

Network Effect* & Long Tail

* Partially adapted from notes by Prof. John Gallagher, Boston College

Web 2.0 foundation attributes

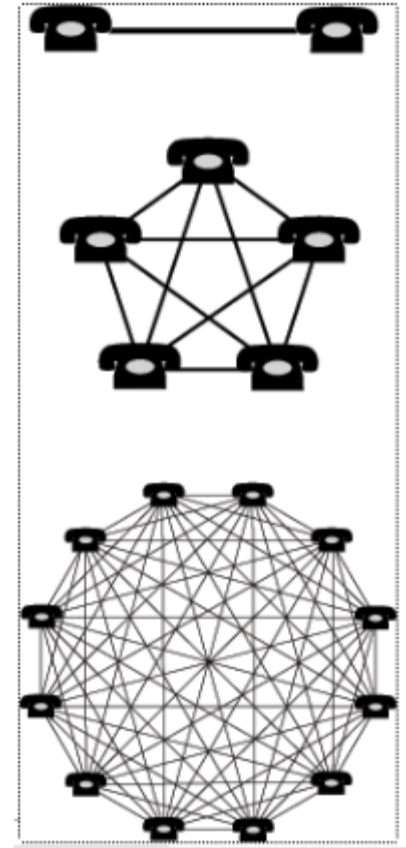


- These two attributes frame the economic model of Web 2.0 services. They allow services to **scale** efficiently to accommodate many customers
- **Scale** - doing things more efficiently with increasing size of operation
 - Supply side
 - Demand side – network effect

Network Effect - Definition

The network effect is the effect one user of a good or service has on the value of that product to other people

- The value of a product or service increases as the number of users grows. More users = more value
- They're among the most important reasons people pick one product or service over another



Bandwagon Effect

Is the idea that people often do and believe things merely because many other people do and believe the same things

- The general rule is that conduct or beliefs spread among people, as fads and trends clearly do, with "the probability of any individual adopting it increasing with the proportion who have already done so". As more people come to believe in something, others also "hop on the bandwagon" regardless of evidence

JUMP ON THE



Examples



Network effects are responsible for the dominance of many products and services that support some kind of exchange or connectivity. Examples include Windows, the New York Stock Exchange, the BS 1363 13 amp electrical standard, Blu-ray DVDs, eBay, and Facebook.

99% of products/services do not have network effect but the above products/services do

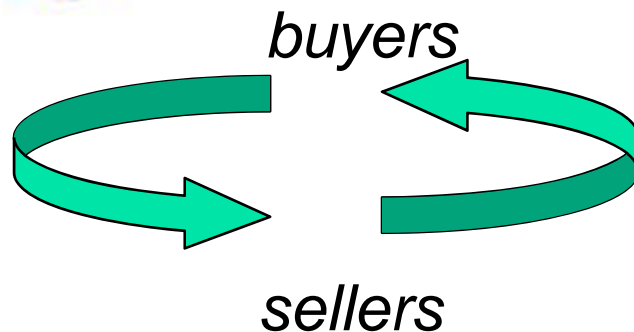
Network Structure – One sided market

- Derive their value from a single class of users
- For example, WeChat/Facebook users attracting more Wechat/Facebook users



Network Structure – Two-sided market

- Derived value from two distinct categories of network participants



Sources of Network Effect

Person-to-person communication feature

- Telephones, fax machines, email, Whatsapp/WeChat



Value from trading volume, number of partners

- eBay, Uber/Airbnb



Value from more nodes in a network

- BitTorrent, P2P Networks

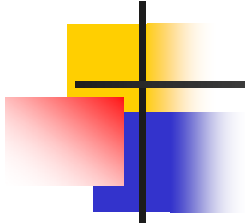


Value from user-generated 'content'

- Web 2.0, Wikipedia, online communities, ...

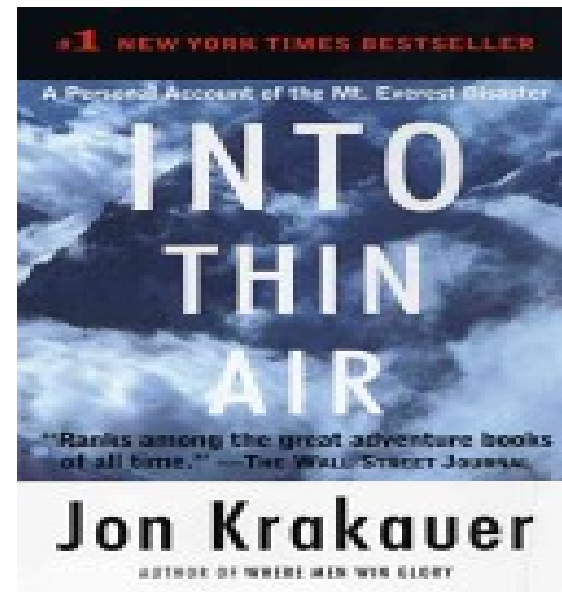
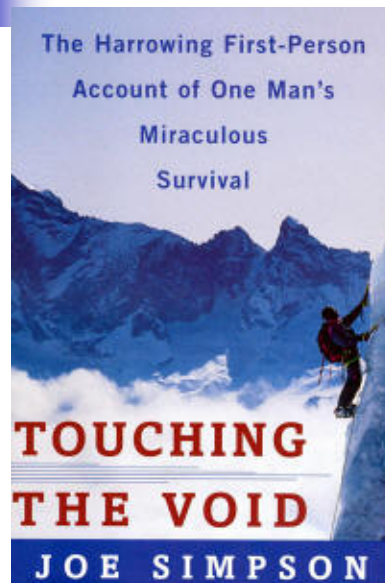


Negative network effect- Congestion



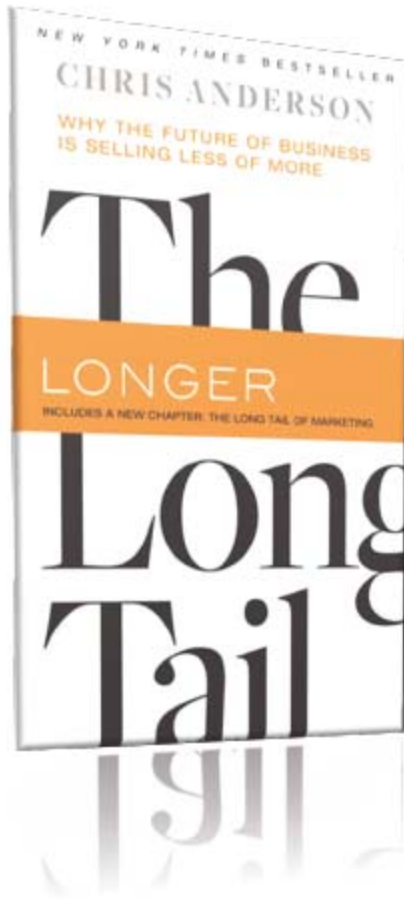
- Negative network effects can also occur, where more users make a product less valuable
- This is commonly referred to as “congestion”
- e.g. Highway traffic, Internet congestion, radio frequency interference

Story of Long Tail



*combining infinite shelf space with real-time information about buying trends and public opinion gives rising demand of an obscure book

Long tail - Chris Anderson



- Coined by *Wired Magazine* writer Chris Anderson in 2004

Pareto



A statistical distribution or the 80:20 rule

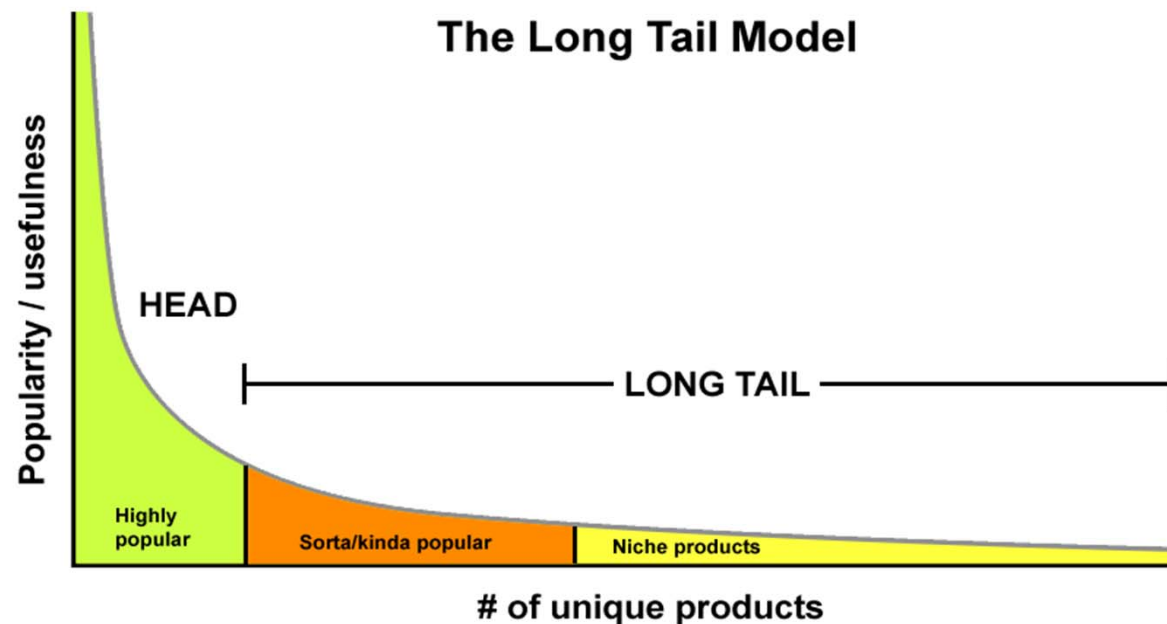
Pareto principle:

- 20% of anything produces 80% the effort
- 20% of the people own 80% of the wealth
- 80% of the total power in the planet is consumed by less than 20% of the countries
- 80% of the problems in a company are created by less than 20% of the employees

Vilfredo Federico Damaso Pareto [vil'fre:do pa're:to]
(July 15, 1848, Paris – August 19, 1923, Geneva)

What is Long Tail ?

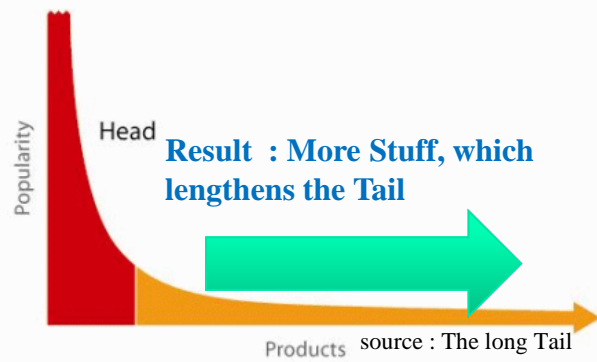
Products that are low demand or have low sales volume can collectively make up a market share that rivals or exceeds the relatively few current best sellers and block busters, if the store or distribution channel is large enough.



<http://slymarketing.com/great-example-long-tail-marketing>

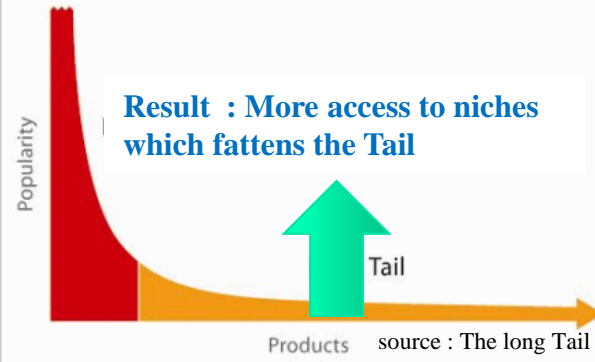
Long Tail and Web 2.0

Democratize the tools of production



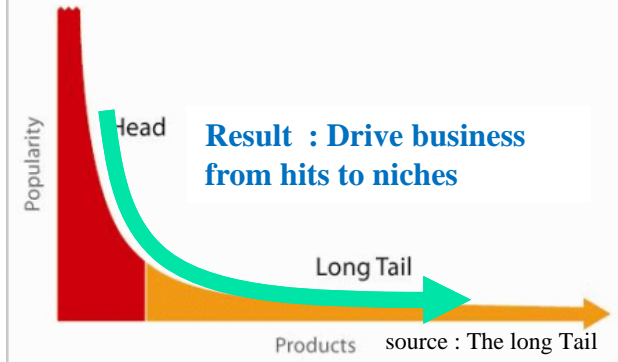
- Everyone is able to make their own content
- The traditional line between producers and consumers has blurred.
- Examples
 - ✓ Personal Computer
 - ✓ Apples Garage band,
 - ✓ Astronomy's Pro-Am movement
 - ✓ Wikipedia peer production

Democratize the tools of distribution



- Every one can distribute their own content
- Examples
 - ✓ Internet newspaper
 - ✓ Lulu.com ->Self distribution site
 - ✓ CNN i-report

Connect supply and demand



- Directly connect supply and demand efficiently
- Lower the search cost, minimize hassle, wrong turns
- Explore unknown together
- Examples
 - ✓ Google wisdom-of-crowds
 - ✓ Amazon recommendations
 - ✓ customer review

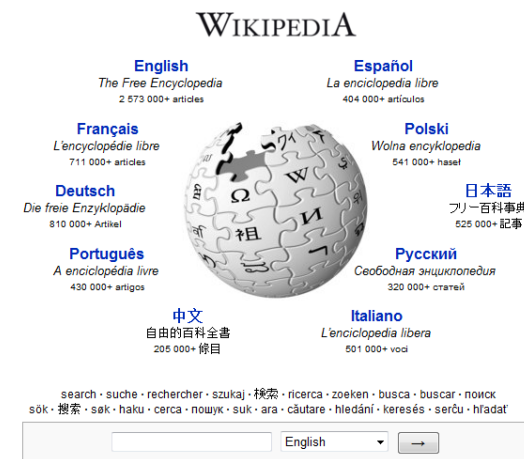
Examples: Democratize the tools of production

Astronomy's Pro-Am movement

- GalaxyZoo.org : Cosmologist Kate Land of the University of Oxford and her team are asking for help in classifying galaxies from the Sloan Digital Sky Survey, the largest digital map of the universe
- SETI@Home : search for extraterrestrial intelligence at home, using the spare computing power of more than half million home computers
- Astronomy has a natural place for volunteer manpower

❖ The Wikipedia : Peer production – mass volunteerism and amateurism

- In 2001, a software application Wiki allows anybody with Web access to go to a site and edit, delete or add to digital encyclopedia.
- Wikipedia offers more than 1million articles in English (Britannica's 80,000, Encarta's 4,500)
- Non-authoritative, But self-repairing, up-to-date, substantive and accurate



Examples: Democratize the tools of distribution

Lulu.com : DIY publisher



- Not for the money, but for distributing your message. Use it for reputation.
- The traditional line between producers and consumers has blurred

Amazon. com : Inventory on Demand

- Virtually connect centralized supply with scattered demand
- Print-on-demand : The idealized form books staying as digital files until customers are purchase Near-zero inventory cost



Amazon Muscles Print-On-Demand Services

by Duncan Riley on March 27, 2008

40 Comments

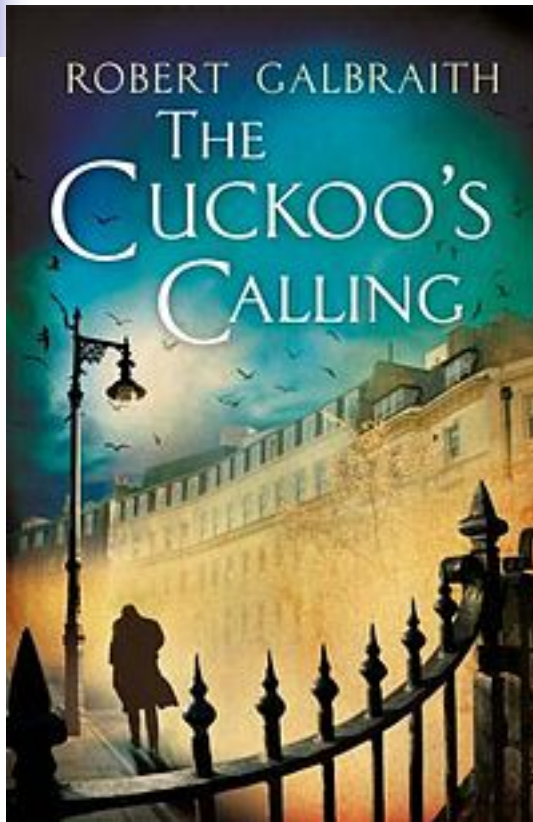
Amazon has announced that it will only sell print-on-demand books printed by its own print-on-demand service BookSurge.



The print-on-demand book business has thrived in the last few years as players such as [Lulu](#), [Blurb](#) and others have catered to publishers looking to reduce overhead on inventory. It will be very difficult for anyone to compete with Amazon in the print-on-demand space.

The decision may also cause book prices to rise with the Wall Street Journal [reporting](#) that Amazon BookSurge prices are higher than other print-on-demand providers.

Exception to the rule ?



- This book by a first time author received almost universal critical acclaim but sold only 1,500 copies and was listed at 4,709th at Amazon best selling list when it was released in April 2013



- The book surged to 1st best selling novel on Amazon after it was revealed on 14 July 2013 that the book was written by Rowling under the pseudonym "Robert Galbraith".