# Conceptualizing Organizational Communication
## Communication, organizations and agent-based modelling

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Agent-based modellers, generally, either take communication for granted without developing an understanding of it or focus on developing models of communication in a vacuum.
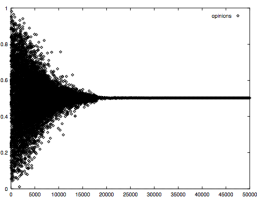
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# Example: Bounded Confidence Opinion Dynamics



**Figure 1.** *Time chart of opinions ($d = 0.5$   $\mu = 0.5$   $N = 2000$). One time unit corresponds to sampling 1000 pairs of agents.*
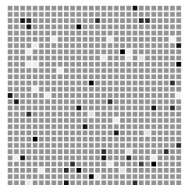


**Figure 5.** *Display of final opinions of agents connected on a square lattice of size 29x29 ($d = 0.3$   $\mu = 0.3$ after 100 000 iterations). Note the percolation of the large cluster of homogeneous opinion and the presence of isolated "extremists".*

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# Communication

A definition (Ashcraft et al., 2009):

> *[Communication] is the ongoing, dynamic, interactive process of manipulating symbols toward the creation, maintenance, destruction, and/or transformation of meanings.*

# Organizations

A natural system definition (Scott, 2003):

> *"Organizations are **collectivities** whose participants are pursuing **multiple interests**, both disparate and common, but who recognize the value of perpetuating the organization as an important resource. The **informal structure** of relations that develops among participants is more influential in guiding the behavior of participants than is the formal structure"*

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# Views of Organizational Communication

According to Ruth Smith (1993):

- Containment: Communication happens within organizations
- Production: One produces the other or both produce each other
- Equivalence: They are the same thing

# Main CCO Schools

- The Four Flows: Focusing on the analytical side
  - Membership negotiation: To its members
  - Activity coordination: To its groups and processes
  - Self-structuring: To itself, as formally controlled entities
  - Institutional positioning: To external institutions
- Montreal School: Focusing on the philosophy and underlying theory
  - Conversation (interaction, context) $\Rightarrow$ Ethnomethodology
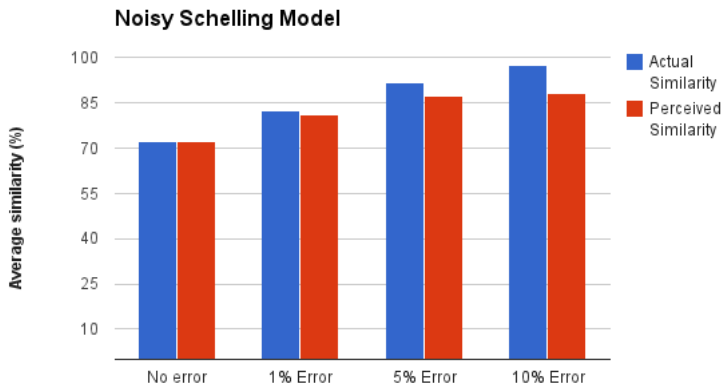  - Text (contents, meaning) $\Rightarrow$ Critical theory

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# Perception

## Phenomenology

The focus of research should not be on what is considered "natural" (which is the main concern of positivism) but on how the perception of it is achieved. Cognitive structures are not passive, as a filter, but it is actively involved in the constitution of the perceived world.

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**Noisy Schelling Model**

2000 agents with tolerance level of 30%

# Intersubjectivity

## Schutz and Ethnomethodology

The perception of the world does not follow some complex process and it is when trying to communicate this perception where problems may arise. Experiences are built based on the language used to communicate them and normal conversation is possible because people assume that their positions are reasonably interchangeable.

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# Distributed Cognition

## Embodied and enacted

Human knowledge and cognition are not limited to the individual. Knowledge is distributed in an environment, placed on objects, individuals and tools. In this way, knowledge embodied in the different elements of the environment, and through the interaction of these elements (enactment), cognition is possible in units bigger than the individual.

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# Outline

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They are simulation of social phenomena but agents aren't truly social.

# Problems with previous examples (I)

They are simulation of social phenomena but agents aren't truly social.

## Accidental co-operation

Two vandals independently arrive at an art gallery with the goal of destroying a particular picture. One, who is intercepted by a guard, diverts her attention. In doing so, he enables the other to succeed in tearing the picture. (Conte, 1995)

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There are two things needed for an action to be truly social:

- A cognitive model
- Communication must carry meaning

# Example: A Constructionist Leadership Model (I)

In the constructionist perspective:

- "Leader" is not universal, but contextual and defined by the agent
- An agent may have different characterizations of "leader"
- Assigning the category "leader" to someone is an action and constitutes reality

Based on Gilbert and Chattoe (2001)

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# Conclusion

- As cognitive models are becoming more sophisticated, communication should also be developed.
- Communication is concerned with manipulation of meanings, not only transmission of information.
- Cognition is not limited to individuals, but should also include the environment and the interaction with other individuals.
- Without cognition and communication there is no "true" social action.

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# Future work

- Development of a model of how organizations proceed from birth to maturity.
- Emphasizing the role of communication in the formation of structures.
- Using agents that have internal representation of their environment that they share and use to make decisions.
- Focusing on mental models and interactions over structure and "external" observations.

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# Thank you.