

# Plone as Social Software and Ambient Art

Laura Trippi  
[www.netvironments.org](http://www.netvironments.org)

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# Overview

- Situate Plone within a trajectory of vanguard art/creative practice
- To consider Plone within a wider social and cultural context
- Frame and raise questions about
  - Plone's larger social function and potential
  - Effects, social and cognitive, of formal and procedural elements

# Context: Acceleration

- Accelerating pace of change
  - Technological drivers: [Moore's Law](#)
  - Unintended effects in world system
    - Mounting complexity
    - The Planet Under Pressure ([BBC graphs](#))
    - Narrowing sense of “now” ([Long Now diagram](#))
    - Loss of sense of place and context

# Approaching a Threshold?

“Go back to that litany of chemistry leading to single-celled organisms, leading to intelligence. The first step took a billion years, the next step took a hundred million, and so on. We're at a stage where things change on the order of decades, and it seems to be speeding up. Technology has the autocatalytic effect of fast computers, which let us design better and faster computers faster. We're heading toward something which is going to happen very soon -- in our lifetimes and which is fundamentally different from anything that's happened in human history before.

. . . (cont.)

# Approaching a Threshold?

“ . . . If I try to extrapolate the trends, to look at where technology's going sometime early in the [21st] century, there comes a point where something incomprehensible will happen. Maybe it's the creation of intelligent machines. Maybe it's telecommunications merging us into a global organism. If you try to talk about it, it sounds mystical, but I'm making a very practical statement here. I think something's happening now -- and will continue to happen over the next few decades -- which is incomprehensible to us, and I find that both frightening and exciting.”

—W. Daniel Hillis, [Close to the Singularity](#)

# Culture as Complex System

- Cultural evolution view entails concept of culture as complex system
- Models:
  - Characteristics of Complex Systems (NECSI)  
Dynamics of emergence and nonlinear effects
  - dn/a: Intelligent Life  
World Wide Web as neural net
    - Distributed intelligence
    - Learning through feedback loops
    - “Compositional tools”: Contributing/intervening in evolution of the world system

# Networks of Network Society

- Exponentially increasing interconnectedness
- Social networks with embedded computational objects and processes
- Manuel Castells:

“[K]ey social structures and activities are organized around electronically processed information networks... It's about social networks which process and manage information and are using micro-electronic based technologies.”

( [The Network Society and Organizational Change](#) )

# Are ‘Post-Human’ Networks

- Growing interdependency of human agents with computational objects / intelligent machines

The posthuman appears when computation rather than possessive individualism is taken to be the ground of being, a move which allows the posthuman to be articulated seamlessly with intelligent machines.

—N. Katherine Hayles, *How We Became Posthuman*



# FLOSS & Social Software

- Foster human-centered innovation at the intersection of technology and culture:
  - Tools and toolsets designed by users
  - Iterative design and development processes
  - Trace cognitive, physical, and social gestures/flows from material space into the digital environment
- What doesn't get digitized gets left out of the account

# What is "Plone"?

- “Plone” as more than a CMS
- Constellation/configuration of:
  - Software:
    - Multiple layers of code (w/unique qualities...)
    - ZODB (object-oriented database)
  - Network of developers
  - Diverse, interconnected communities of users
  - Knowledge, practices, and protocols produced by them

# Plone as “Connective”

- A "connective" social and cultural network\*
  - Neither individualistic nor "collective" in the traditional sense
  - Loosely interconnected, with points of intersection and divergence
  - Specific form of “agency” (identity) arising in the network society

# Machinic and Heterogenous

- From late French philosopher Felix Guattari:

“Characteristic of the forms of agency as they evolve in networked environments is that they are neither individualistic nor collective, but rather connective. Whereas the collective is determined by an intentional and empathetic relation between agents within an assemblage, the connective rests on any kind of machinic relation and is therefore more versatile, more open, and based on the heterogeneity of its components or members. . . . The inter-connectedness of their activities can be experienced visually, acoustically, and through the constant reconfiguration of the data sets, an experience which can become the basis of the formation of a specific, heterogeneous group subject.”

—Andreas Broeckmann,  
"Minor Media — Heterogenic Machines"

# Connective Network Architectures

- Foster communication and tactical integration across networks and modalities
- Foster emergence:
  - Rapid reorganization
  - Adaptive ("intelligent") change
  - “Surfing to a higher level”
    - More complex
    - But simplified and clarified

# Plone as Creative Work

- Plone as a complex, evolving creative **work**
- A “dialogical work,” as defined by Russian literary theorist Mikhail Bakhtin:

“Every element of the work can be compared to a thread joining human beings. The work as a whole is a set of these threads, that creates a complex, differentiated, social interaction, between the persons who are in contact with it.”

—Mikhail Bakhtin

# Trajectory of Creative Practice

- Core strand of vanguard art practice, from modernism to postmodernism
- Gradual dissolution of art objects into dynamic social space
  - “Dematerialization' of art”
  - Re-materialization of the social field
  - From Russian avant garde through “institutional critique” to “project work” or “social work”

# El Lissitzky

- Russian artist, designer, typographer, architect (1890-1941)
- Leading figure of early 20<sup>th</sup> century avant-gard
- Formal experiments oriented toward social change



# Lissitzky's Demonstration Spaces

- From the 1920's, “demonstration spaces” for presenting art:
  - “Room for Constructivist Art” (Dresden, 1926)
  - “Abstract Cabinet” (Hanover, 1927-1928)
  - Designed to activate viewer participation
- Along with formal experiments on abstract space
  - Layers and strata held together through dynamic tension (“Proun Space”)

# Mondrian

- Dutch abstract painter (1872-1944), member of De Stijl art movement
  - Social and political orientation of his formal program
  - Abstract painting as a training ground
  - Training perceptual apparatus toward modalities of social relation

# Dynamic Equilibrium

- Central concept for Mondrian's approach to abstraction: dynamic equilibrium
  - Diverse elements – blocks of color, lines – held together by creative tension and interplay
  - No top-down organizational element
  - Constitutive elements componentized at different scales
  - Creating the cognitive conditions of possibility for truly socialist – bottom-up – society

# Plone as Social Process

- Parallels between Plone and the work of El Lissitzky and Mondrian
  - Formal and suggestive
    - Cognitive effects?
  - Social
    - Modes of engagement between “work” and viewer/participant

# Formal Parallels

- Treatment of space
  - Abstract
  - Componentized
  - Translucent (revealing underlying architecture)
  - Highly malleable or plastic
- Traversable across scales

# Social Process

- Turning "consumers" into participants
- Elements held together in dynamic tension/equilibrium
- Fostering communication across
  - Layers of code and content
  - Domains of design, development, content creation and management
- Fostering movement among roles

# Plone as Training Ground

- Perceptual and social “training ground”:
  - Laying down cognitive architecture for social relations
  - Dynamics of bottom-up, object-oriented systems
- Creating conditions of possibility for new, non-coercive forms of social organization
- Coders become content producers and content producers become coders
- Plone as special case of FLOSS (ZODB and other factors)

# Plone's Larger Role

- Urgent need for such authoring tools in network society
  - Institutions not keeping pace with change
  - Innovation necessarily coming from local users, bottom-up
- Holding open and activating the creative space between coding and cultural production