Research Challenges

• What is the Web culture?
  – Design/use/analysis are connected to "cultural stereotypes" (Think HSBC ads)
    • What are the cultural stereotypes in the emerging online community?

• What level of "knowledge" is needed by Web users?
  – Is this dependent on application? User community?
  – Is expressivity a plus, minus, non-issue?
    • Especially in an open system (previous AI systems were "closed")
Research Challenges

• Computational challenges as "end user" support
  – Scaling
  – HCI (What do we show "real users"?)

• What are the trade-offs in use
  – Virtually all AI literature assumes a high-cost, high-value model
  – The Semantic Web is showing us alternative models
    • What are the trade-offs, analyses

• If more and more of what we see includes integrated data from multiple sources, will that change the trust models
  – Do we need to expose provenance? Will "provider" model be changed?
Research Challenges

• Who are the "experts"
  – What level of expertise is needed to become "dangerous" with this new technology?
    • What is the "ecosystem" (what is the equivalent of Web developer/web master/web user?)

• If more and more of what we see includes integrated data from multiple sources, will that change the trust models
  – Do we need to expose provenance? Will "provider" model be changed?

• Formal vs. informal models of ontology
  – I didn't discuss "folksonomy" but a key aspect is "social context" (Hendler & Golbeck, 08)
    • Can social contexts use
Figure 3: Studies of Web structures consistently find Zipf distributions, Exponential growth curves, and small world networks. While there are many studies describing these behaviors, explaining why human-aided computing continually shows these properties is still an open problem.