

SURFING THE SEMIOSPHERE

WORKPLAN



INTRODUCTION

[BIOSEMIOTICS] “biosemiotics is the study of the myriad forms of communication and signification observable both within and between living systems. It is thus the study of representation, meaning, sense, and the biological significance of *sign processes* – from intercellular signaling processes to animal display behavior to human semiotic artifacts such as language and abstract symbolic thought.” (Favareau)

[SEMIOSPHERE] first defined by Yuri Lotman, refers to the sphere of semiosis in which sign processes operate in the set of interconnected Umwelten, whereby Umwelt refers to the concept defined by von Uexküll. Organisms experience life in terms of species-specific, spatio-temporal, ‘self-in-world’ subjective reference frames.

[SURFING] the term surfing refers to the act of riding a wave, regardless of whether the wave is ridden with or without a board and regardless of the stance used.

[SENSES/SENSORS] A sense is a physiological capacity of organisms that provide data for perception (and meaningmaking), through sensing changes in their environment

Ecology of Senses, this year’s Field_Notes theme, will explore and investigate the role of sensing in its many forms, it is driven by excitement over new technologies that allow us to move beyond our bodily experiential limitations to newly frame our networked realities. The role that Surfing the Semiosphere (StS) takes on within this program is at the same time critical, exploratory and radical.

Critical:

based on prior work in spatial technologies and spatial ontologies, StS challenges the idea of universal spatial cognition and human superiority in cognition. It is grounded in the interdisciplinary field of biosemiotics.

Inspired by the semiotic theory of Charles Sanders Peirce and the notion of Umwelt introduced by Jakob von Uexküll, biosemiotics became a formalized field of study instituted by Thomas A. Sebeok.

Exploratory:

“Peirce ...extended the concept of intentionality beyond the confines of human cognition and he did so by grounding intentionality in a very generalized understanding of sign action, semiosis,” (Hoffmeyer)

As such, the biosemiotic program opens the door to question the idea that intelligent behavior is exclusive to humans and invites us to explore meaning and cognition beyond our Umwelt.

Based on the idea that our Earth’s spheres are full of signals – in which we are immersed/ embodied – that can be sensed and interpreted by appropriate sensors/sensing organs, we (StS team) will explore specific sets of signals/wave characteristics that serve to connect a number of Umwelten within our semiosphere at different scales and configurations. We will look at natural occurring signals (ElectroMagnetic and mechanical waves), but also critically consider the role and effect (e.g. interference/ ‘semiotic pollution’) of man-made radiation on semiotic relations.

“the ability of living systems to embody knowledge is a unique and qualitatively different area of study from physics or chemistry,” and “biosemiotics provides an arena to move beyond mechanistic conceptions of traditional science to more holistic investigations of humanity.” (Brier 2008)

“If cognition can span the brain, body, and the environment, then the “states of mind” of disembodied cognitive science won’t exist to be modified. Cognition will instead be an extended system assembled from a broad array of resources. Taking embodiment seriously therefore requires both new methods and theory/” (Wilson and Golonka)

[WAVES] a wave is a disturbance that transfers energy through matter or space, with little or no associated mass transport. Wave consists of oscillation of a physical medium or field, around relatively fixed locations.

Radical:

The challenge to develop ideas and tools for a different science – ‘surfing the waves’ will be newly defined in evolutionary and ecological context. Reframing Peirce’s tri-relations within the context of sensing technologies and semiotic symbiosis



CONTEXT : ECOLOGY OF SENSES

[**ECOLOGY**] is the branch of biology which studies the interactions among organisms and their environment. Ecosystems are dynamically interacting systems of organisms, the communities they make up, and the non-living components of their environment. Ecosystem processes regulate the flux of energy and matter through an environment. These processes are sustained by organisms with specific life history traits.

[embodied / meaning making; /intention; / niche hypothesis; replacement hypothesis; signals and noise / sensors and 'platforms' /

In situating the ideas of Peirce, von Uexkull, Gibson and others who have inspired the current field of biosemiotics into the realm of emerging spatial technologies, Surfing the Semiosphere converges with Ecology of Senses (EOS) objectives .

SURFING THE SEMIOSPHERE: DEVELOPING A NEW FRAMEWORK

“Life did not take over the globe by combat, but by networking.” Lynn Margulis, *Symbiotic Planet* 1995

“Science is deconstructing the old notion of individual boundaries....” Gilbert et.al. 2012 – “we are all lichen”

Motivation: the desire to understand spatial sense/perception and intelligence underpinning ecological communities; to move beyond the limiting [western] brain-body dichotomy that hinders the investigation of meaning and intelligence within and across populations, including human populations.

Desire to develop embodied spatial technologies/ networks, based on the notion that the body / [multi]sensory networks play a significant role in spatial understanding and behavior – following a biosemiotic approach.

The challenge we face today: A changing environment, new signals – impact of man-made signals; interfering with communication that is essential for species’ survival? Can we develop new indices to gain understanding of sensory richness and health of semiotic relations.

Geographic context: Subarctic

Arctic ecological communities are particularly sensitive to change and pollution.

General goals & objectives:

Taking exploratory steps toward developing novel spatial technologies rooted in principles of biosemiotics and embodied cognition.

WORK SCHEDULE

Specific objectives:

During early morning discussions, daily goals will be set. Field work will be a priority – daily walks and recording sessions from different places and perspectives in the Kilpisjärvi surroundings will be our main activity during the day.

DAY 1 ENCOUNTER

- AM Group presentation(s) – goals and objectives
- PM: Walk: exploring signals in the land (biosphere; geosphere....thinking about scale and semiotic relations – first immersion in semiotic relations

DAY 2 SCALE

- AM Discuss semiosphere in subarctic; in pairs select different scale organisms to explore organism – environment ((lichen/ insect/reindeer/human] – discuss tools and technologies
- PM
- Field: identifying semiotic relations / first observations and sense recordings
Focus : (UV/Magnetoreception; polarized light)

DAY 3 WAVES

- AM Surfing - across scales (using selected signals to connect Umwelten
- PM
- Exploring Concepts in the field: collective motion/navigation; interference e.g. man-made radiation;

DAY 4 BODIES

- AM Sense –driven behavior //replacement hypothesis
- PM “we are all lichen” (Gilbert et.al.) – new concept of body in time of embodied cognition - Field
- Discuss – final presentation

DAY 5 SEMIOCAVENGER

- AM New interface for surfing the semiosphere – connecting umwelten – considering the impact of man made signals.
- PM
- Field
- Discuss outcome/presentation of StS (e.g. publication/work)