

The Futures We Want: Global Sociology
and the Struggles for a Better World

 3rd ISA Forum of
SOCIOLOGY

July 10–14, 2016
Vienna, Austria



Sociocybernetics: Designing Mathematical Models and Its Simulation As a Decision Support System.

Monday, 11 July 2016: 14:15

Room: Hörsaal 15

Oral Presentation

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SOCIOCYBERNETICS: Designing mathematical models and its simulation as a decision support system

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Is it possible to make experiments within Social Sciences? Some would say "NO" because after the first experiment the social system learns and reacts differently. However, if we have a good model, we can experiment simulating the model.

Into the organizations, the managers must take decisions in order to solve a problem, but sometimes they make it worse.

This is because "the rapidly increasing difficulty of action and decision in such a complex and highly dynamic world". (HORNUNG)

To coop with this difficulty the human brain and their mental models are not enough.

It would be necessary, first of all, to have the ability to see the world as a complex system, where everything is connected to everything.

System Dynamics is a method to enhance approaching to complex systems.

System Dynamics to deal with the complex systems into the organizations requires

tools to represent the mental models

formal models and simulation methods to test and design new policies or to test our hypothesis without affecting the real system

to have a long term view of the consequences of our decisions

Cybernetics provides us a key concept: FEED FORWARD that will let us to work with "government" concept instead of "controlling".

This requires a circular – causality reasoning instead the linear reasoning.

"The art of system dynamics modeling is discovering and representing the feedback processes, which, along with stock and flow structures, time delays, and nonlinearities, determine the dynamics of a system." (STERMAN)

This kind of tools let us to create virtual worlds. Virtual Worlds "are formal models, simulations, or "microworlds" in which decision makers can refresh decision-making skills, conduct experiments, and play." (STERMAN)

See more of: [Sociocybernetics, Simulation and Anticipation: Paradigms and Challenges](#)

See more of: [RC51 Sociocybernetics](#)

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Meeting Information

When:

July 10 - 14, 2016

Where:

Vienna, Austria

*Please note this is a preliminary
schedule and is subject to change.*

The registration deadline is **April 5th, 2016. All participants who fail to register by the deadline will be automatically deleted from the program.**