

Participatory Networks

Todd Marshall
Doctoral Candidate
Information Institute
Syracuse University - Syracuse, NY



Is There Any Unity in Diversity?

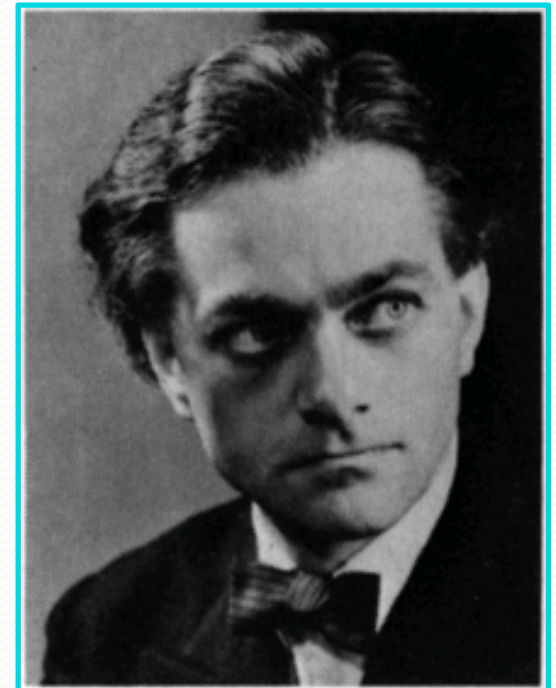
- **Asynchronous Learning Networks – ALN**
- **Collaborative Information Technologies – CIT**
- **Collaborative Networks – CN**
- **Computer-Supported Intentional Learning Environment – CSILE**
- **Computers-supported collaborative learning – CSCL**
- **Computer-supported Social Network – CSSN**
- **e-collaboration**
- **Electronic Brain Storming – (EBS)**
- **Free/Libre Open Source Software Development – FLOSS/FOSS**
- **Group Support Systems – GSS**
- **Groupware/Computer Supported Collaborative Work – CSCW**
- **Massive Voluntary Collaboration – MVC**
- **Metaverse**
- **Social Network Sites – SNS**
- **Virtual Community – VC**
- **Web-based social networks – WBSN**

Conversation at the heart of 2.0



Theoretical Foundation: Conversation Theory

- Developed by Gordon Pask (1975, 1976)
- Rooted in 2nd order Cybernetics
- Conversation is not a metaphor but a theory explaining iterative interaction
- Created machines which could “converse” with people (SAKI, Musicolour, CASTE)
- Significant influence in Cybernetics, Education, and Architecture



The Relevance of Conversation Theory

- Provides two basic frameworks
 - “a structure for the architecture of conversations”
 - “a schema for modeling the evolution of conversations” (Pangaro, 2008, p. 36)
- A conversation is “the basic unit of psychological/ educational observation is a conversation” (Pask, 1976a, p. 3)
- Knowledge is created and shared through conversation
- Sharing knowledge is a process of cyclical negotiation as opposed to linear transfer

Conversation at the heart of 2.0





A Participatory Network is:

“an interconnected set of cognizing agents where every member has the potential to converse with other members in a technologically intermediated environment resulting in an entailment mesh to address problems in a given context.”

Can you break that down?

- interconnected set (social network) – social network
- cognizing agents (participants) – people or machines
- members (bounded group) - participants
- potential (ability)
- conversing (action)
- an intermediating technology (medium)
- and an entailment mesh (product) – information
- for addressing problems (purpose)
- in a given context (context)

Context

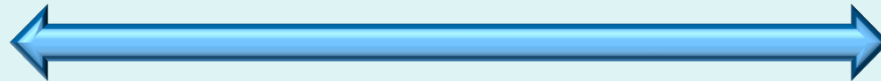
People – Social Network Layer (2.0)



Information – Semantic Network Layer (3.0)



Problem Layer (4.0?)

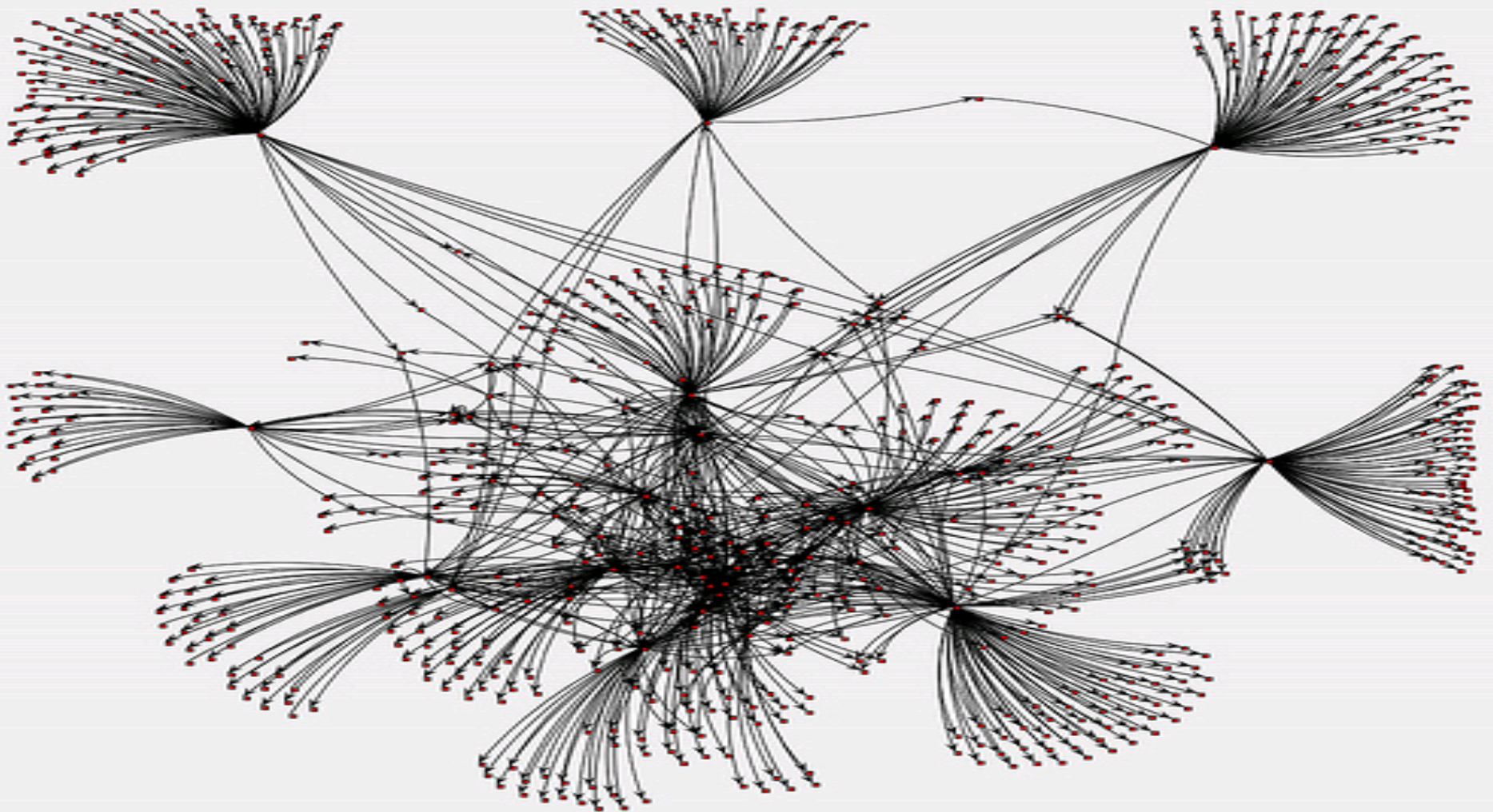


Representing a Social Network



Facebook Visualizer

What does this mean?



Membership / Potential

facebook

Remember Me

[Forgot your password?](#)

tmarshal@syr.edu

••••••

Login

Facebook helps you connect and share with the people in your life.

Sign Up

It's free and anyone can join

Full Name:

Your Email:

New Password:

I am:

Select Sex:

Birthday:

Month:

Day:

Year:

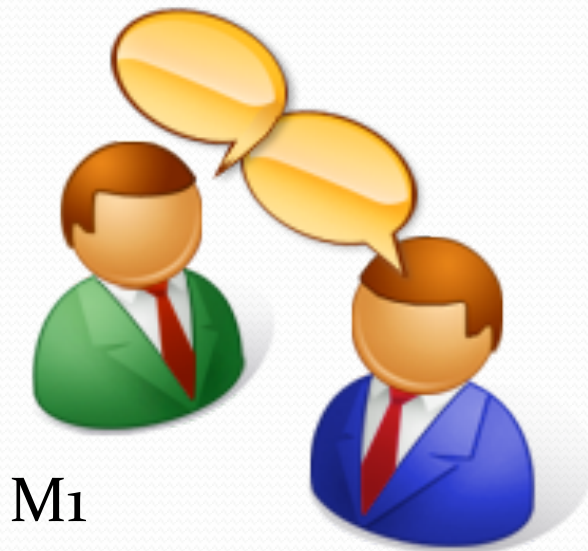
Why do I need to provide this?

Sign Up

By clicking Sign Up, you are indicating that you have read and agree to the [Terms of Use](#) and [Privacy Policy](#).



Cognizing Agents

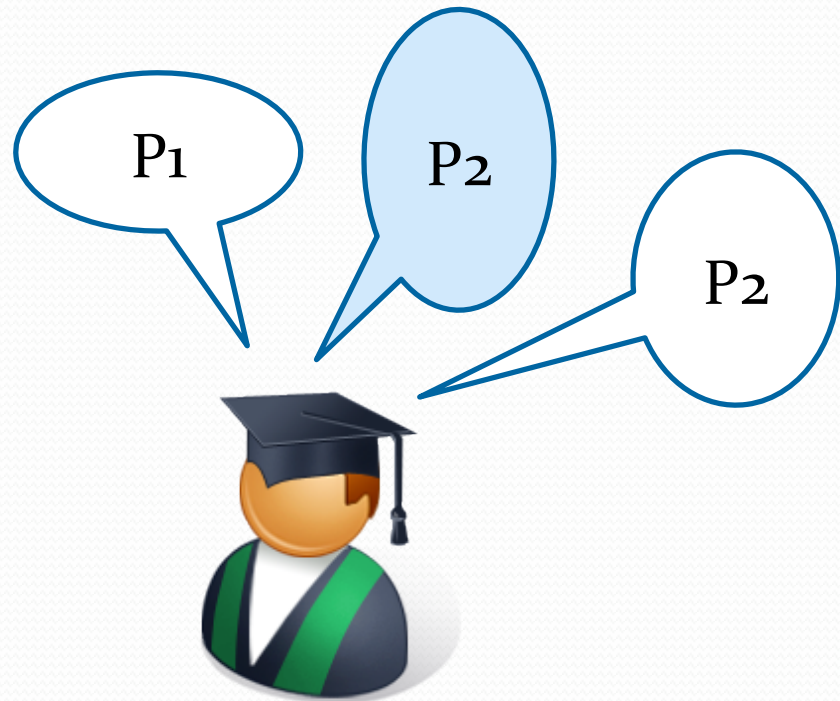


M₁

M₂

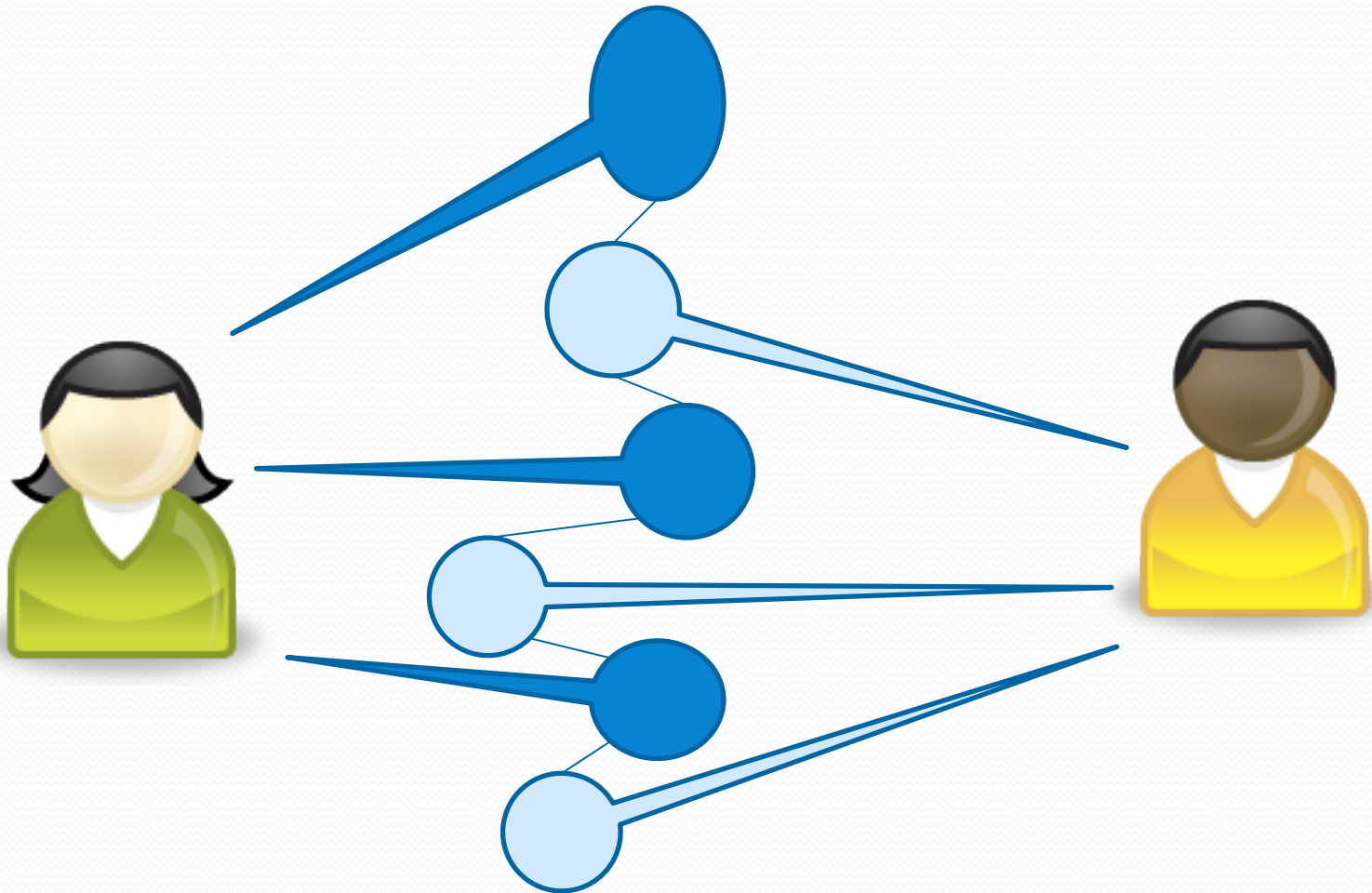
M – Mechanical Individual

P – Psychological Individual



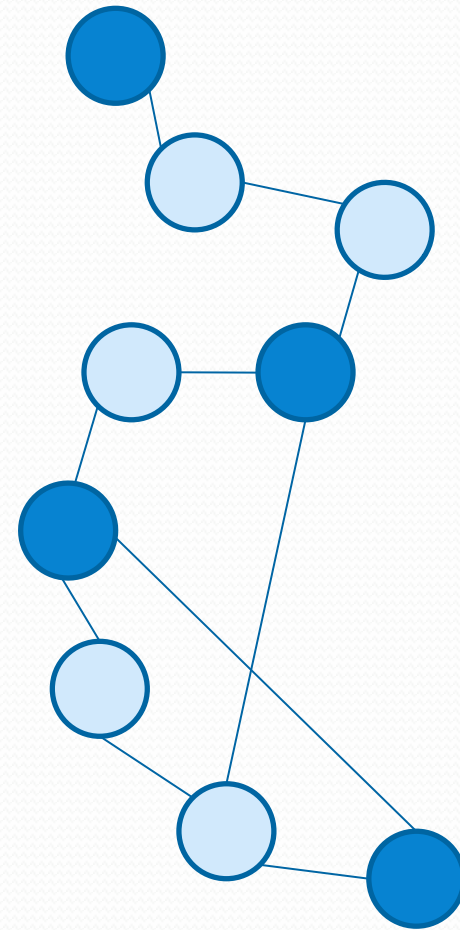
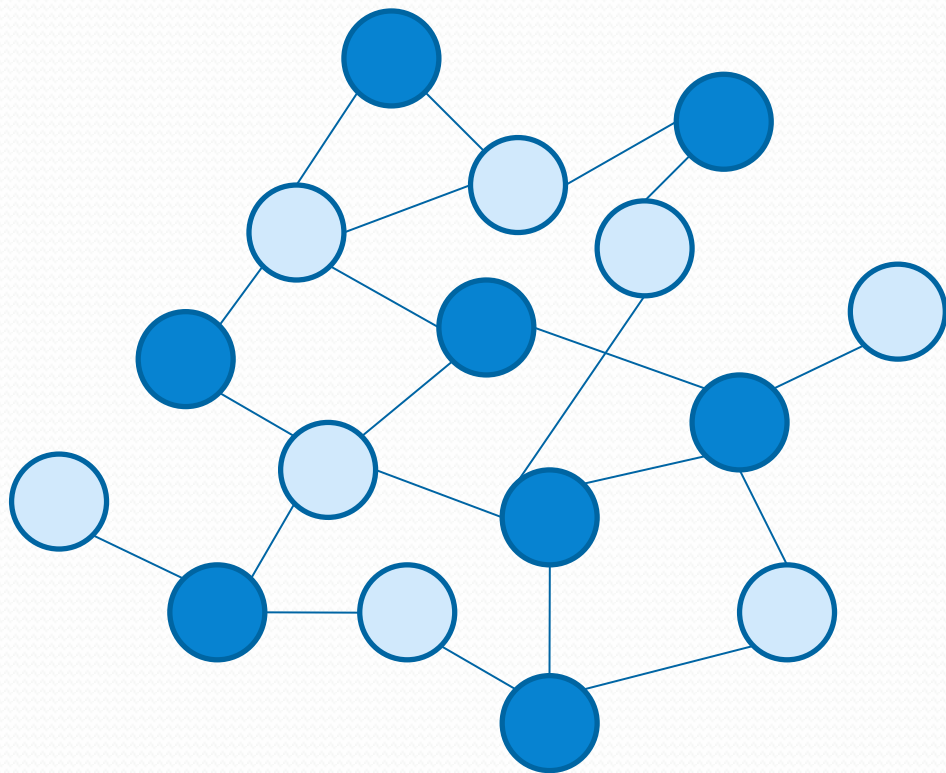
M₃

Conversing



Entailment Mesh / Structure

“Semantic Network”



Technologically Intermediated Environment



twitter



flickr®

digg

amazon.com

AADL.ORG



You Tube

ebay

facebook

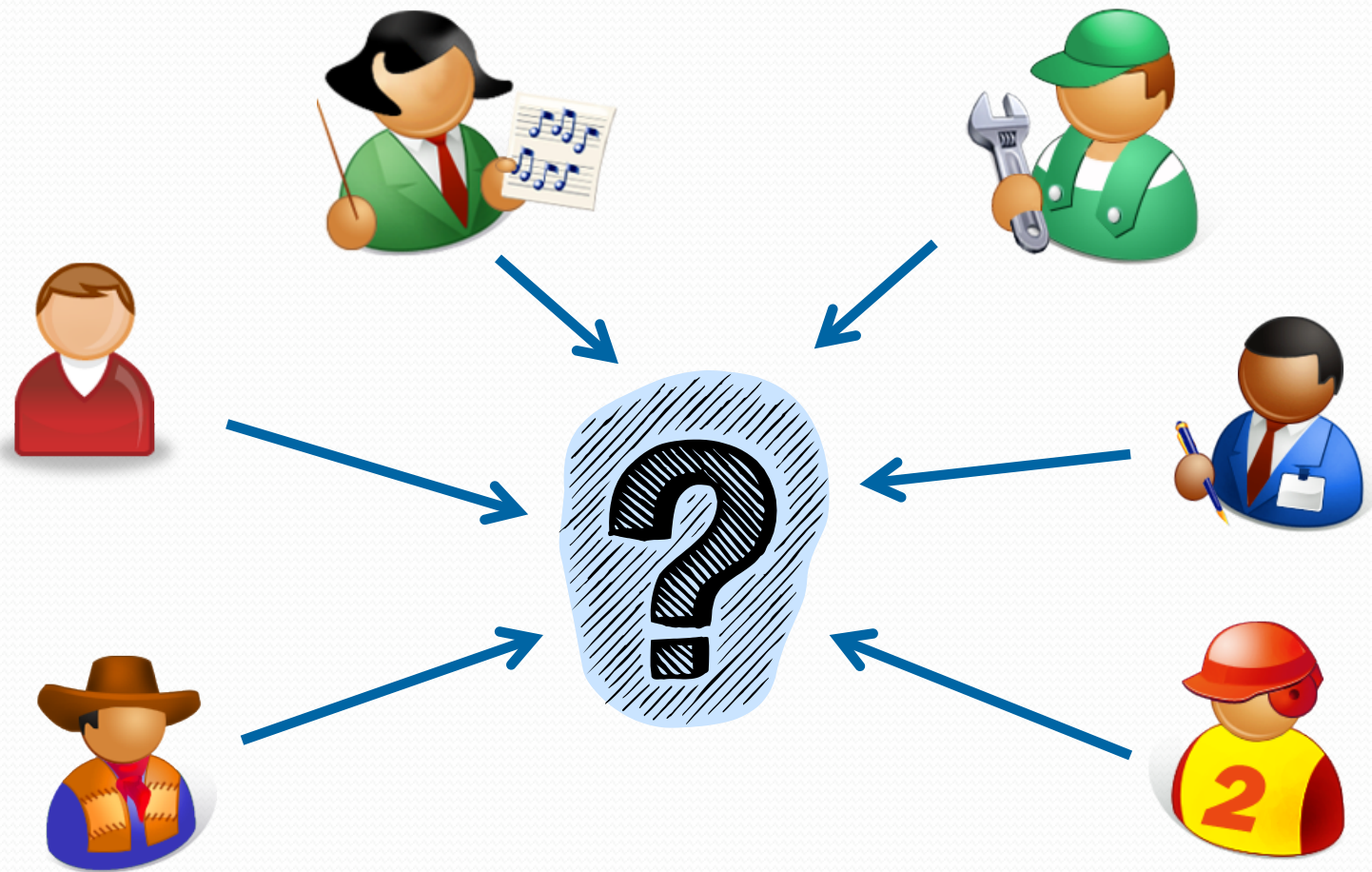
They vary in their degrees of participation and instantiation.



Context

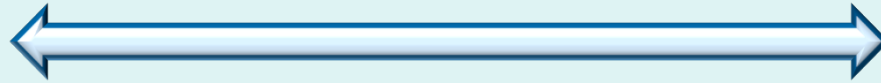


Problem as Occasion for Cooperation

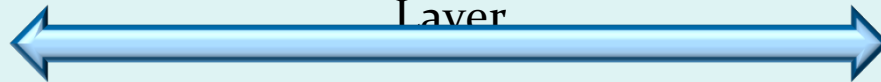


Context

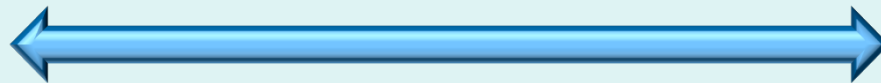
People – Social Network Layer



Information – Semantic Network
Layer



Problem Layer



Changes in Information Systems

Old Model

New Model

User Role:	Consumer	to	Co-creator
Locus of Conversation:	Self/Offline	to	Within/With the system
Source of Information:	System Creator	to	Users/Creator
Application:	Static/ Designed	to to	Plastic / Customizable

So what? The Conversation is Becoming the System

Traditional Non-Participatory	Transitional Semi-Participatory	Today/Tomorrow Participatory Systems
User	User Contributes Information to the System	User Contributes Information and Creates the System
Information Service		
Application	Application	
Infrastructure	Infrastructure	Infrastructure



A Participatory Network is:

“an interconnected set of cognizing agents where every member has the potential to converse with other members in a technologically intermediated environment resulting in an entailment mesh to address problems in a given context.”



Sources & Further Reading

- Lankes, R. D., Silverstein, J., Nicholson, S., & Marshall, T. (2007). Participatory Networks: The Library as Conversation. *Information Research* 12 (4). [Available at <http://InformationR.net/ir/12-4/coliso5.html>]
- Pangaro, P. (2008). Instruction for Design and Designs for Conversation. In R. Luppicini (Ed.), *Handbook of Conversation Design for Instructional Applications* (pp. 35-48). Hershey, PA: Information Science Reference.
- Pask, G. (1962). Musicolour. *The Scientist Speculates. An Anthology of Partly-Baked Ideas*, New York, Basic Books, 135-137.
- Pask, G. (1973). A Theory of Conversations and Individuals (Exemplified by the Learning Processes on CASTE). *International Journal of Man-Machine Studies*, 5(4), 443-566.
- Pask, G. (1975a). *Conversation, Cognition and Learning: A Cybernetic Theory and Methodology*: Elsevier Publishing Company.
- Pask, G. (1975b). *The Cybernetics of Human Learning and Performance: A Guide to Theory and Research*: Hutchinson Educational.
- Pask, G. (1976a). *Conversation Theory: Applications in Education and Epistemology*: Elsevier.
- Pask, G. (1976b). Styles and strategies of learning. *Br. J. educ. Psychology*, 46, 128-148.
- Pask, G. (1979). Consciousness. *Cybernetics and Systems*, 9(3), 211-258.
- Pask, G. (1982). SAKI: 25 years of adaptive training into the microprocessor era. *International Journal of Man-Machine Studies*, 17, 69-74.

Thank You!

Todd Marshall
Doctoral Candidate
Information Institute
Syracuse University - Syracuse, NY

tmarshall@syr.edu

www.participatorynetworks.com