Information Economics of Open Content Production

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Wikimania

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Outline

- Open Source Software & Wikipedia
  - Similarities
  - Crucial differences
    - …and key implications
- A few policy suggestions

Broad Similarities

- Production of an information good
  - No reproduction cost
  - Non-rivalrous consumption
- Similar infrastructure
  - Internet-based computer-supported cooperative work
- Social movements with movement goals
- Rapid adoption/growth
  - Increases access by poor/cheap users
  - Helps commoditize proprietary incumbents

Other Similarities

- Similar intellectual property
  - Users own their contributions
  - Content licensed under GNU copyleft
  - Exclusive ® for branding (cf. Apache)
- Non-profit foundation (cf. O'Mahony, 2003)
- Benevolent dictator for life

Similar Production Economics

Similar production via volunteer labor:

- Positive-feedback loop ("network effects")
  - More utility/visibility/"buzz" → more users
  - More users → more contributions
  - More contributions → more utility, etc.
- Niches have problem getting enough labor

But Wikipedia is Different…

- Scope of effort
  - Larger pool of potential contributors
  - Larger (and more heterogeneous) scope of content under one roof
- More ambiguous definition of “done”
  - Quality harder to define/measure
  - Historically, no releases
- Few commercially-sponsored “volunteers”

Focus: Two Key Differences

Wikipedia has disadvantage vs. OSS:

- Monoculture means slower evolution
- Weaker feedback → lower quality

Larry Lessig on Friday

Lessig encouraged license diversity:

- Room for Creative Commons and GFDL
  - “We don’t need monopolies on anything”
  - I.e. competing approaches are good
  - “No single point of failure”
- As Hayek observed, resources are best allocated through market feedback
  - Cf. the old saying “users vote with their feet”

Monoculture vs. Diversity

- Open source has variation and selection:
  - Dozens of major projects
  - 100,000+ minor projects
  - Random (or not) variations on processes, tools
  - Mimetic/selection effects
    - Successful projects have best practices, are copied
    - Unsuccessful ones atrophy or die
  - Result: more robust community
- 1 Wikipedia ≈ 1 set of processes

Weak Feedback Mechanisms

- Fewer economies of scale
- Not user innovation in von Hippel sense
- Low barriers to participation (too low?)
- Diseconomies of scope

Less Economies of Scale

- Software production is partially automated
  - Great tools developed in last 40 years
    - Development, production, syntax checking
  - Post-authorship validation (QC)
  - Solve problem once, use many times
- Production of natural-language content extremely labor-intensive
  - Same problem as mass media

User Innovation

- Eric von Hippel saw the power of user innovation
  - Read *Democratizing Innovation* (free PDF)
- Open source: “scratching own itch”
  - Strong utilitarian motivation
    - “Eat your own dogfood”
  - If someone breaks my module, I want it fixed
- Wikipedia: writer → reader asymmetry
  - I get no utility from my own content
  - Only ego motivates me to monitor it

Low Participation Barriers

- Easier to twiddle than create content
- Emphasis on consistency over accuracy

Eugene Kleiner

From Wikipedia, the free encyclopedia

(Difference between revisions)

Revision as of 00:55, 25 November 2003 (edit)	Revision as of 01:22, 25 November 2003 (edit)
Joelwest (Talk I contribs)	66.47.67.223 (Talk)
	(fixed name of Shockley Transistor to match Wikipedia)

Line 5:

In 1956, he was among the first to accept an offer from William Shockley to come to California to help form what became Shockley **Semiconductor**. In 1957, he and seven colleagues (who Shockley

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Line 5:

In 1956, he was among the first to accept an offer from **[[**William Shockley**]]** to come to California to help form what became Shockley **Transistor**. In 1957, he and seven colleagues (who Shockley

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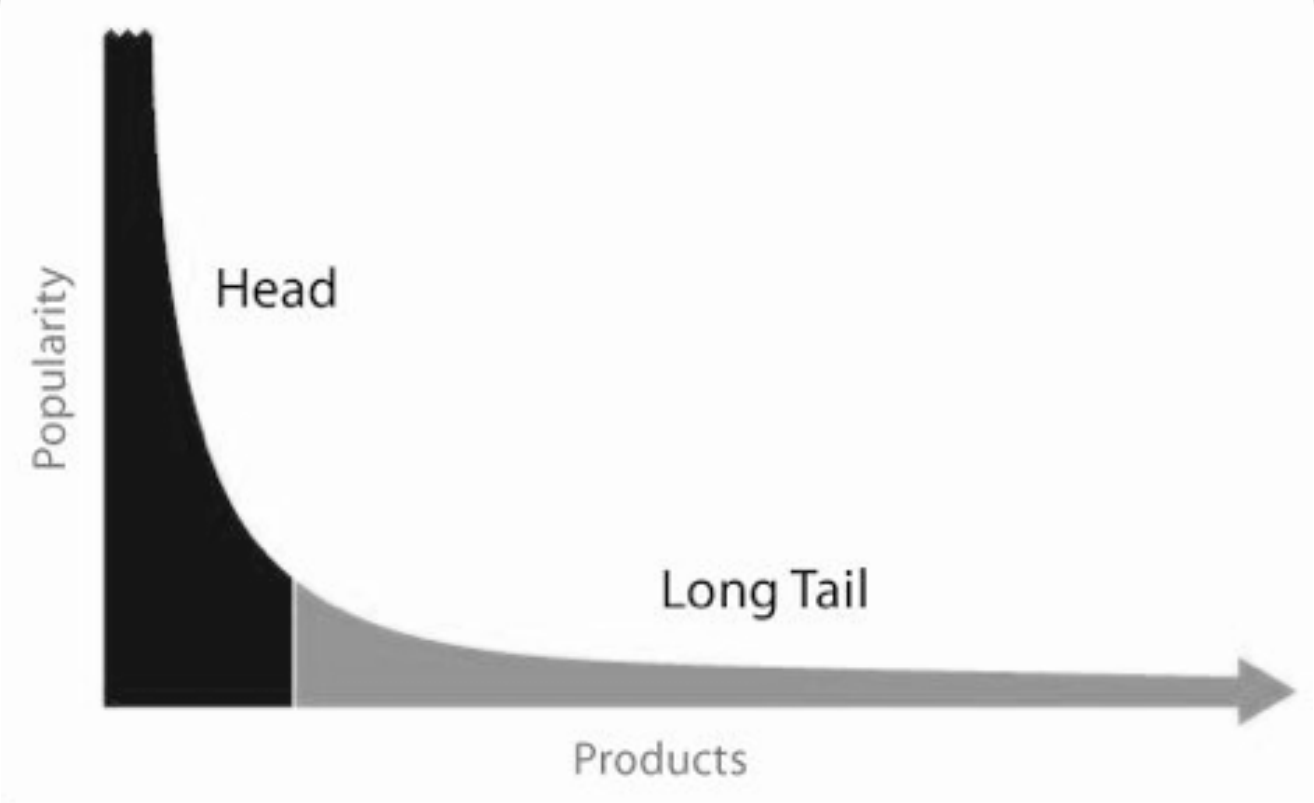
Define: Economies of Scope

- Economies of scope: having wider selection is more valuable or efficient
- One example is “the long tail”
  - Having obscure works increases demand for popular works and vice versa
  - Promise of “one stop” shopping
    - Toys: Toys R Us vs. Wal-Mart
    - Books: Amazon vs. brick & mortar

The “Long Tail”



See Chris Anderson, *The Long Tail;* also www.TheLongTail.com

Diseconomies of Scope

Diseconomies=wider scope → less efficient

- Weak content hurts overall legitimacy
- Open source can pick & choose battles
  - Linux is only an operating system
  - Apache is only a web server
  - OpenOffice problems don't tar Firefox
- Not inherent to collaborative content production
  - Less an issue for bounded sites (IMDB, Wikitravel)
  - But Wikipedia's goals are deliberately unbounded

Some Modest Suggestions

- New business models
- Releases
- Delegation
- Internal competition
- Technology

Business Models

- Making money key to getting resources
  - Corporate support key to success of Linux, Apache
  - Always some form of cross-subsidy
- Various models:
  - Compilations (GNU magnetic tapes)
  - Razor & razor blade (Linux & IBM mainframes)
  - Teaseware (“free” software but paid support)
  - Premium (free PHP but high-performance Zend)
  - Enterprise market (CollabNet)
  - Advertising (Slashdot)
  - T-shirts (Mozilla)

Releases

- To many, “Wiki” means fluid and dynamic
  - Rare exception: offline dump
- A prereq to winning broader acceptance
  - M. Walker’s “stable” and “validated” proposals
  - Show K-12 librarians the 3.0, not a beta
- Decades of best practice in software
  - 15+ years of best practice in OSS

Delegation

- Centralized authority often lacks control
  - Wild West: authority delegated to US Marshall
  - Suburbia has Neighborhood Watch
- WikiProjects are *post hoc* partial coverage of the existing territory
  - How well known are they?
  - Are they attracting volunteers?
  - Suggestion: quality before breadth

Internal Competition

- A monoculture is dangerous to a species
  - Diversity avoids risk of catastrophic failure
  - Allows selection of best practice
  - Key to the OSS success story
- Wikipedia must explicitly encourage process, policy, tool experimentation
  - By languages, and WikiProjects
  - By creating an “incubator” to test reforms

Technology

Tech fixes may help but not solve problems

- Make it easier to improve quality
  - Escalating problems
  - Fact checking/validation marking
  - Rating contributor quality (e.g. Amazon)
- Experiment with other metaphors
  - Validated pages
  - Formal WikiProject control

Thanks!

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