

Electronic Participatory Culture as a Digital Ecosystem

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Digital Ecosystem

*(...) we are in a single global ecosystem - **wired, connected, overlapping and bumping into one another**, benefiting from each others' successes and suffering from each others' failures. (...)*
And when one part of us is excluded or handicapped, either through conscious discrimination or benign neglect, the rest of us will suffer eventually.¹

¹Carly Fiorina, The Digital Ecosystem, World Resources Institute Conference: Creating Digital Dividends, Seattle, Washington, October 16, 2000, http://www.hp.com/hpinfo/execteam/speeches/fiorina/ceo_worldres_00.html

A Part of 6th Framework Program

*A digital ecosystem is a **self-organising** digital infrastructure aimed at creating a digital environment for networked organisations that supports the **cooperation**, the knowledge **sharing**, the development of **open** and adaptive **technologies** and **evolutionary** business models²*

²The Digital Ecosystem in a nutshell, n. d.,
<http://www.digital-ecosystems.org>

*(...) migration of services which are distributed in a decentralised **peer-to-peer network**, operating continuously in time; this process feeds a second optimisation based on **evolutionary computing** that operates locally on single peers and is aimed at finding solutions to satisfy **locally relevant constraints**. Through this twofold process, the local search is accelerated and will yield better local optima, because the distributed optimisation already provides a good sampling of the search space by making use of computations already performed in other peers with similar constraints³*

³G. Briscoe, P. De Wilde, Digital Ecosystems: Evolving Service-Orientated Architectures, in: BIONETICS '06 Proceedings of the 1st international conference on Bio inspired models of network, information and computing systems, New York 2006 <http://arxiv.org/pdf/0712.4102v1.pdf>

Participatory culture

Participatory culture

For the moment, let's define participatory culture as one:

- 1. With relatively low barriers to artistic expression and civic engagement*
- 2. With strong support for creating and sharing one's creations with others*
- 3. With some type of informal mentorship whereby what is known by the most experienced is passed along to novices*
- 4. Where members believe that their contributions matter*
- 5. Where members feel some degree of social connection with one another (at the least they care what other people think about what they have created).⁴*

⁴Henry Jenkins, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century (Part One)*, http://henryjenkins.org/2006/10/confronting_the_challenges_of.html

New participatory culture

The new participatory culture is taking shape at the intersection between three trends:

- 1. New tools and technologies enable consumers to archive, annotate, appropriate, and recirculate media content;*
- 2. a range of subcultures promote Do-It-Yourself (DIY) media production, a discourse that shapes how consumers have deployed those technologies; and*
- 3. economic trends favoring the horizontally integrated media conglomerates encourage the flow of images, ideas, and narratives across multiple media channels and demand more active modes of spectatorship⁵*

⁵Henry Jenkins, *Fans, Bloggers, and Gamers. Exploring Participatory Culture*, New York and London 2006, s. 135-136.

1. explicite media practice⁶
 - 1.1 a conscious activity of competent users
 - 1.2 driven by motivation
 - 1.3 eg. gamers, fan, hackers of Microsoft Xbox
2. implicite media practice
 - 2.1 built into design of interfaces
 - 2.2 often unconscious
 - 2.3 eg. peer-to-peer, social bookmarking, folksonomy

⁶Mirko Tobias Schäfer, *Bastard Culture! How User Participation Transforms Culture Production*, Amsterdam 2011, p. 51

Wikipedia Authorship

Jimmy Wales in Stanford: — Wikipedia was written by

*"a community (...) a dedicated group of a few hundred volunteers"*⁷

- 50% of all the edits — 7% of the users (524 people)
- the most active 2% (1400 people) — 73.4% of all the edits.
- remaining 25% of edits⁸

*"people who [are] contributing ... a minor change of a fact or a minor spelling fix"*⁹

⁷Cf. Aaron Swartz Who Writes Wikipedia?,
<http://www.aaronsw.com/weblog/whowriteswikipedia>

⁸Cf. Wales, [Wikipedia-I] Wikipedia, Emergence, and The Wisdom of Crowds, <https://lists.wikimedia.org/pipermail/wikipedia-l/2005-May/021764.html>

⁹Cf. Swartz 2006

Aaron Swartz asks:

*"Did the Gang of 500 actually write Wikipedia?"*¹⁰

Two Hypotheses

1. The Gang of 500
2. The Anonymous Horde

¹⁰Swartz 2006

Alan Alda article example

- counting edits

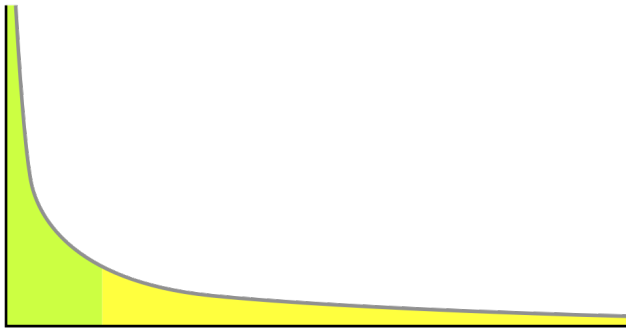
*"it appears **the biggest contributors to the Alan Alda article (7 of the top 10) are registered users who (all but 2) have made thousands of edits to the site"***

- counting letters

*"**few of the contributors (2 out of the top 10) are even registered** and most (6 out of the top 10) have made less than 25 edits to the entire site. In fact, #9 has made exactly one edit — this one"¹¹*

¹¹Swartz 2006

Long Tail



Forget squeezing millions from a few megahits at the top of the charts. The future of entertainment is in the millions of niche markets at the shallow end of the bitstream.¹²

¹²Chris Anderson, *The Long Tail*, 2004,
<http://archive.wired.com/wired/archive/12.10/tail.html>

*"an outsider makes one edit to add a chunk of information, then insiders make several edits tweaking and reformatting it."*¹³

- insiders vs. outsiders
- formatters vs. contributors
- "editcountitis" problem — obsessive edit-counting disorder (OECD)¹⁴

Swartz's conclusion

*"growing it [Wikipedia] requires making it easier and more rewarding to contribute occasionally."*¹⁵

¹³Swartz 2006

¹⁴<https://en.wikipedia.org/wiki/Wikipedia:Editcountitis>

¹⁵Swartz 2006

The Minnesota study

- persistent word view (PWV)
*"the number of times any given word introduced by an edit is viewed."*¹⁶
- top 0.1% of edits (about 4,200 users) have contributed over 40% of Wikipedia's value in terms of PWV¹⁷

¹⁶Reid Priedhorsky, Jilin Chen, Shyong (Tony) K. Lam, Katherine Panciera, Loren Terveen, John Riedl, Creating, Destroying, and Restoring Value in Wikipedia, "GROUP '07 Proceedings of the 2007 international ACM conference on Supporting group work" New York 2007.

¹⁷Priedhorsky et alii, 2007

Alain Désilets

1. Most edits done by **a small core**
2. But most of the text created by **the long tail**
3. However, most of the text that people actually read, was created by the **small core**¹⁸

¹⁸Cf. Finn Årup Nielsen, Wikipedia research and tools: Review and comments, 2015; Alain Désilets, [Wiki-research-l] "Regular contributor", <http://lists.wikimedia.org/pipermail/wiki-research-l/2008-November/000697.html>, 2008

Further research

1. Felipe Ortega, Jesus M. Gonzalez-Barahona, Gregorio Robles, On the Inequality of Contributions to Wikipedia, w: Proceedings of the 41st Annual Hawaii International Conference on System Sciences, IEEE Computer Society Washington, DC 2008.
2. Luca De Alfaro, Michael Shavlovsky, Attributing authorship of revisioned content, "WWW 2013 - Proceedings of the 22nd International Conference on World Wide Web", Geneva 2013.
3. Fabian Flöck, Maribel Acosta, WikiWho: Precise and Efficient Attribution of Authorship of Revisioned Content, "World Wide Web Conference" New York 2014.