On demand

Why – constructing shared understanding

- Symmetries of ignorance and symmetries of ignorance
- Informed compromises (individuals)
- Conflict resolution (group)
- Participation around and beyond the table– distributed

Discuss reading in the context of the presentation

- what do you consider the main message of the article? the presentation?
- what implications can be drawn from the concept to information technologies? to design? to art?
- what are the limitations of information technology in supporting participation
- what did you find:
  a. interesting about the article? This presentation?
  b. not interesting about the article? This presentaiton?
  c. are themes discussed in the presentation or the article which you would like to know more about?