Reflections on the democratic meaning of power law in the networked public sphere: The cases of Wikipedia, 15M/Indignados, & SOPA

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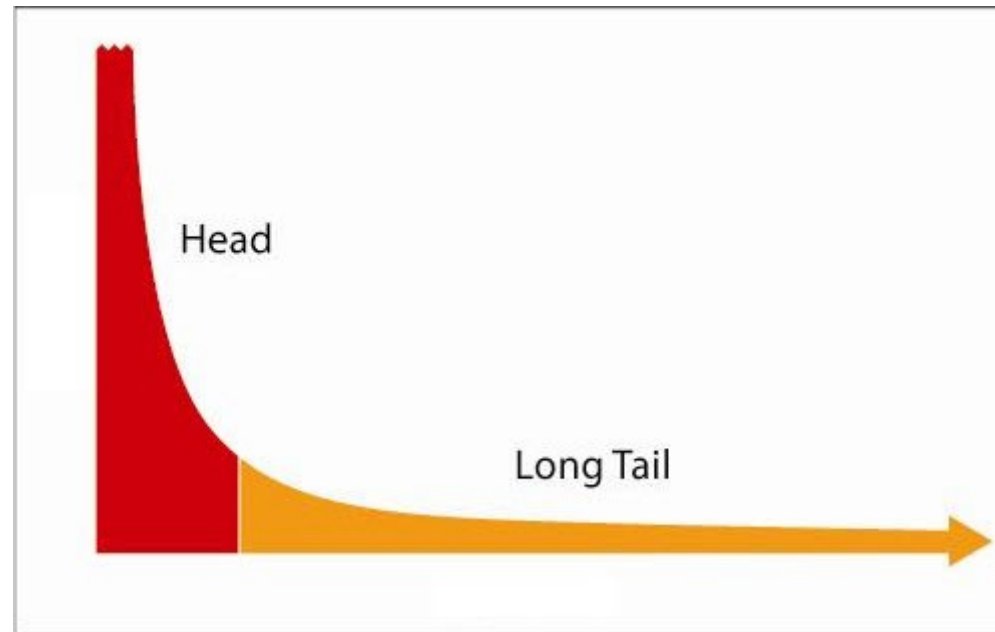for Media Cloud team
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Debate about the democratic quality of the networked public sphere

The presence of power laws in collective action in the networked public sphere is interpreted as a non-democratic feature of the sphere.

Sure? Is this way that should be interpreted? How to approach the democratic meaning of power laws?

What is a power law?

A property of a network characterised of few very dominant nodes and a queue of many "minor" nodes regardless of the network scale (Réka, Hawoong, & Barabási, 1999)

Power law is very ubiquitous. It has been observed in a large variety of phenomena. However it should not be considered as something "natural" and "inevitable", but socially constructed.

The collective action in the networked public sphere also tends to generate power laws.

Cases

Common-based peer production:
Wikipedia
Results from Ortega y González-Barahona (2007) & Ortega (2009) + Fuster Morell (2010)

Political mobilization and organization:
Mobilization against SOPA law
Results from Benkler *et* al (2012, 2013)
15M/Indignados
Results from Borge-Holthoefer *et* al (2011) & Fuster Morell (2012)

Power law in the collective action in the networked public sphere

5 Explanatory hypothesis (from a more functional/behavioral perspective)

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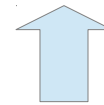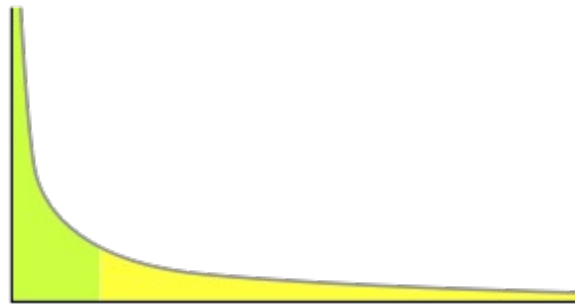**6 Notes to reflect on its political meaning**

1 Hypothesis

Power law resulting from the tendency to generate cumulative preference (Barabási, 2003; Price, 1965)

* In systems of free choice, the choices of each person are affected by the choices of others, and people tend to value more the elections of previous people (regardless of the criteria that followed the first).
* Cognitively, humans would tend to seek the "agreement" and social validation in their choices, so tend to copy what precedent people and most people did.
* As a consecuence, free choice systems reward the choices of the first to arrive.
* But the trend is not inevitable. Some networks create norms to counteract the cumulative preferences tendency.
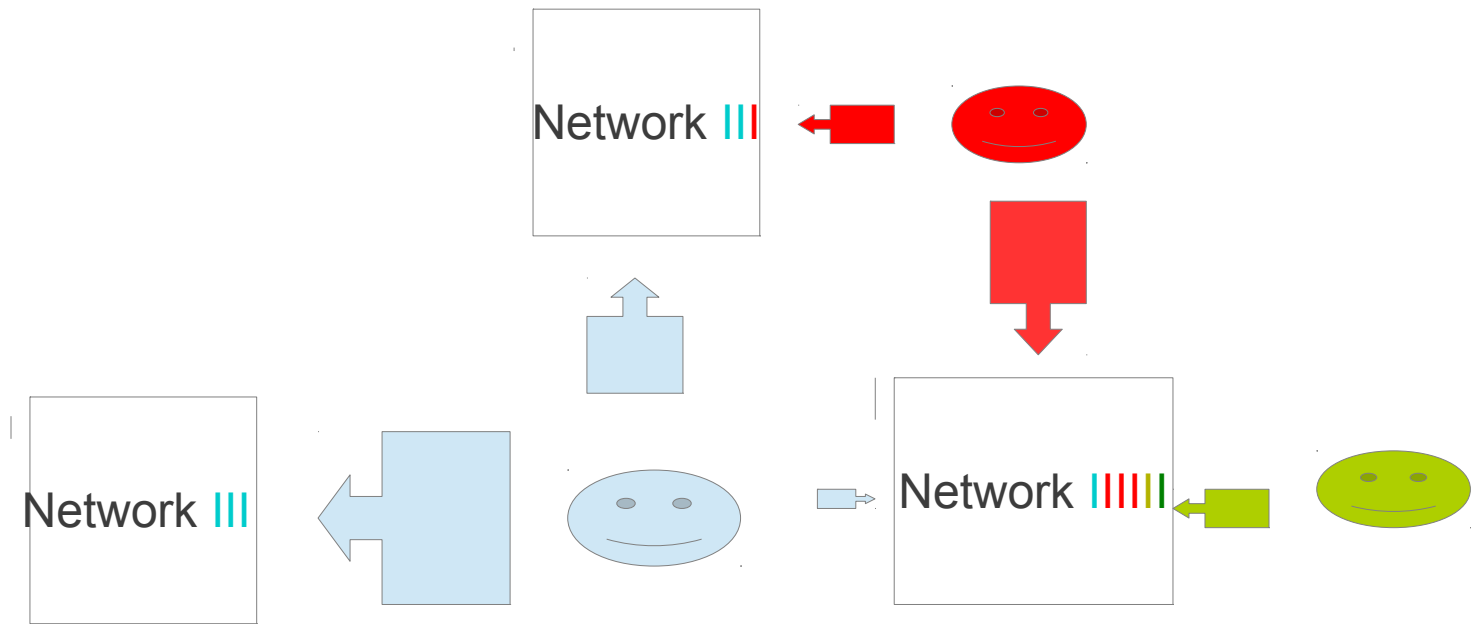
2 Hypothesis

Power law resulting from the low cost of failure or abandonment

Abandonment

3 Hypothesis

Resultant of multi-belonging
Participants distribute their resources unevenly between various networks.

4 Hypothesis

Resulting from the ecosystemic dynamic of the participation

The three recurrent levels (90/9/1) are interdependent with each other and each has its role in the system.

Contribution of 1% stronger participation:
    * Key to the initial critical mass
    * Create content
Contribution of 9%weak participation:
    * Connect the network with a wide field of knowledge (Granovetter, 1983)
Contribution 99% of the "no-participants":
    * Act as an audience
    * Network effect value
    * Motivate 1% and 9%
    * Improve the system with the digital threads

(Detailed analysis for Wikipedia, Flickr, and Wikihow cases at Fuster Morell, 2010)

5 Hypothesis

Strengthens the resilience of the network and reduces the probability that it collapse

Power law contribute to network robustness and increase fault-tolerant. It is more likely it "die" nondeterministic node.

Notes to reflect on the political meaning of power law

We should not interprete the democratic character of power law on the basis of the presence or not of power laws in the network. Instead the kit of the matter is what do they do with it, the way in which the network "rules" and perform the power law.

"The governance of the power law"

"The governance of the power law"

The networks (though their social norms, their algorithm code, their structure and access/costs required for participation) perform differently the power law.
Some practices favor a democratic ruling of power law, while others reinforce the creation of an elite.

6 Practices that favor a pro-democratic power law: Rotation among the strong nodes

Crosstemporales studies in Wikipedia (Ortega), 15M (Borge-Holthoefer *et* al), and SOPA (Benkler *et* al) show mobility between nodes. The more visible notes are not always the same.

7 Practices that favor a pro-democratic power law: Attention bounds (Benkler, 2006, et al 2013)

Core nodes act as "attention bounds" to give visibility to a plurality of other voices without visibility. In this way atention is distributed. They are shared resources maintained by a broader network of nodes.

Observed at SOPA (Benkler et al 2013)

8 Practices that favor a pro-democratic power law: **Collective accounts**

The more visible nodes are collective actors that are the result of the aggregation of many actors (such as common campaigns or platforms). The account become a resource for many voices.

Observed at 15M (Borge-Holthoefer *et* al 2011) and Fuster Morell (2012)

9 Notes on the political meaning of power law: **The democratic conception of the network also shape power law**

The distribution of attention reflects the conception of democracy of the network (and its governance though social norms, formal notes or others). If the network value meritocracy, it might result in to more visibility to the nodes that have more merit.

10 Notes on the political meaning of power law: The "fault" of algorithms and who control them

Power law might result from the configuration of algorithms (or its "manipulation" to make prevail other aspects that a democratic distribution of attention (such as corporate benefit))

Depending on the type of network governance, algorithm might be more transparent or under the control of the communities or not. The distribution of attention resulting from the algorithm might be the "democratic" responsibility of who control the algorithm, which not always is the community.

11 Notes on the political meaning of power law: Power laws might reflect the unequal distribution of resources in society participation. Open networks in "undemocratic" (unequal) societies are "undemocratic".

In an unequal society, open systems tend to reinforce social inequalities. Those who have more resources contribute more and gain more visibility.

The communities might put in place some formulas to avoid this to happen and do not reinforce "external" inequalities.

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