HCC/FOSS Panel

FOSS = “Sociotechnical `Systems’”

- “Frameworks” for approaching STS?
  - Technical: Technical capacities, constraints,, dependencies, infrastructure, time, dynamics…
  - Social: Social ***processes***, structures, meanings, sensemaking, institutions, dynamics,…
  - “Seamless Web”

“Seamless Web”

"Since the mid-1980s, there has been a movement away from both the technological and socio-economic determinisms that have been defining (and conflicting) central metaphors in the relationship between technology and society, and towards the metaphor of the “seamless web of technology and society” (Pinch & Bijker, 1994, p. 10)." [Kling, 1998]

How to theorize this, for FOSS?

Theorizing Technology

"...we argue that the field has not deeply engaged its core subject matter—the information technology (IT) artifact.... we propose that … researchers begin to theorize specifically about IT artifacts, and then incorporate these theories explicitly into their studies." [Orlikowski & Iacono, 2000]

Technical (Brief)

- **Capabilities**: Organizing, displaying, communicating, sensing, remembering, preserving, hiding, relating, trading-off….
- **Constraints**: Limits, speed, space, maintainability, access, installability, …
- **Dependencies**: hardware/software ecologies, networks, …

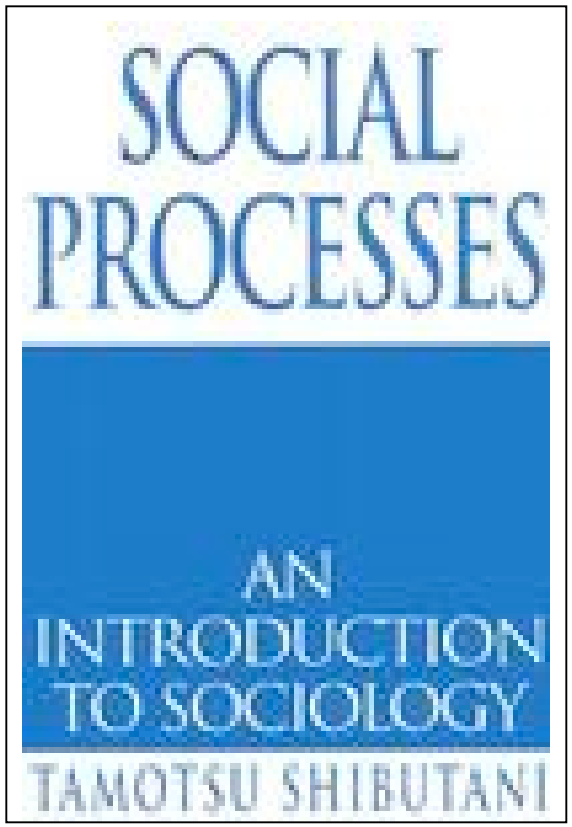
Technical (Brief)

- **Infrastructure**: embeddedness, transparency, learned as part of membership, links with conventions of practice, embodiment of standards, built on an installed base, becomes visible upon breakdown." [Star & Ruhleder, 1996]

- **Time**: temporal rhythms, speed, slowness,…

- **Dynamics**: "invention, innovation, regulation, expansion, slippage, upgrades, patches, cookies, viruses, workarounds, wear and tear, error, and failure." [Orlokowski & Iacono, 2000]

- …….



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II. Sustaining Processes

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Examples

- Luis Murillo, ***"Toward a multi-disciplinary FOSS research: contribution of anthropology for the study of "local" FOSS projects."***
- Scott Hissam: ***"Free and Open Source Software Development in High Criticality Domains"*** e.g., "safety culture", sociotechnical aspects of reliability
- Stormy Peters, ***"How people communicate on projects"***
- Patrick Wagstrom, ***"How does FOSS change for users, developers, and researchers as commercial developers enter volunteer communities?"***
- John Riedl, ***"New Members"***

Discussion Questions

1. How thoughts and contributions from the workshop fit with some conception of sociotechnical systems
   - what are the sustaining or agonistic social processes in FOSS "settings";
   - what are the "theories of technology" for FOSS?

2. What are the ***critical unknowns*** (researchable issues) in this space?

3. What makes these unknowns critical for a "science of FOSS"? (what is their “natural significance and practical potential” [Delong, 2009])