MIRA

BIOMEDICAL TECHNOLOGY AND TECHNICAL MEDICINE

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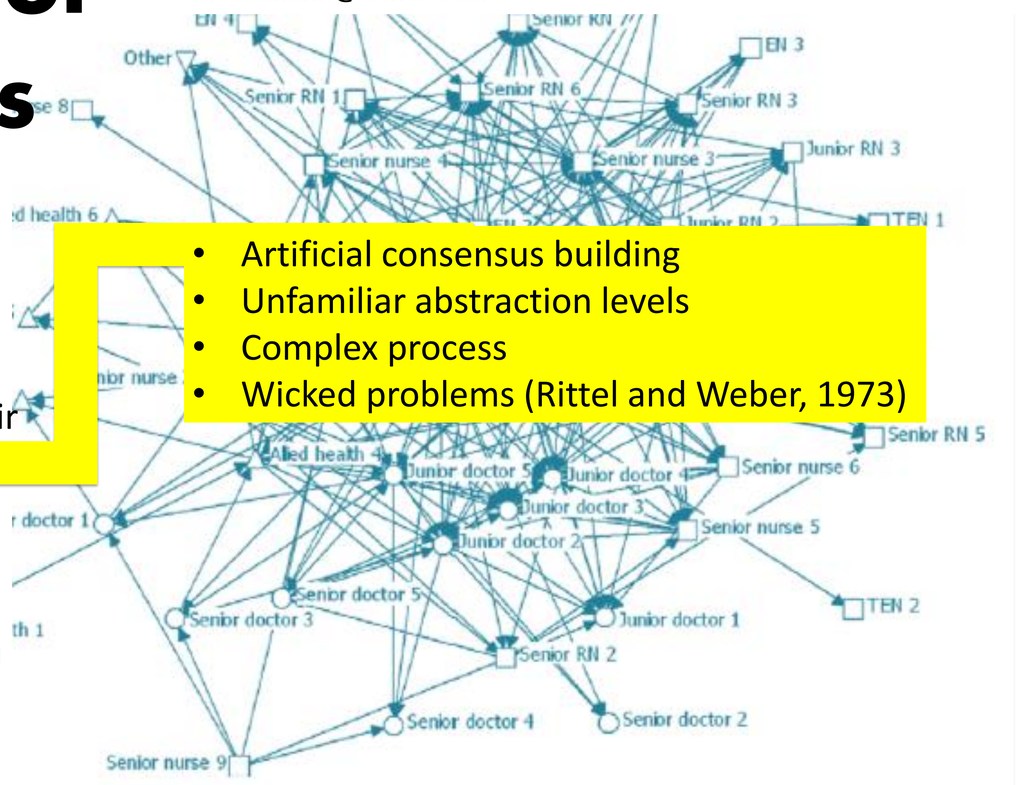
Collaborative Planning for Healthcare Environments

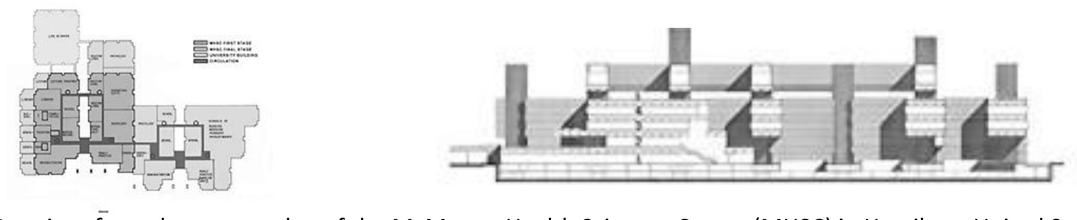
Healthcare environment design often requires time-consuming meetings with various stakeholders. Patients and workers are often included into the design process, but the participation is sometimes not productive or enjoyable. The traditional meeting model for participation where supposedly every stakeholder can talk about their concerns often don't satisfy the participants, for many reasons.

- Artificial consensus building
- Unfamiliar abstraction levels
- Complex process
- Wicked problems (Rittel and Weber, 1973)



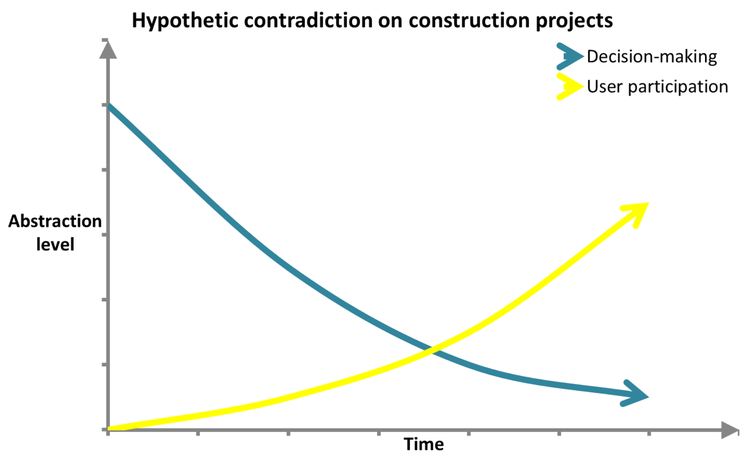
Background image: social network analysis of how a hospital ward staff seek help amongst their peers to solve work-related problems (Westbrook et al, 2007).

The research goal is to **develop tools** that support collaboration on this scenario, helping people understand each other concerns and deliberate on contradictory issues. It's important that these tools can be used both in group meetings and in individual contexts, enabling constant concrete reevaluation of abstractions being produced. **Distributed collaboration** can overcome participant's limited scheduled availability for meetings and encourage participation from people that feel constrained to talk in group meetings.



Drawings from the master plan of the McMaster Health Sciences Centre (MHSC) in Hamilton, United States. (Pilosof, 2005)

Specific **abstraction skills** are required from participants to envision before building, but users and workers often lack them, even tough they have concrete knowledge about how use and work is done. This make users and workers apart from decision-making in early phases of projects. Then, best building use and work insights come after it's built, when it's difficult to change.



Direct-manipulation of simulations through Virtual Reality and Tangible Interfaces are being considered for bridging the **abstraction level gap.** We plan to use those simulations in game-like interactions, in order to provide structures for agile decision-making and ludic explorations of future scenarios.

Low-tech collaborative games

Problem-solving game based on Post-its.
Photo by the author.

High-tech simulation games

Theme Hospital simulation game,
Bullfrog Productions, 1997.

References

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Rittel, H. W. J. and M. M. Webber (1973). "Dilemmas in a general theory of planning." Policy sciences 4(2): 155-169.
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