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]

• ……. 
I. Communicative Processes

II. Sustaining Processes

III. Transitional Processes

IV. Agonistic Processes
Communicative Processes

PART ONE. COMMUNICATIVE PROCESSES

II. SYMBOLIC RECONSTRUCTION

1. Mapping the Environment: Objects
2. Evaluations and Emotional Reactions
3. Symbolic Representation of Objects
4. Human Knowledge as a Social Process
5. Summary and Discussion
6. Suggested Readings
Communicative Processes

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Agonistic Processes

PART FOUR. AGONISTIC PROCESSES

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Techniques of Negotiation
Techniques of Persuasion
Techniques of Coercion
Summary and Discussion
Suggested Readings

XV. BIPOLARIZATION
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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 (reasearchable 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])