

# **Post-Modern Technologies: Transformable, Interchangeable, Reconfigurable**

March 17, 2010

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## **Discussion Topics:**

- How Brian Arthur relates to “The Question Concerning Technology” and Heidegger
- Opinion Space

## **The Nature of Technology – Brian Arthur:**

- mentions Heidegger twice
- Arthur has background in engineering at Cal
- how technology has evolved, how it is generated
  - “Real Nature of Technology”
  - “Technology-ness” of technology; essence of technology
  - Early 80’s increasing returns, ‘positive’ feedback loop, something that connects to itself, pumps itself up, phenomenon, amplifies that effect
  - Idea of technologies
  - Page 2: Auto-poetic – self creating (like poesis); consistent with understandings of being, mind of its own, we’re not driving it
    - o conscious of connection with techne
    - o how characterizing different from poesis
  - Page 3: “issued forth” same as Heidegger’s “challenging forth” – man is doing the “challenging forth” while the economy and technology are doing the “issuing forth”
  - The relationship between the economy and technology – economics a great example of “Age of the World Picture” because we can make it so we can control the economy
  - Economics:
    - o Economy creates demand that drives creation of technology
    - o Economy tries to model and create theory of the economy
    - o Economics – example of “age of world picture”, can build a model, quantify and ultimately control it
  - Economics very much a technology:
    - o rules, models, techniques
    - o Heidegger: “technology nothing technological”
    - o “not limited to artifacts, machines”, model of revealing → way of approaching the world, essence of technology
  - Science and Technology:
    - o Technology: What Heidegger says about technology – “challenging forth” mode of revealing
    - o Science: scientists are just trying to understand nature, not trying to master it, may never manipulate it (astronomers), just wants to know *how* it works
  - Economy as technology: attitude towards economy in wanting to control it, very much technologies
    - o once studied and have models, that’s when it moves into technology

- micro-scale: companies, macro-scale: countries, global-scale: global level
  - economy indeed a technology: economy arose from its technologies, technology comes first
- Sometimes technology comes first, demand follows after
- Not trying to predict, not about new technologies, trying to say structurally what these important characteristics
- mentions Heidegger leaving traces of this
- attitude towards technology → skeptical about technology and its consequences, being skeptical doesn't mean one wants to do away with technology
- Three principles:
  - (1) All technologies are combinations of elements
  - (2) These elements themselves are technologies
  - (3) All technologies use phenomena to some purpose
    - Can study processes of evolution, talking about modern and post-modern technologies
      - Is the 2<sup>nd</sup> principle saying that all technology is post-modern?
- Evolutionary model: "technology has evolved in a way that is not human driven" -- much more complicated, common ancestry, not trying to make perfect model of evolution in nature, there is evolutionary process, nature has evolved without men's drive
- technology has evolved without human drive
- analogy between technology and biology
- evolutionary model → need follows solution much as solutions follow need
- needs come from technology, need makes solution necessary, but the solution also drives need
- technology like chemistry – metabolism
- technology has mind of its own, not human driven
- technology and biology:
  - has now evolved to digitalization, sensing (electronic) characteristics used in biology, smart systems, self healing, technology and biological systems, learning (systems that can learn)
  - next generation of technologies with biological overtones, becoming more and more similar, inter-mingle but not same
  - technology has a mind of its own, larger force
- The Generative Economy (pages 209-211):
  - Shift from modern to post-modern
  - Talks about "saving power" in the end
  - economy shifting to optimizing fixed operations into creating new combinations, new configurable offerings
  - uncertainty
  - management trying to model this uncertainty, world much less strategizable
  - available to take advantage of new things that come around
  - high-tech companies seeking for intelligent employees
  - uses modern for post-modern
  - elements
  - shifting from machine-like economy to organic → chemistry (complex, open-ended)
  - "Messy vitality" uncertainty, ambiguous, distorted, redundant, inconsistent
  - contrasting of modern and post-modern
  - aware of danger and saving grace but talks about technology on a somewhat positive note
- New Media: same characteristics of post-modern
- humanities, technology and art/design (multi-disciplinary)

- What is medium?
  - o intervening element that which facilitates perception
  - o thinking of medium as a lense (telescope/electrical light – facilitates perception at night)
  - o lenses can transmit but may also distort
  - o may bring inequities

**Opinion Space:**

- “Opinion if the medium between ignorance and knowledge.” –Plato
- Berkeley Center for New Media (BCNM) – very cross-disciplinary
- What is a medium?
  - o Intervening element, facilitates perception
  - o Lenses transmit as well as distort
  - o “moving from an information age to opinion age” – Warren Sack
  - o DARPA Network Challenge – Dec. 2009 – showed the power of social networks
  - o Working to increase motivation to comment/reply to posts but how do you read all the comments?
  - o “Cyberpolarization”: people only going to blogs and/or sites they already agree with
  - o Opinion space – can be used for so many things