

Hearing #3 on Competition and Consumer Protection in the 21st Century

George Mason University
Antonin Scalia Law School
October 15, 2018



Welcome

Henry Butler

George Mason University
Antonin Scalia Law School



Introductory Remarks

Commissioner Rohit Chopra
Federal Trade Commission



The Economics and Network Effects of Multi-Sided Platforms

Derek Moore

Federal Trade Commission
Office of Policy Planning



The Economics of Multi-Sided Platforms

David Evans

Global Economics Group



BlaBlaCar Increases Efficiency by Matching Drivers and Passengers and Filling Empty Seats

Density of drivers and passengers between cities for liquidity.

Matching of riders and passengers including making pleasant trip.



BlaBlaCar connects drivers and passengers for long road trips, such as Paris to Barcelona.

Price to passengers capped to cover driver's gas and depreciation.

Increases driver and passenger welfare.

Lots of These Kinds of “Matchmakers” That Connect Different Types of Users



Rank	Company	Key Platform
1	Apple	iOS
2	Amazon	Marketplace
3	Alphabet	Search
4	Microsoft	Windows
5	Berkshire	
6	Facebook	Facebook
7	Alibaba	Taobao
8	Tencent	WeChat
9	JPMorgan	
10	Johnson & Johnson	

7/10 largest publicly traded companies in the world operate substantial multisided platforms, as of 9/18.

Very Old Business Model, But New Economic Learning That Began Around 2000 Provides Insights

Key foundational theory papers

- ❑ Rochet and Tirole (JEEA, 2003; Rand Journal 2006);
- ❑ Armstrong (Rand Journal, 2006);
- ❑ Weyl (American Economic Review, 2010).

Hundreds of articles, dozens of books. For surveys:

- ❑ Rysman, Journal of Economic Perspectives, 2009;
- ❑ Evans-Schmalensee, Matchmakers: New Economics of Multisided Platforms, 2016.

PLATFORM COMPETITION IN TWO-SIDED MARKETS

Jean-Charles Rochet
Université de Toulouse,
Institut D'Economie Industrielle

Jean Tirole
Institut D'Economie Industrielle,
Centre d'Etudes et de Recherches en
Analyse Socio-Economique

Abstract

Many if not most markets with network externalities are two-sided. To succeed, platforms in industries such as software, portals and media, payment systems and the Internet, must "get both sides of the market on board." Accordingly, platforms devote much attention to their business model, that is, to how they court each side while making money overall. This paper builds a model of platform competition with two-sided markets. It unveils the determinants of price allocation and end-user surplus for different governance structures (profit-maximizing platforms and not-for-profit joint undertakings), and compares the outcomes with those under an integrated monopolist and a Ramsey planner. (JEL: L5, L82, L86, L96)

1. Introduction

Buyers of video game consoles want games to play on; game developers pick platforms that are or will be popular among gamers. Cardholders value credit or debit cards only to the extent that these are accepted by the merchants they patronize; affiliated merchants benefit from a widespread diffusion of cards among consumers. More generally, many if not most markets with network externalities are characterized by the presence of two distinct sides whose ultimate benefit stems from interacting through a common platform. Platform owners or sponsors in these industries must address the celebrated "chicken-and-egg problem" and be careful to "get both sides on board." Despite much theoretical progress made in the last two decades on the economics of network externalities and widespread strategy discussions of the chicken-and-egg problem, two-sided markets have received scant attention. The purpose of this paper is to start filling this gap.

The recognition that many markets are multisided leads to new and interesting positive and normative questions. Under multisidedness, platforms must choose a price structure and not only a price level for their service. For example, video game platforms such as Sony, Sega and Nintendo make money on game

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Two-Sided Platforms, Transactions Costs, and Externalities



Platforms Emerge to Reduce Frictions Between Possible Partners

- ◆ Drivers have spare capacity, passengers would like a ride.
- ◆ Marketers willing to pay more to deliver an ad than viewers willing to pay to receive it.
- ◆ Single men and single women would like romantic partners.
- ◆ Buyers and sellers need common method of payment.



“When Fred was trying to get home to his family in the French countryside for Christmas 2003, he struggled as he had no car and all the trains were full. After begging his sister to pick him up, it was on the road when Fred noticed the sheer number of people driving alone. It hit him that all those empty seats in existing cars could be the beginning of a new travel network.”

Existence of a “transaction-cost problem” is a necessary condition for two-sided platform. (Rochet-Tirole (2003)).

Externalities Create Welfare Interdependencies Among Platform Participants

- ◆ Positive indirect network externalities:
 - more of the “right” counterparties increases likelihood of good exchange;
 - scale + density = liquidity.
- ◆ Negative externalities:
 - congestion can create friction on same or different side;
 - higher ad loads reduce viewer value;
 - people don’t like strange people in their cars.
- ◆ Behavioral externalities that typically affect communities and interactions:
 - fraud and deception involving trade;
 - gross stuff like porn;
 - bad stuff like verbal or physical violence.

Managing externalities among participants central to what platforms do. Very different from other firms.



Platform Addresses Externalities Through ... Pricing and Terms of Trade

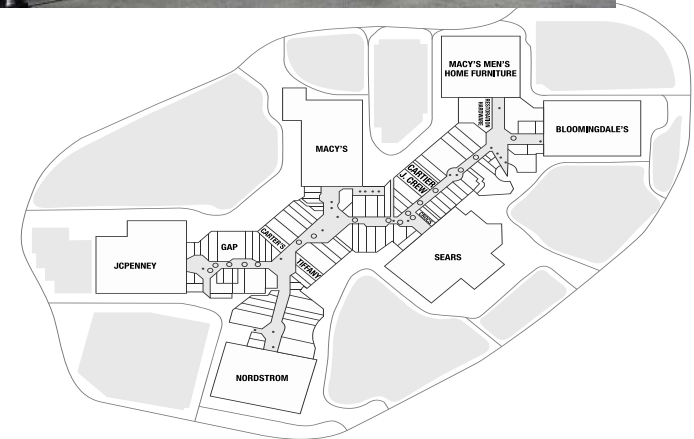
- ◆ Pricing structures to increase density of good trading partners and other externalities
 - Der Spiegel reader price determines density of readers for advertisers, advertiser price determines ad load, which may affect readership, which affects ad prices.
- ◆ Non-pecuniary payments such as content, rewards
 - Der Spiegel ~140 pages of content attracts “male, educated with high income” readers, which is what it markets to advertisers.



Platforms can charge membership fees (e.g. annual fee for cardholders) and transaction fees (e.g. merchant fees for card transactions).

Platform Address Externalities Through ... Platform Design

- ◆ Design features that facilitate matching like how content is bundled.
- ◆ Technology features like matching algorithms, search technologies.
- ◆ Business design like liquidity maker institution for exchanges.



Physical and virtual platforms designed to facilitate interactions among members of the two groups to help them make good exchanges.



Platform Addresses Externalities Through ... Rules, Governance

- ◆ Behavioral rules for interactions—do's and don'ts of platform behavior.
- ◆ Detection mechanisms for violations—people and software for finding violations.
- ◆ Penalties for violating rules—including permanent and temporary exclusion.



Apple App Developer Guidelines: “If you attempt to cheat the system (for example, by trying to trick the review process, steal user data, copy another developer's work, or manipulate ratings) your apps will be removed from the store and you will be expelled from the Developer Program.”

Governance systems common feature of multisided platform businesses.



Putting It All Together With ... BlaBlaCar

- Passengers want access to more drivers, and drivers want access to more passengers.
- But only if they are paid for having strangers in their cars.
- Pricing structure caps fees as driver cost which tends to eliminate professional drivers but also reduces incentives to drive.
- Platform reduces negative externalities and facilitates matching by among other things asking participants how chatty they like to be (“bla, bla bla, or bla bla bla”).
- Relative value proposition ultimately sufficient to get density of drivers and passengers on enough city pairs.

Now in 22 countries, 60 million driver passenger users, 18 million travelers per quarter.



“...Ladies Only... It's a great way for women to feel even safer.”

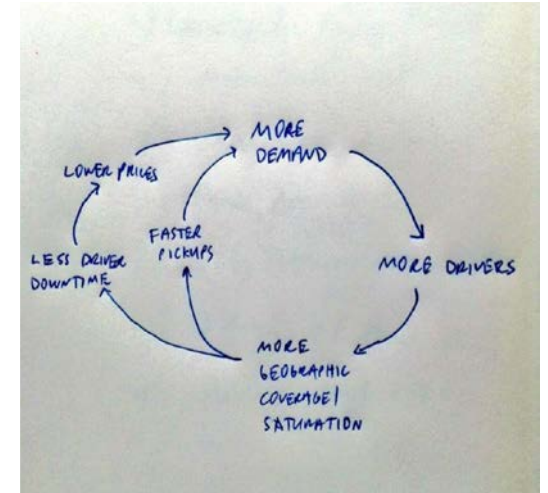


Basic Economics of Two-Sided Platforms



Platform Connects Two Groups with Indirect Network Effects to Reduce Transactions Costs and Facilitate Exchange

- ◆ Platform is intermediary:
 - ❑ that connects two types of users (“sides”);
 - ❑ to help them make good exchanges (or have good interactions);
 - ❑ by reducing transactions costs between them.
- ◆ Platform has “indirect network externalities”:
 - ❑ demand by at least one type of user depends on demand for other type because possible gains depend on presence of other type;
 - ❑ users on one side benefit from having access to more users on the other side.
- ◆ Platform internalizes these externalities and thereby increases surplus through more and better interactions.



Profit-Maximization Accounts for Interdependent Demand between Types

- ◆ Standard models makes demand for each type depend on depend for other types:
 - ❑ vary in how they do that (Rochet-Tirole (2003, 2006), Armstrong (2006), Weyl (2010).)

$$\Pi = (P_1 - C_1)D_1(P_1, Q_2) + (P_2 - C_2)D_2(P_2, Q_1) \quad \text{Armstrong Model (2006)}$$

- ❑ this interdependent demand is key feature of two-sided platforms with significant implications for economics and business; lots of other nuances.
- ◆ Profit-maximization requires determining “pricing structure” in addition to “pricing level”:
 - ❑ “pricing structure” refers to *relative* prices charged to different sides;
 - ❑ “pricing level” refers to total prices realized from users;
 - ❑ general models have access prices and transaction prices for each side.
- ◆ This interdependent demand is key feature of two-sided platforms with significant implications for economics, business, antitrust:
 - ❑ feedback loops between two-sides involving prices, demand;
 - ❑ lots of nuances to theory; lots of differences across businesses.



Robust Economic Theory Leads to Novel Pricing Result Confirmed by Empirical Evidence

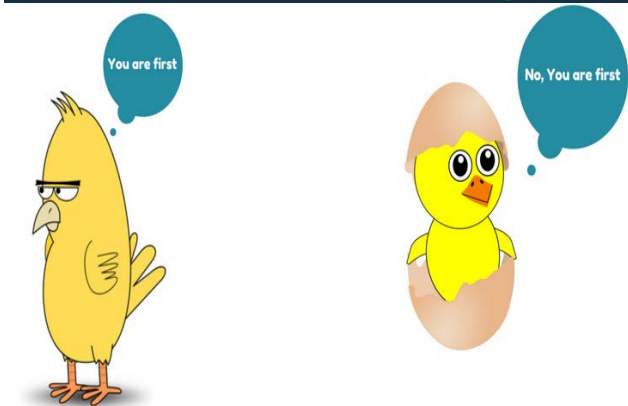
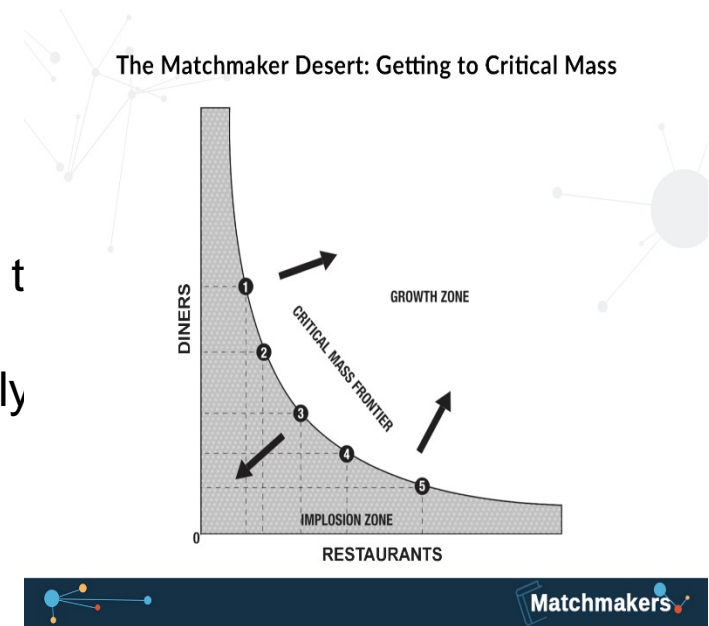
- ◆ Profit-maximizing price could be less than marginal cost on one side as a matter of theory:
 - ❑ including zero price (“free”) and negative price (“rewards”) on one side;
 - ❑ loses on “subsidy” side made up with profits on “money” side;
 - ❑ result fundamentally different than traditional economic models where $p > MC$.
- ◆ Below-cost pricing common empirically:
 - ❑ common for platforms to charge less than marginal cost (e.g. print magazines);
 - ❑ free to one side frequent business model (e.g., online media);
 - ❑ reward to one side sometimes (e.g., credit cards).



Platforms sometimes have more than two sides; results extend to these cases as well. At least one side needs to make money.

Economic Theory Shows Importance of “Critical Mass”

- ◆ Platform provides value to members of group only if it can provide access to enough members of the other group:
 - ❑ platforms need to have enough participants on both sides, and the right proportion of participants to provide value;
 - ❑ participant on side will incur cost of joining and participating only they expect to make enough good exchanges to make it worth their while;
 - ❑ need for critical mass well-known issue in older literature on indirect network effects but key to platform businesses.
- ◆ Leads to “chicken-and-egg” problem for new platforms:
 - ❑ how can platform get members of one group to participate if they don't have the other?
 - ❑ empirically this turns out to be an important aspect of platform startups.



WHO IS FIRST FOR YOUR MARKETPLACE?

Economic Theory Shows Relevance of Use of Multihoming

- ◆ Whether participants on one side use just one or several platforms to access participants on the other side affects pricing and competition:
 - ❑ “single-homing” on one platform by one side means that the only way the other side can reach participant is to also use that platform; (e.g. people use only one mobile operating system usually).
 - ❑ “multihoming” on platforms by one side means that the other side could use several platforms to reach that user (e.g. people use several ad-supported media).
 - ❑ Implies that competition can be intense for single-homing customers.

- ◆ Some implications:
 - ❑ competition can be intense for single-homing customers;
 - ❑ platform can be bottleneck for access single-homing customers;
 - ❑ lots of nuances to theory and empirics though, and really depends on facts of business.



Key Features of Platforms That Can Be Used for Definitional Purposes

Key features require a transaction cost problem for which a two-sided platform is a feasible solution:

- two distinct types of customers for whom valuable interaction is possible;
- frictions that make efficient interactions difficult to arrange;
- platform facilitates connections between those customers;
- participation of members of at least one group depends on the participation of the other group so it makes sense to aggregate on a platform.

For economists it usually comes down to whether a businesses connects two different types of customers for which there is sufficiently strong interdependent demand that it matters.



Some Pointers on the Scope of Two-Sided Platforms

- ❑ Ad-supported media are two-sided platforms; modern theory analyzes as two-sided (Anderson & Gabszewicz (2006)) and lots of great empirical papers in this area.
- ❑ Members of two groups could be different for purpose of transaction but could be same economic agents. Often the case for send-receive platforms, sharing, and marketplaces.
- ❑ Rochet-Tirole (2006) suggested that for a platform to be two-sided platform output needed to depend on price structure; price structure affects output when there are indirect network effects assuming arbitrage between parties can't prevent platform from using price structure--so price/output effect is implication of being a two-sided platform rather than a defining characteristic.



Not Just Complements, Not Just Everything

◆ Two-sides aren't mere complements for which we can rely on existing theory:

- ❑ complements usually sold to same customer (gas and tires) while platform is serving different customers (drivers, passengers) at least for purpose of that interaction;
- ❑ complements often sold by different firms (gas stations, tire stores) while platform usually has provide services to both types of customers to provide a service to either.

◆ Doesn't say every business or even every intermediary is a multisided platform:

- ❑ many “traditional” businesses don't connect two sides, lack material indirect network effects between customers;
- ❑ two-sided theory has predictions on business behavior that apply to two-sided firms but not to traditional firms.



Sells gas



Sells tires



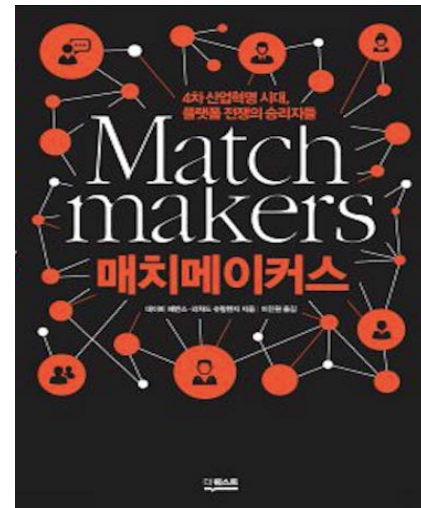
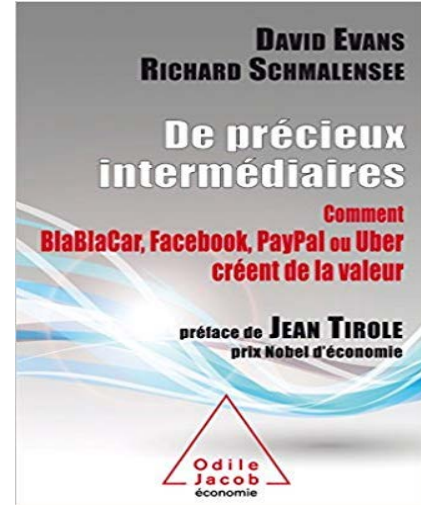
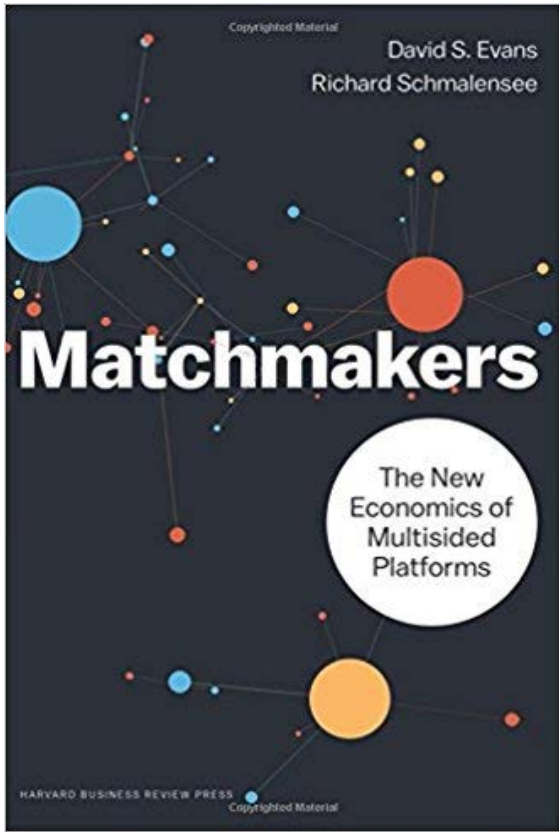
Sells connections

But Increasingly Common

Multisided platforms are increasingly “commonplace” as a result of

- technological change particularly in computer processing, Internet, software platforms, mobile, cloud;
- Which has resulted in the creation of many multisided platforms and enabled some to quickly scale globally;
- many new platforms are replacing fragmented platforms based on old technology.





Network Effects in Multi-Sided Platforms: Platform Competition

Catherine Tucker

Massachusetts Institute of Technology

Sloan School of Management



Agenda

1. What are Network Effects?

2. Breaking into Platform Markets



Network Effects

- Describes the value that users obtain from other users on the platform



Different Network Effects

- Same-Side (Direct) Network Effects





Same-Side Network Effects

Different Network Effects

- Cross-Side (Indirect) Network Effects



LINUX





















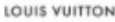





Cross-Side Network
Effects: Technology



Freedom. Choices. Beautiful.



Cross-Side Network
Effects: Marketplace

01  +3% 184,154 \$m	02  +6% 141,703 \$m	03  +10% 9,999 \$m	04  -5% 6,763 \$m	05  +29% 64,796 \$m TOP GROWING 	06  +9% 56,249 \$m	07  -6% 50,291 \$m	08  +48% 48,188 \$m TOP GROWING 
09  +10% 47,829 \$m	10  -11% 46,829 \$m	11  +3% 1,218 \$m	12  +5% 1,515 \$m	13  0% 1,521 \$m	14  +5% 10,770 \$m	15  +7% 39,459 \$m	16  +3% 31,930 \$m
17  +3% 27,466 \$m	18  +8% 27,021 \$m	19  -4% 22,919 \$m	20  +3% 22,696 \$m	21  +6% 22,635 \$m	22  +1% 20,491 \$m	23  -10% 20,488 \$m	24  +11% 18,573 \$m

Everyone wants to be a platform:
Make definitions tricky



First Challenge: 'Tipping'

- Usefulness depends on participation



Second Challenge: 'Coring'

- Usefulness depends on platform ensuring participants behave well



Agenda

1. What are Network Effects?

2. Entry into Platform Markets



Customer Decision

- $NetworkBenefits + StandAloneBenefits - Price \geq 0$



Agenda

2. Breaking into Platform Markets

2.1 3 Drivers of Strength of Network Effects

2.2 Alternative Strategies For Entry



Driver 1: Scope of Network Effects

- Do consumers want to interact with everyone?
Personalization?
- Can people anticipate who they will want to interact with?





My Dissertation



City, zip, address or school



PARENTING ▾

SIGN

FEATURED

Parent Power

Podcasts

Parenting Cue Cards

Massachusetts > Belmont > Schools > School Profile

Mary Lee Burbank School

Unclaimed ?



266 School Street, Belmont, MA 02478

New! ?

9

GREATSCHOOLS RATING

REVIEWS

7 ★★★★★

Limited Regional Scope

See contact info and more



One-to-one matching
vs all-to-all matching?

Driver (1): Scope of Network Effects

- Do consumers want to interact with everyone?
Personalization?
- Can people anticipate who they will want to interact with?



Friends[®] Reunited

Social Coordination

Remember when?

Driver (2): Switching costs preventing multihoming

- How easy it is for users to use multiple platforms at the same time?
- Shift towards cloud and digital tools reduces switching costs and increases multihoming



A close-up photograph of a car's hood, showing two logos. The top logo is a silver 'U' inside a square frame. Below it is a red logo with the word 'Lift' in white script. The car's body is dark and highly reflective, showing distorted reflections of the logos and the surrounding environment. A semi-transparent dark grey box with white text is overlaid on the center of the image.

How easy is multihoming?

Driver (3): Negative Network Effects

- Too many users can lead to congestion
- Some users can make the platform look uncool





We made bitcoin
uncool at MIT

Agenda

2. Breaking into Platform Markets

2.1 3 Drivers of Strength of Network Effects

2.2 Alternative Strategies For Entry



Alternative Strategies

- Can the product offer independent benefits?
- Some firms enter with zero prices and then can't raise prices because customers are anchored.





Insta

Standalone benefits:
Can be simple

Alternative Strategies

- Can the product offer independent benefits?
- Some firms enter with zero prices and then can't raise prices because customers are anchored.





Zero prices persist
Difficult \uparrow prices later.

Punchline

- Platforms: Network effects but also ‘coring’
- Network Effects \neq number of users
 - The combination of size and network effects may not always be an anti-trust problem
- Digitization facilitates multi-homing and intensifies competition
 - The right question is still one of switching costs



Break

10:10-10:20 am



The Current Economic Understanding of Multi-Sided Platforms

Session moderated by:

John M. Yun

George Mason University
Antonin Scalia Law School



The Current Economic Understanding of Multi-Sided Platforms

Marc Rysman
Boston University
Department of Economics



The Current Economic Understanding of Multi-Sided Platforms

Katja Seim

University of Pennsylvania
Wharton School



The Current Economic Understanding of Multi-Sided Platforms

Joseph Farrell

University of California, Berkeley

Department of Economics



Features or Definitions?

- Network effects
- The ghost of departed quantities
- Discretion in pricing pattern—market power??



So What?

- Network effects, like other economies of scale, set the stage for possible competition problems but not the end of that story
- Can one focus on total price versus pattern?
 - Neutralization results?
 - Balancing effects on two sides?



The Current Economic Understanding of Multi-Sided Platforms

Michael Salinger

Boston University

Questrom School of Business



The Current Economic Understanding of Multi-Sided Platforms

Howard Shelanski

Georgetown University Law Center



The Current Economic Understanding of Multi-Sided Platforms

Panel Discussion

David Evans, Joseph Farrell,
Marc Rysman, Michael Salinger,
Katja Seim, Howard Shelanski,
Catherine Tucker

Moderator: John Yun



Lunch Break

12:20-1:30 pm



Multi-Sided Platforms in Action

Session moderated by:

Jan Rybnicek

George Mason University

Antonin Scalia Law School

Freshfields Bruckhaus Deringer LLP



Multi-Sided Platforms in Action: Aggregators, Platforms, and Regulation

Ben Thompson
Stratechery, LLC





STRATECHERY

Subscriber's Daily Update

- Thursday, October 4, 2018 China's Alleged Hardware Hack, How the Attack (Allegedly) Happened, Believability and Implications
- Wednesday, October 3, 2018 Data Factories Follow-Up, Amazon's Pay Raise, Amazon Makes Hay
- Monday, October 1, 2018 Microsoft Ignite, Weaknesses To Strengths, Amazon's Device Announcements
- Thursday, September 27, 2018 WhatsApp Founder Speaks, EU Deception?, Facebook Ideology

Data Factories

Tuesday, October 2, 2018

I'm generally annoyed by the cliché "If you're not paying you're the product"; **Derek Powazek has explained** why the implications of this statement are usually misleading and often wrong, something that is particularly problematic in the context of **Aggregators**. After all, if a company's market power flows from controlling demand — that is, users — that means said company is incentivized to keep

Explore Stratechery

- Concepts
- Companies
- Topics

Who am I, and why am I here?





STRATECHERY

Aggregation Theory

Tuesday, July 21, 2015

The last several articles on Stratechery have formed an unintentional series:

- **Airbnb and the Internet Revolution** described how Airbnb and the sharing economy have commoditized trust, enabling a new business model based on aggregating resources and managing the customer relationship
- **Netflix and the Conservation of Attractive Profits** placed this commodification/aggregation concept into Clay Christensen's *Conservation of Attractive Profits* framework, which states that profits are earned by the integrated provider in a value chain, and that profits shift when another company successfully modularizes the incumbent and integrates another part of the value chain
- **Why Web Pages Suck** was primarily about the effect of programmatic advertising on web page performance, but also touched on the broader implications of the commodification of attention

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By Ben Thompson

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Who am I, and why am I here?



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2018 ANTITRUST AND COMPETITION CONFERENCE - DIGITAL PLATFORMS AND CONCENTRATION

APRIL 19–20, 2018
GLEACHER CENTER, 450 N CITYFRONT PLAZA DRIVE

About the Conference

The economic and societal role of the handful of large companies known as “digital platforms” has grown dramatically in the last decade. Google, Amazon, and Facebook are not only transforming communication, media, and retail but have the potential to transform many other industries. While they invest billions in research and development and propel important innovation, they also raise many policy questions with regard to their dominance in many markets, the vast consumer data they collect and own, and their influence on the markets for news, information, and ideas. On April 19 and 20, 2018, the Stigler Center at the University of Chicago Booth School of Business will dedicate its annual Antitrust and Competition conference to the topic of “Digital Platforms and Concentration.”



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APRIL 19–20, 2018

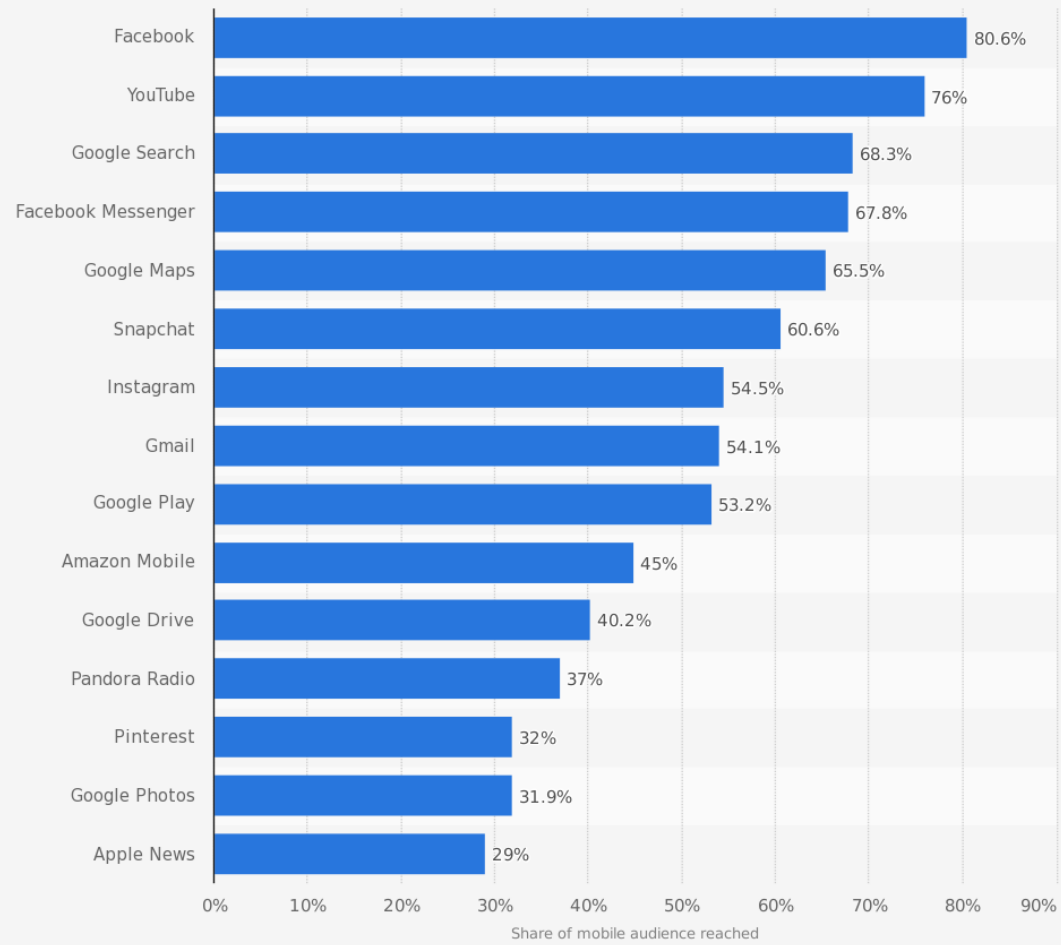
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Mobile audience reach of leading smartphone apps in the United States as of February 2018



Source
comScore
© Statista 2018

Additional Information:
United States; comScore; February 2018; 18 years and older; iOS and Android platforms

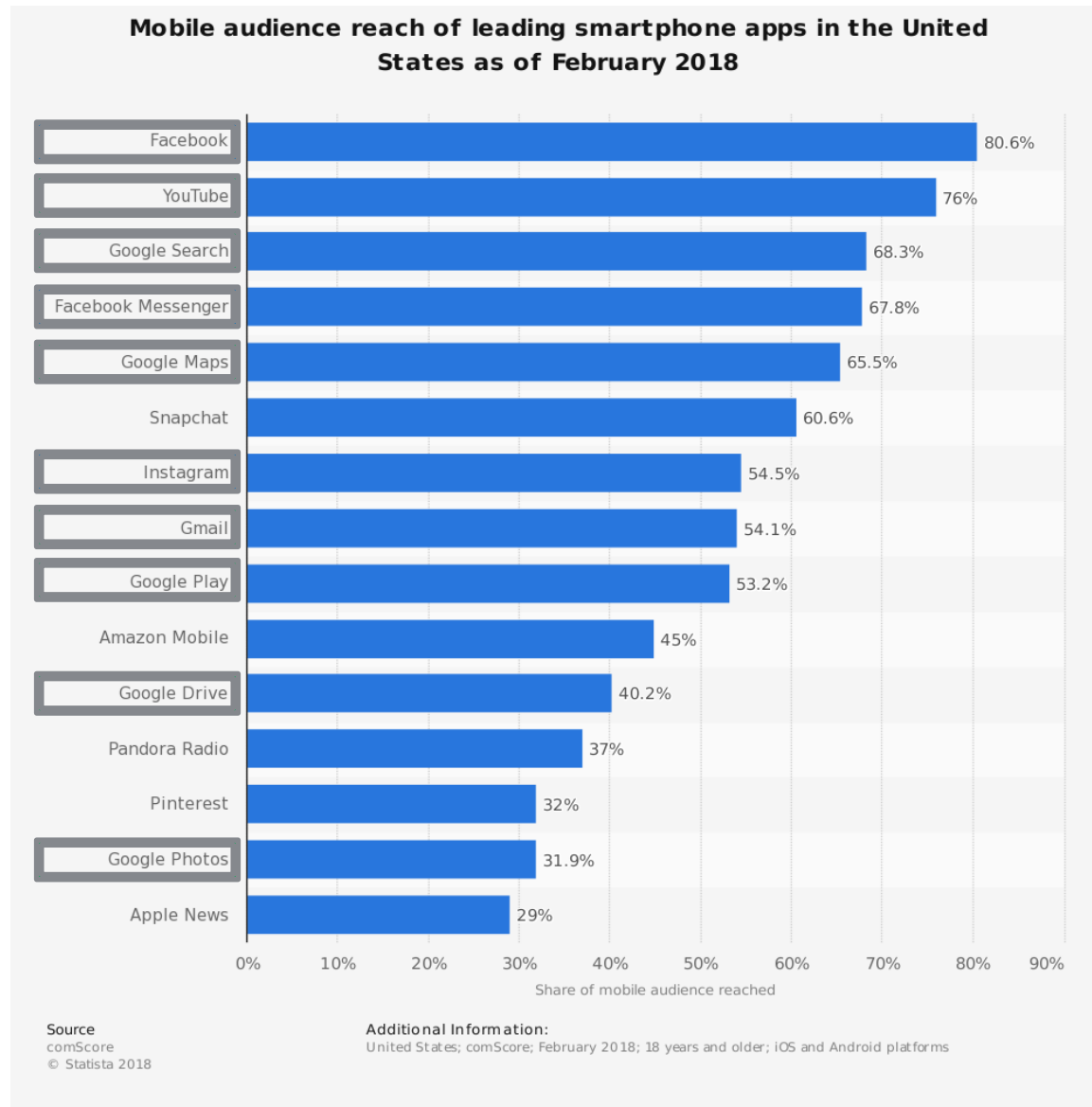


Google = 7

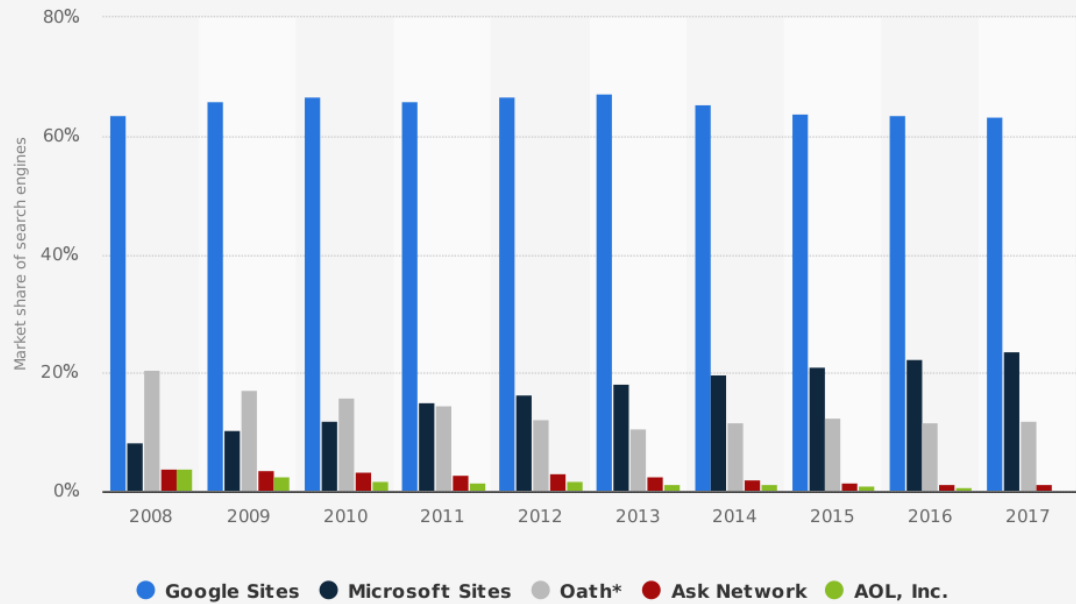
Facebook = 3

All of the top 5

8 of the top 10



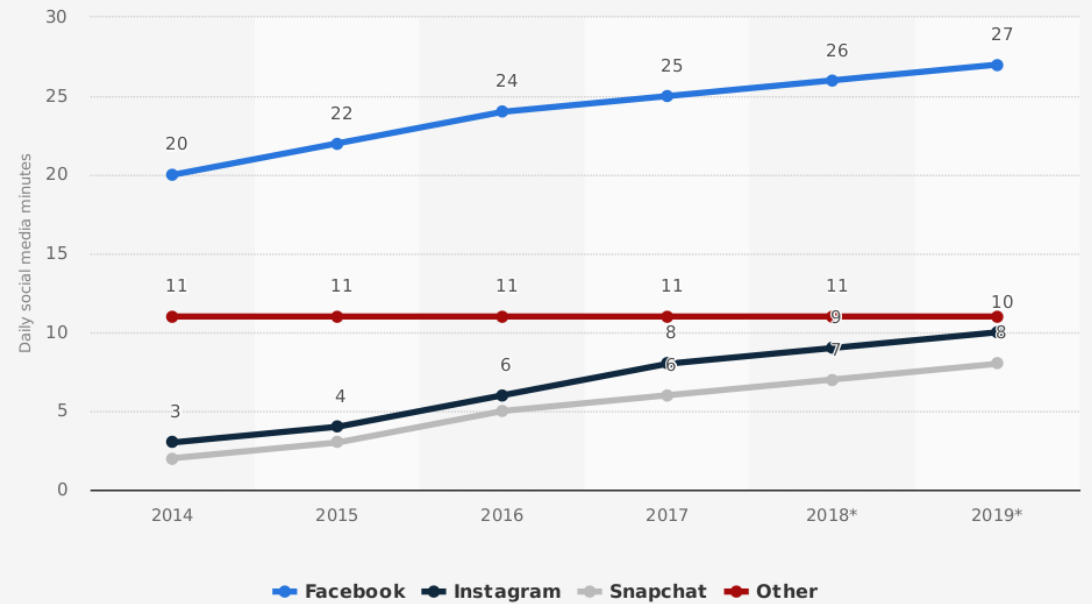
Market share of search engines in the United States from December 2008 to 2017



Source
comScore
© Statista 2018

Additional Information:
United States; comScore; December 2008 to December 2017

Average daily time spent on selected social networks by adults in the United States from 2014 to 2019 (in minutes)



Source
eMarketer
© Statista 2018

Additional Information:
United States; eMarketer; 2014 to 2017; 18 years and older; total population, not exclusively users



What is an Aggregator...

...and how is it different than a platform?



Yahoo and Google

How an Aggregator is formed



The Internet, circa 1994



1994



Yahoo

[[What's New?](#) | [What's Cool?](#) | [What's Popular?](#) | [A Random Link](#)]

[[Yahoo](#) | [Up](#) | [Search](#) | [Suggest](#) | [Add](#) | [Help](#)]

- [Art](#) (619) [new]
- [Business](#) (8546) [new]
- [Computers](#) (3266) [new]
- [Economy](#) (898) [new]
- [Education](#) (1839) [new]
- [Entertainment](#) (8814) [new]
- [Environment and Nature](#) (268) [new]
- [Events](#) (64) [new]
- [Government](#) (1226) [new]
- [Health](#) (548) [new]
- [Humanities](#) (226) [new]
- [Law](#) (221) [new]
- [News](#) (301) [new]
- [Politics](#) (184) [new]
- [Reference](#) (495) [new]
- [Regional Information](#) (4597) [new]
- [Science](#) (3289) [new]
- [Social Science](#) (115) [new]
- [Society and Culture](#) (933) [new]

There are currently 31897 entries in the Yahoo database



1996



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1998



The screenshot shows the Yahoo! homepage with the following elements:

- Navigation icons: What's New, Check Email, Personalize, Help.
- Advertisements: World Cup 98, SURPLUS DIRECT (WIN A '98 VETTE), and Yahoo! Mail (free @yahoo.com email).
- Search bar with a "Search" button and a link to "options".
- Link: [Yahoo! Games](#) - play online chess, backgammon, bridge, blackjack and more...
- Navigation links: [Yellow Pages](#), [White Pages / People Search](#), [Maps](#), [Classifieds](#), [Personals](#), [Chat](#), [Email Shopping](#), [My Yahoo!](#), [News](#), [Sports](#), [Weather](#), [Stock Quotes](#), [more...](#)
- Category links (two columns):
 - Arts and Humanities**: [Architecture](#), [Photography](#), [Literature](#)...
 - Business and Economy [Xtra!]**: [Companies](#), [Finance](#), [Employment](#)...
 - Computers and Internet [Xtra!]**: [Internet](#), [WWW](#), [Software](#), [Multimedia](#)...
 - Education**: [Universities](#), [K-12](#), [College Entrance](#)...
 - Entertainment [Xtra!]**: [Cool Links](#), [Movies](#), [Music](#), [Humor](#)...
 - Government**: [Military](#), [Politics \[Xtra!\]](#), [Law](#), [Taxes](#)...
 - Health [Xtra!]**: [Medicine](#), [Drugs](#), [Diseases](#), [Fitness](#)...
 - News and Media [Xtra!]**: [Current Events](#), [Magazines](#), [TV](#), [Newspapers](#)...
 - Recreation and Sports [Xtra!]**: [Sports](#), [Games](#), [Travel](#), [Autos](#), [Outdoors](#)...
 - Reference**: [Libraries](#), [Dictionaries](#), [Phone Numbers](#)...
 - Regional**: [Countries](#), [Regions](#), [U.S. States](#)...
 - Science**: [CS](#), [Biology](#), [Astronomy](#), [Engineering](#)...
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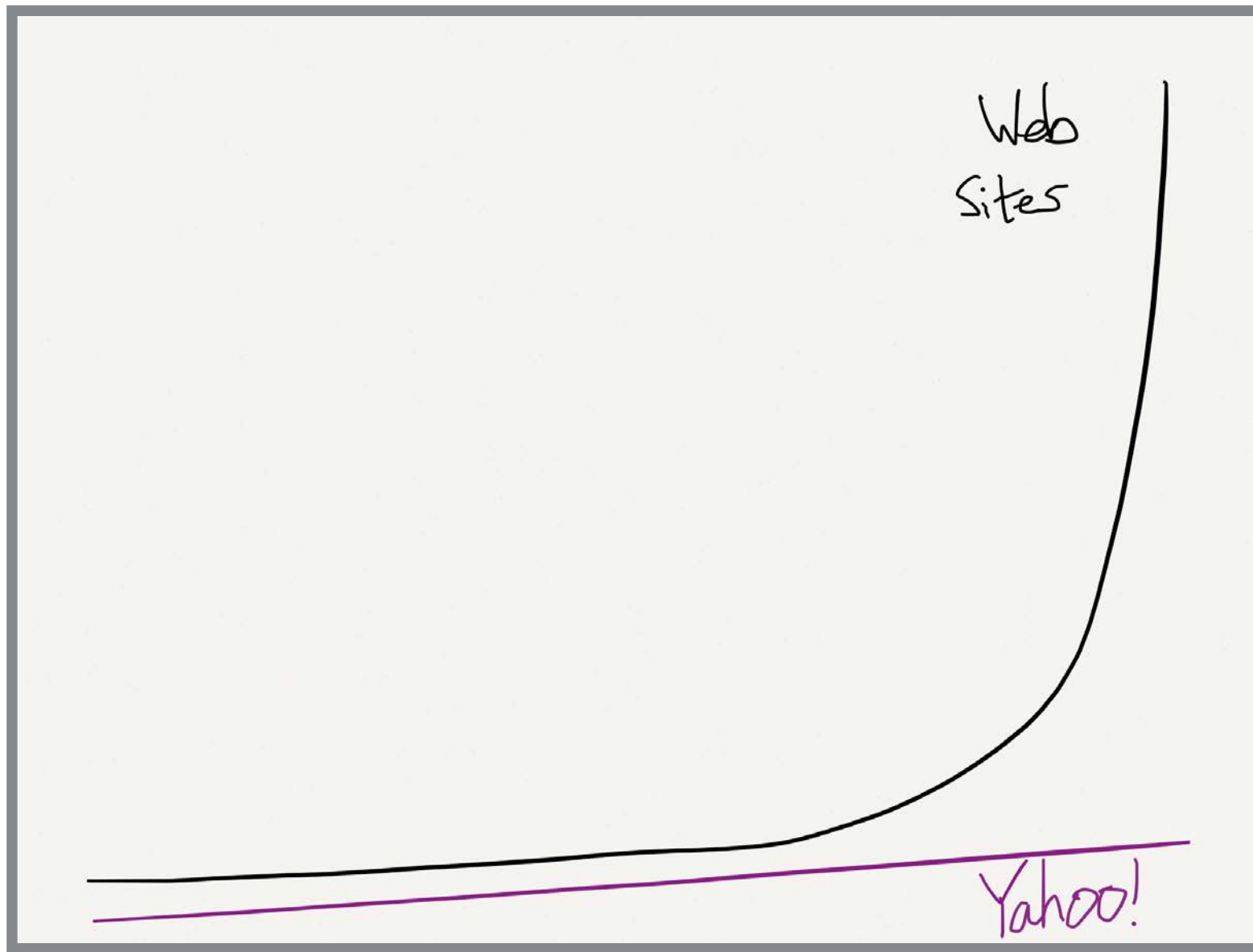
Smart Shopping with

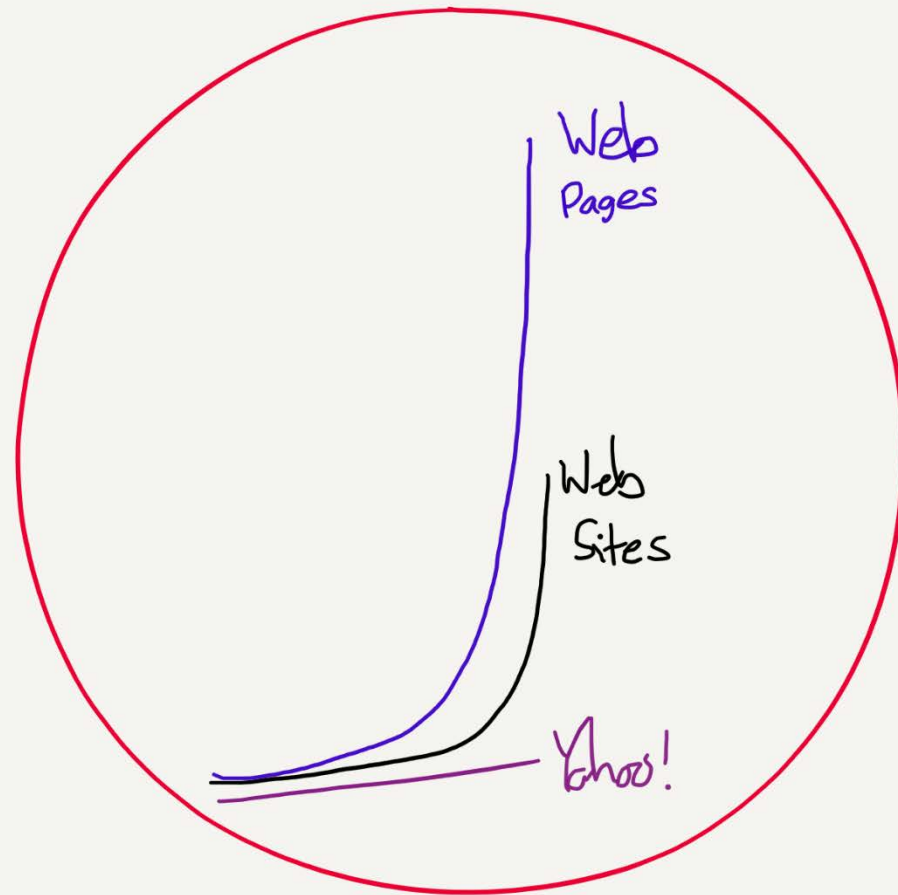
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Google

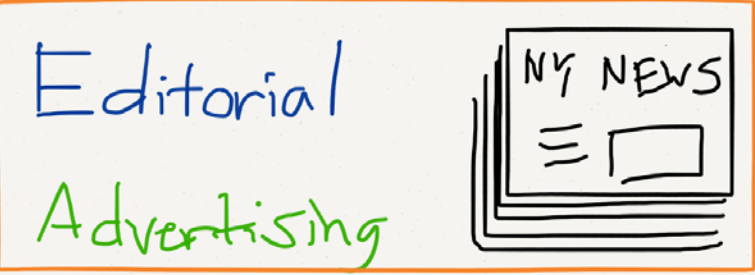
Google Search

I'm Feeling Lucky

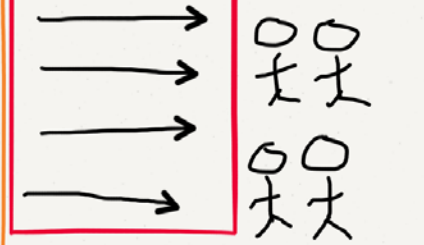
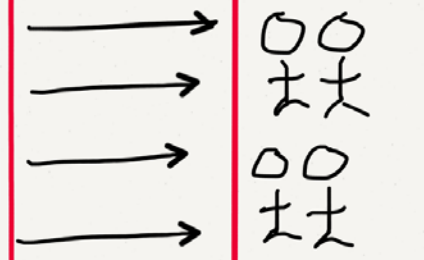
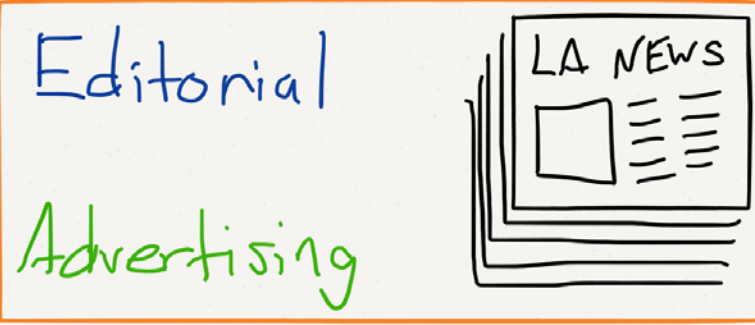
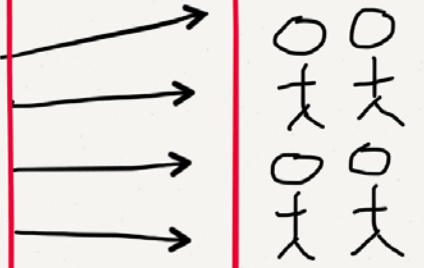


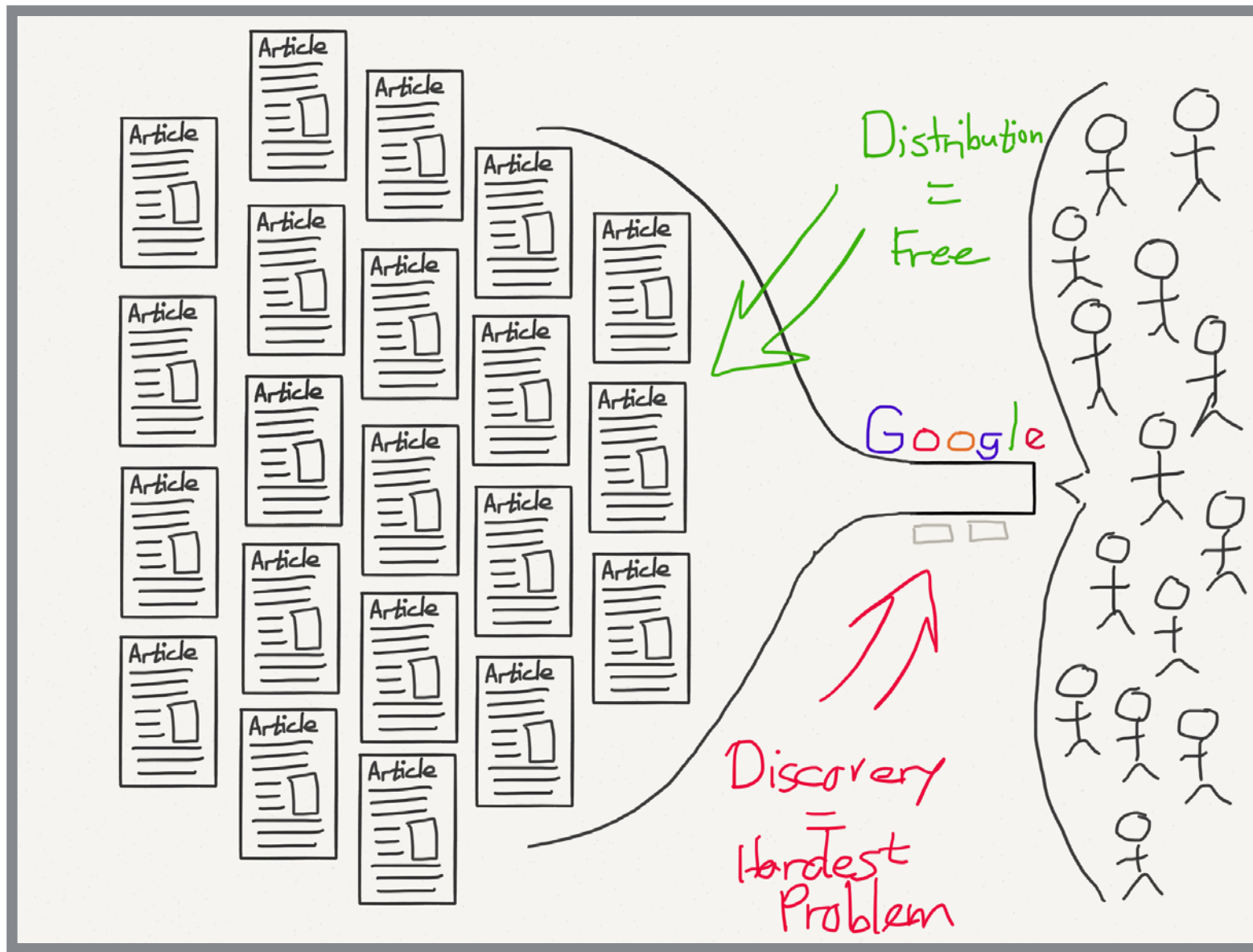


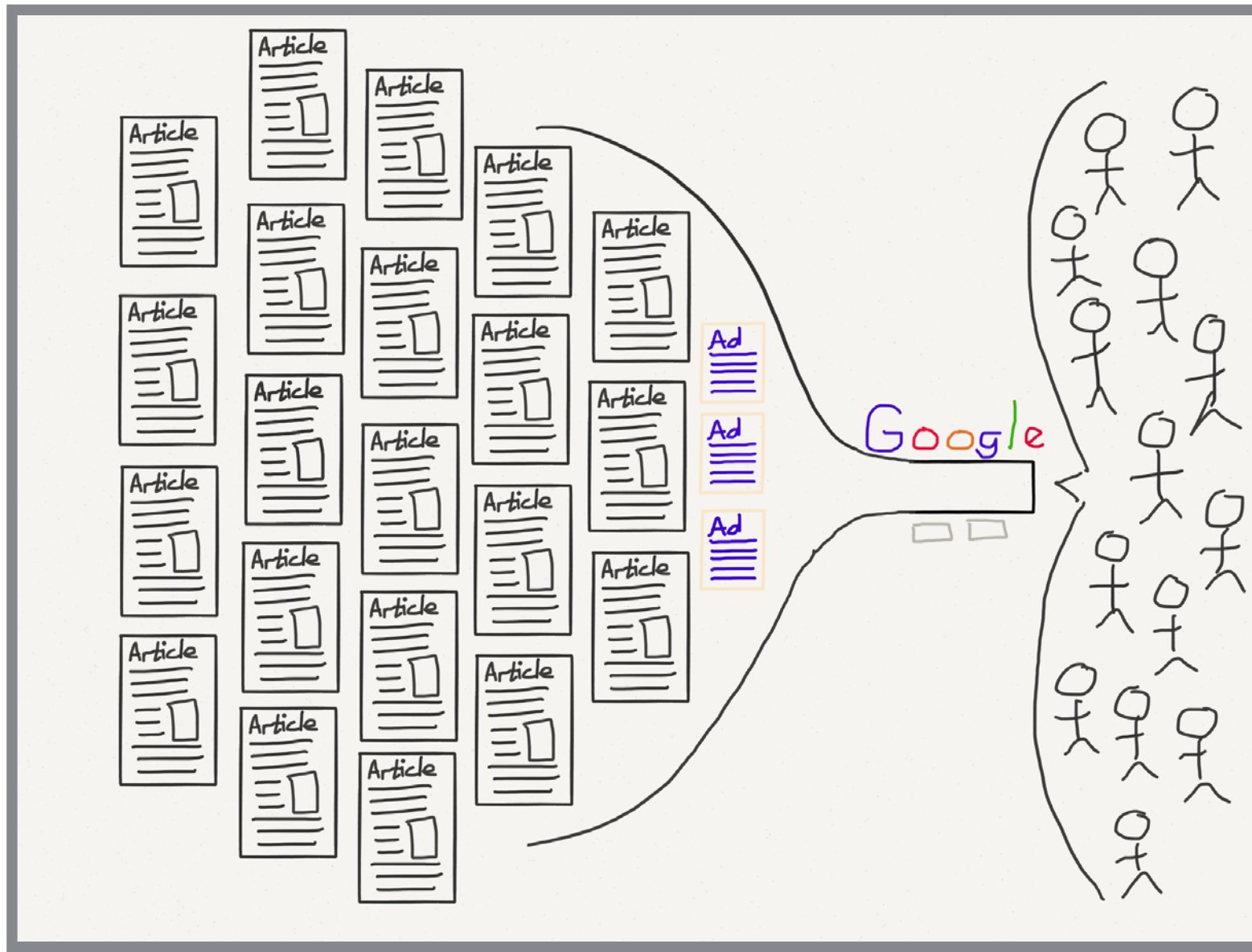
Integrated = Valuable



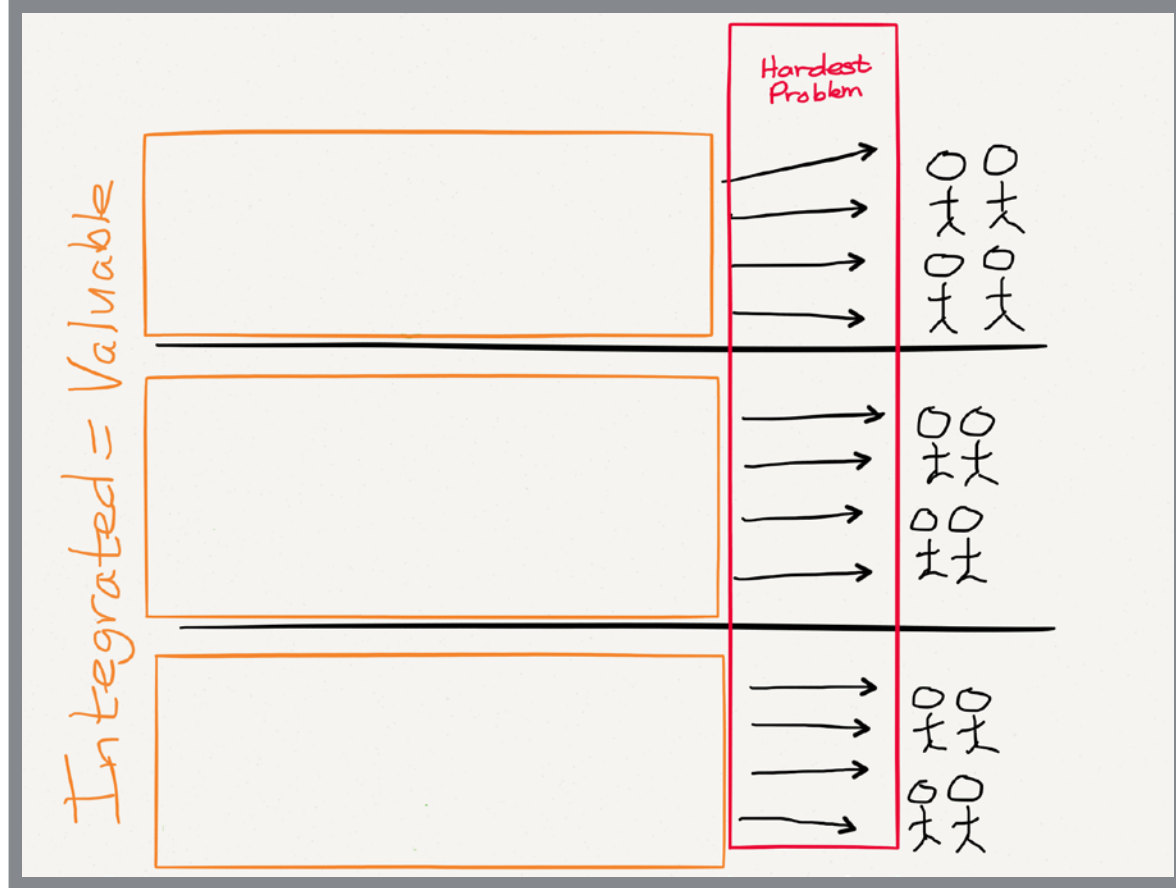
Distribution = Hardest Problem



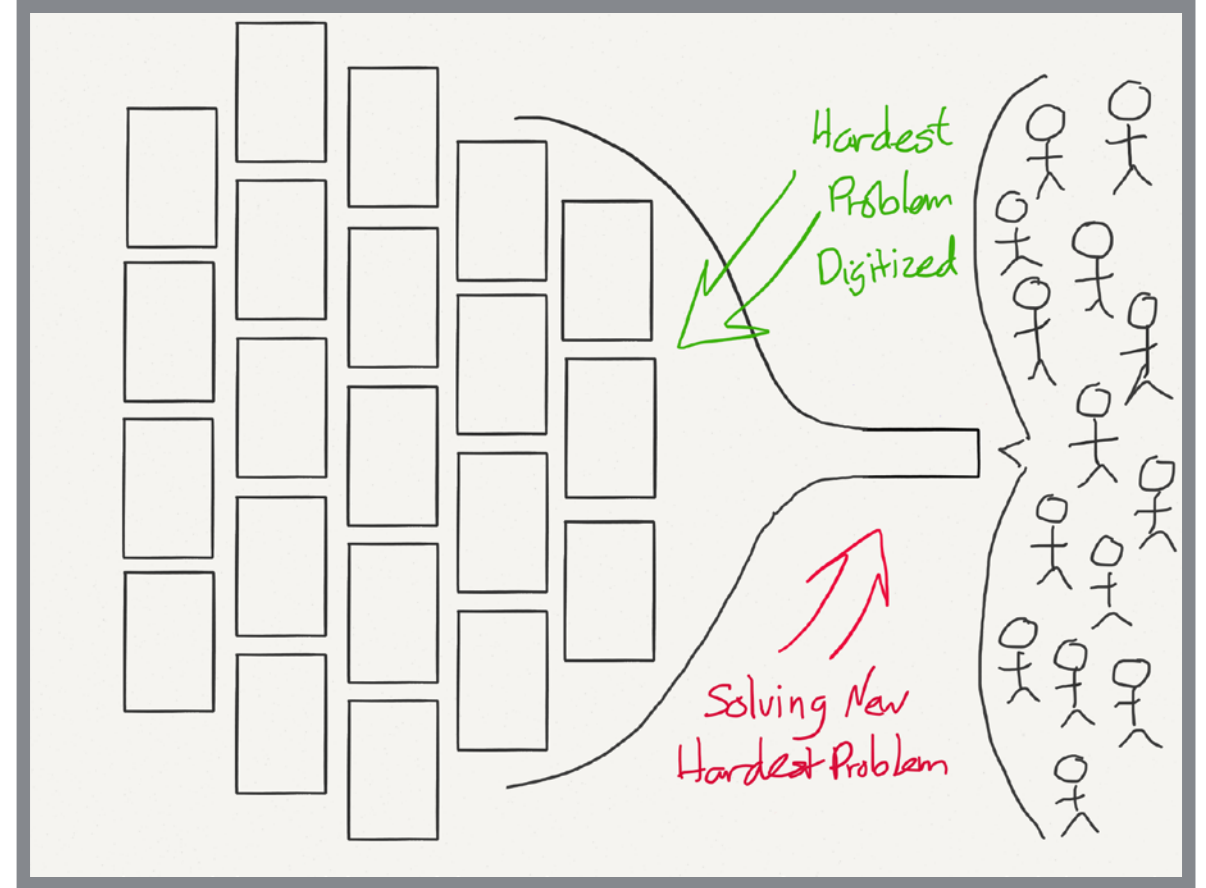




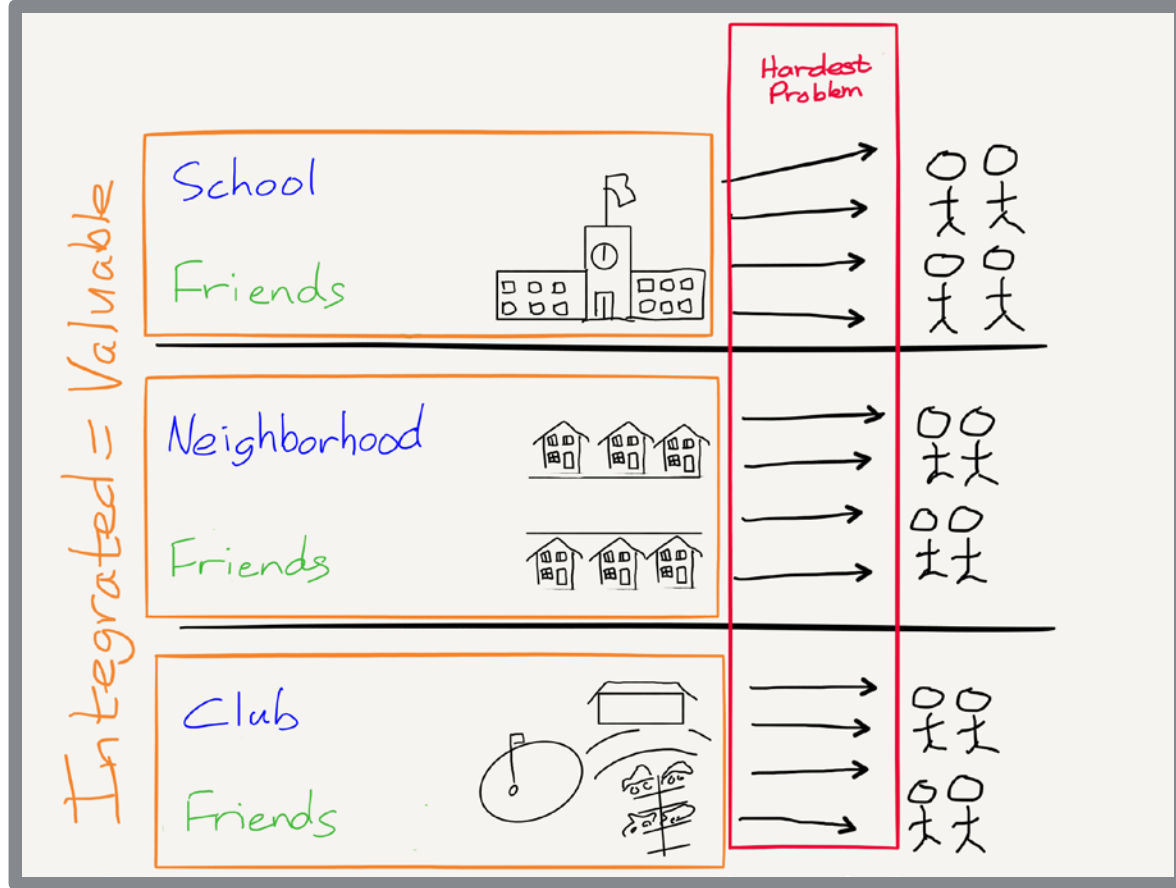
Pre-Internet



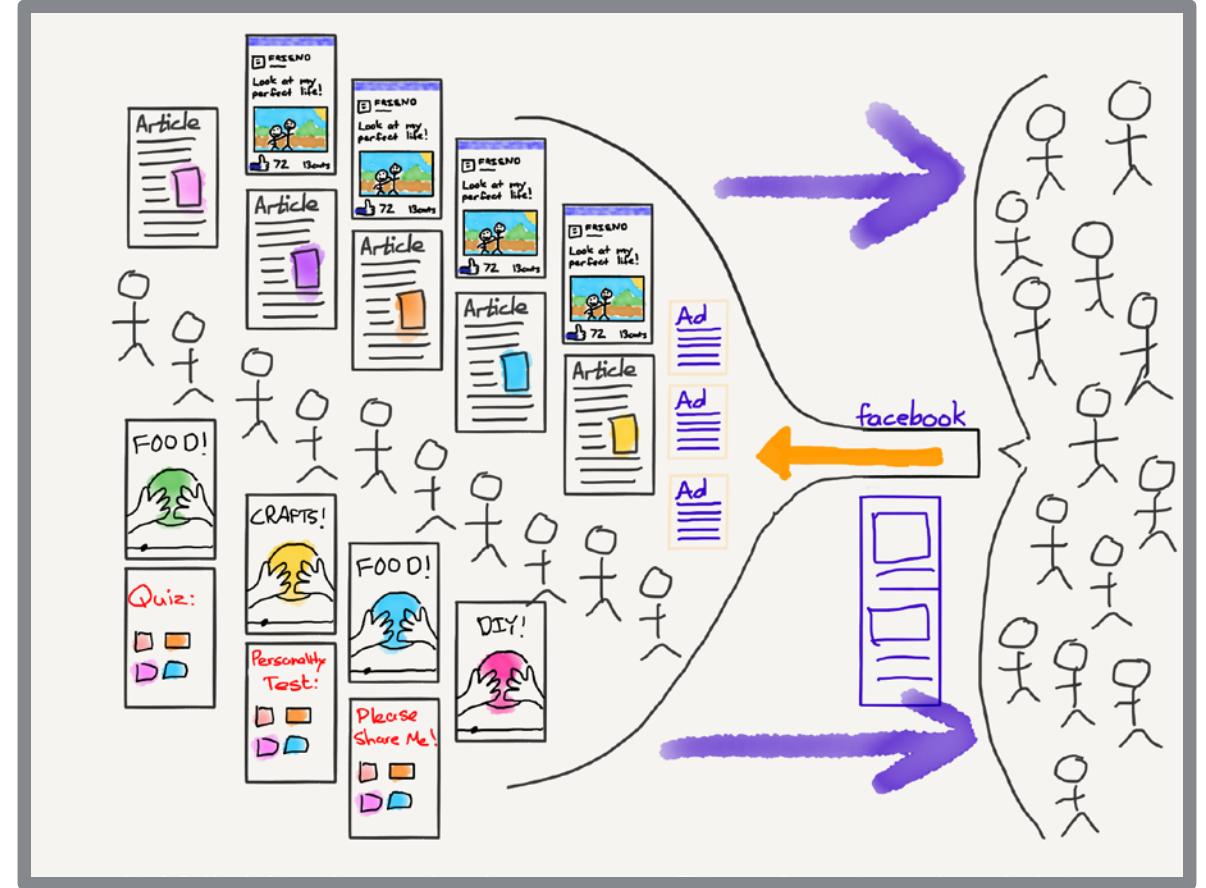
Aggregated



Pre-Internet



Aggregated



“Our competition is only a click away.”

—Larry Page



Digital Platforms are Aggregators

- Control demand
- Deliver a superior user experience
- Pull suppliers onto their platforms on their terms
- Benefit from scale
- Tend towards winner-take-all



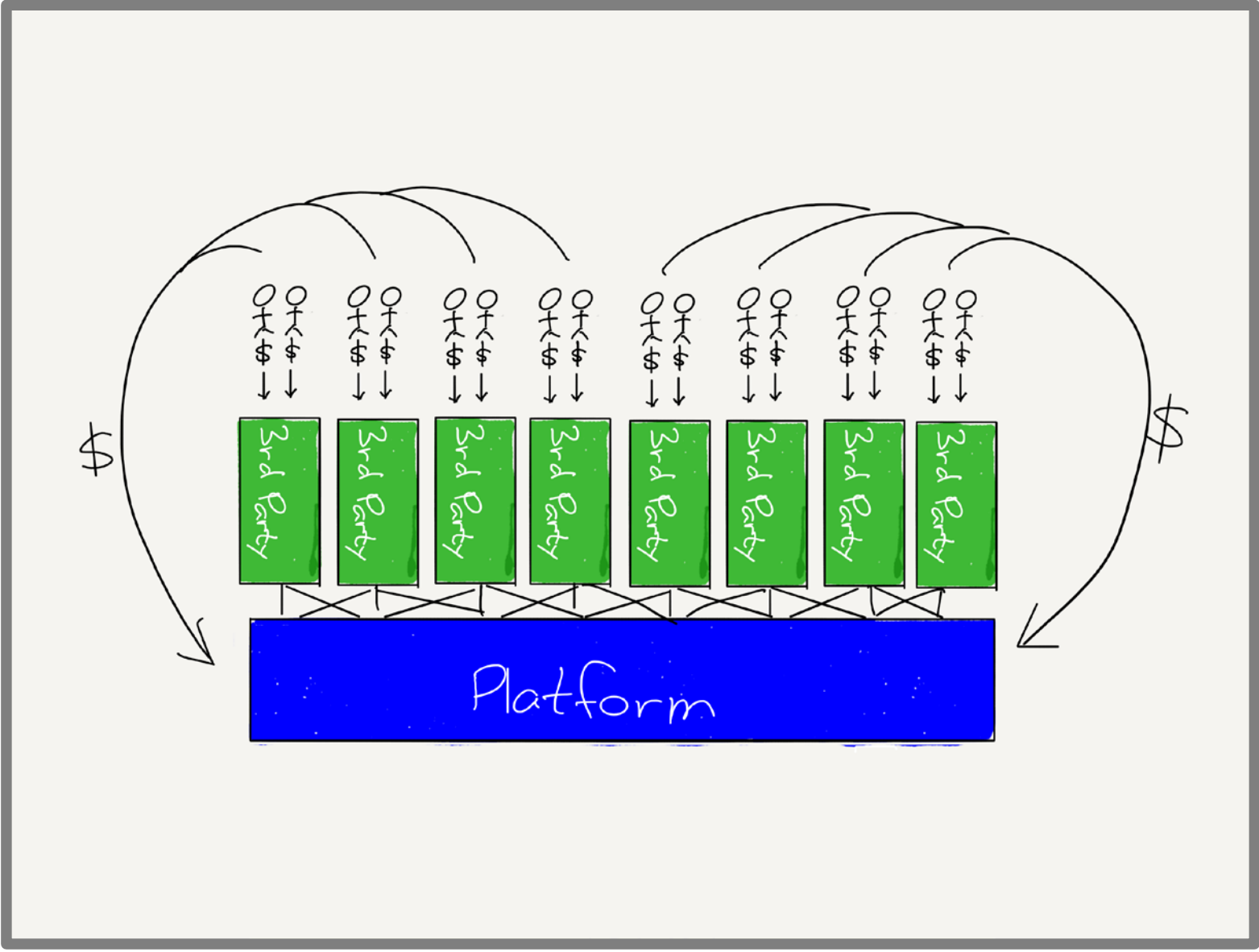
Digital Platforms are Aggregators

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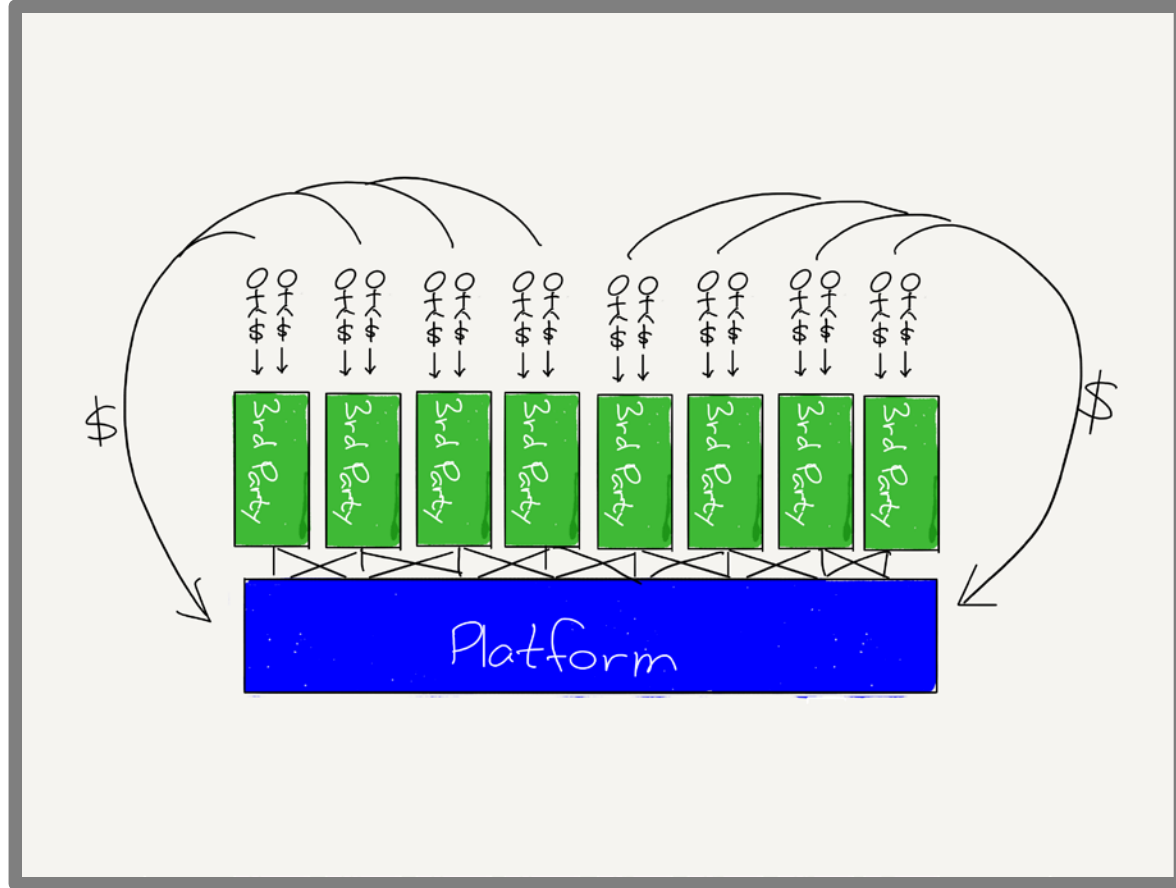


Aggregators vs Platforms

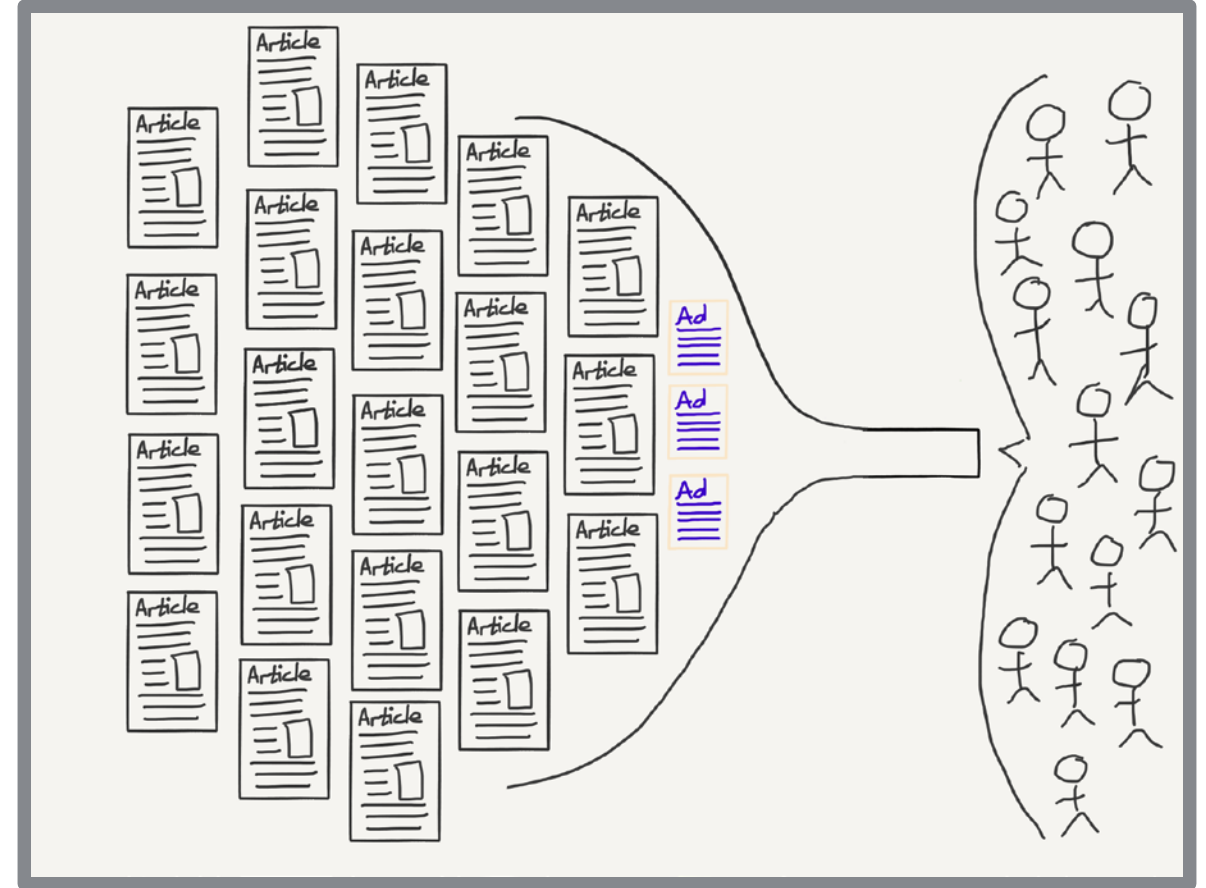




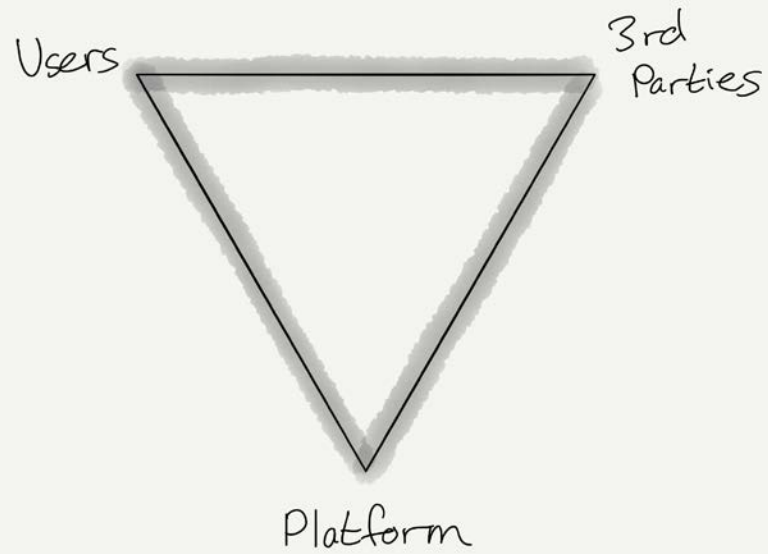
Platform



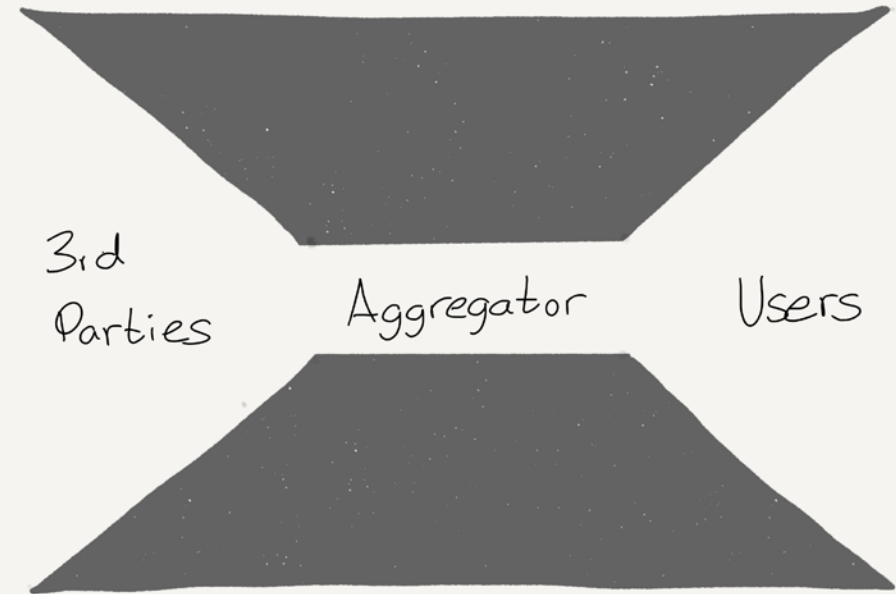
Aggregator



Facilitates



Intermediates

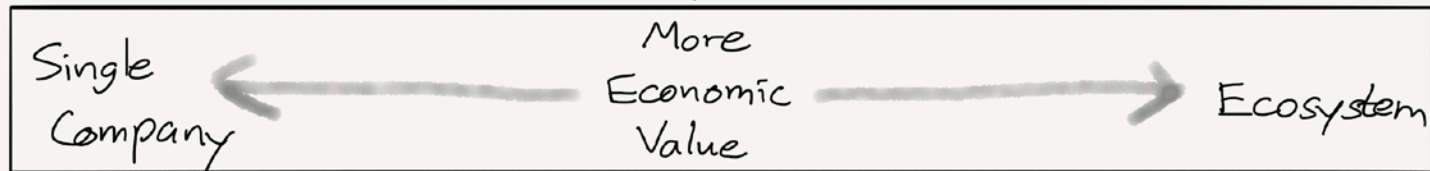


I was in charge of Facebook Platform. We trumpeted it out like it was some hot s*** big deal. And I remember when we raised money from Bill Gates, 3 or 4 months after — like our funding history was \$5M, \$83 M, \$500M, and then \$15B. When that 15B happened a few months after Facebook Platform and Gates said something along the lines of, “That’s a crock of s***. This isn’t a platform. A platform is when the economic value of everybody that uses it, exceeds the value of the company that creates it. Then it’s a platform.”

— Chamath Palihapitiya



The
Bill Gates
Line



Strategy:	Platform/ Aggregator	3rd Party	Regulator
Platforms	<i>Open Access on Proprietary Tech</i>	<i>Partner with Platform</i>	<i>Limit Vertical Disclosure</i>
Aggregators	<i>Closed Access on Open Tech</i>	<i>Go Around Aggregator</i>	<i>Limit Horizontal Expansion</i>



Regulating Aggregators

Start with Internet Assumptions

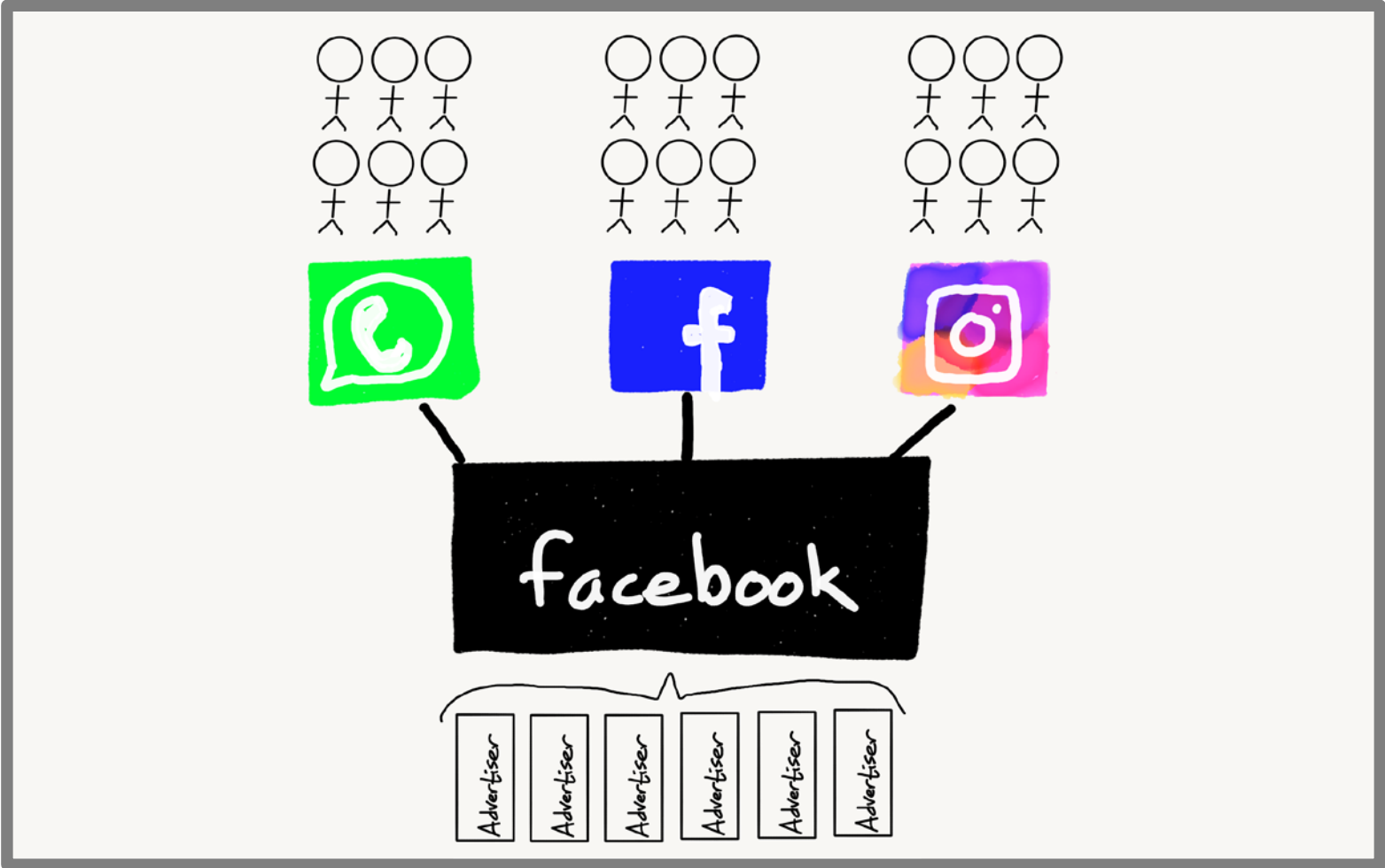


Regulating Aggregators

1. Constrain Horizontal Expansion

e.g. Facebook, Instagram and Advertising Markets





Regulating Aggregators

1. Constrain Horizontal Expansion
2. Focus on Transparency

The regulatory corollary of Aggregation Theory is that the ultimate form of regulation is user-generated



Regulating Aggregators

1. Constrain Horizontal Expansion
2. Focus on Transparency
3. Don't Burden Challengers

Simple and Predictable > Complex and Prescriptive



Thank You

stratechery.com/ftc



Multi-Sided Platforms in Action

Elizabeth J. Altman

University of Massachusetts Lowell

Manning School of Business



Multi-Sided Platforms in Action: Marketplace Platforms Over Time

Steven Tadelis

University of California, Berkeley

Haas School of Business



Online Marketplaces

- Craigslist and eBay, 1995
- What was the business model?
 - Connect buyers and sellers
 - Create gains from trade
 - Collect fee (eBay a lot more than Craigslist)



Marketplace Incentives

- Marketplaces connect many buyers with many sellers
- Economics of Reputation on Platforms:
 - What goes around comes around
 - Each seller has weak incentives and imposes an externality
 - The marketplace internalizes this externality (Nosko-Tadelis)
 - Using search and feedback systems to control quality and act for the benefit of consumers



Is entry into a platform marketplace easy?

- Common argument: strong network effects
 - Goes back to “chicken & egg” problem of two-sided networks
- But, this ignores the ease of multihoming
 - especially with APIs and digital technology
- What’s the evidence on entry?



Craigslist Today

craigslist

post to classifieds
my account

search craigslist

event calendar

M	T	W	T	F	S	S
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

help, faq, abuse, legal
avoid scams & fraud
personal safety tips
terms of use **new**
privacy policy
system status

about craigslist
craigslist is hiring in sf
craigslist open source
craigslist blog
best-of-craigslist
craigslist TV
"craigslist joe"
craigslist connects
progressive directory
weather quake tide

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community

activities lost+found
artists missed
childcare connections
classes musicians
events pets
general politics
groups rants & raves
local news rideshare
volunteers

services

automotive labor/move
beauty legal
cell/mobile lessons
computer marine
creative pet
cycle real estate
event skilled trade
farm+garden sm biz ads
financial travel/vac
household write/ed/tran

discussion forums

android frugal pets
apple gaming philos
arts garden photo
atheist haiku politics
autos help psych
beauty history recover
bikes housing religion
celebs jobs rofo
comp jokes science
cosmos legal spirit
diet linux sports
divorce manners super
dying marriage tax
eco money travel
feedback music tv
film open vegan

housing

apts / housing
housing swap
housing wanted
office / commercial
parking / storage
real estate for sale
rooms / shared
rooms wanted
sublets / temporary
vacation rentals

for sale

antiques farm+garden
appliances free
arts+crafts furniture
atv/utv/sno garage sale
auto parts general
aviation heavy equip
baby+kid household
barter jewelry
beauty+hith materials
bike parts motorcycle parts
bikes motorcycles
boat parts music instr
boats photo+video
books rvs+camp
business sporting
cars+trucks tickets
ods/dvd/vhs tools
cell phones toys+games
clothes+acc trailers
collectibles video gaming
computer parts wanted
computers wheels+tires
electronics

jobs

accounting+finance
admin / office
arch / engineering
art / media / design
biotech / science
business / mgmt
customer service
education
etc / misc
food / bev / hosp
general labor
government
human resources
legal / paralegal
manufacturing
marketing / pr / ad
medical / health
nonprofit sector
real estate
retail / wholesale
sales / biz dev
salon / spa / fitness
security
skilled trade / craft
software / qa / dba
systems / network
technical support
transport
tv / film / video
web / info design
writing / editing

gigs

computer event
creative labor
crew talent
domestic writing

resumes

english

nearby cl

bakersfield
chico
fresno
gold country
hanford
humboldt
inland empire
klamath falls
las vegas
los angeles
medford
mendocino co
merced
modesto
monterey
orange co
palm springs
redding
reno
roseburg
sacramento
san luis obispo
santa barbara
santa maria
siskiyou co
stockton
susanville
ventura
visalia-tulare
yuba-sutter

us cities

us states

canada

cl worldwide

The Business Model

- There's nothing new under the sun...
- Uber, Lyft, Airbnb, Upwork, Taskrabbit...
 - All are reincarnations of eBay's model
- Why didn't eBay do it all?
 - Ease of entry; multihoming; innovation; etc...
 - Outside social networks and maybe search, barriers to entry are negligible, mostly because of multihoming



Multi-Sided Platforms in Action

Roger McNamee
Elevation Partners



Multi-Sided Platforms in Action

Scott Kupor

Andreessen Horowitz



Multi-Sided Platforms in Action

Panel Discussion

Elizabeth Altman, Scott Kapor,
Roger McNamee, Steven Tadelis,
Ben Thompson

Moderator: Jan Rybnicek



Break

3:00-3:15 pm



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Session moderated by:

Daniel Francis

Federal Trade Commission
Bureau of Competition



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Michael Salinger

Boston University

Questrom School of Business



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Tasneem Chipty
Matrix Economics, LLP



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Joseph Farrell

University of California, Berkeley

Department of Economics



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Eric Citron

Goldstein & Russell, P.C.



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Darren Tucker
Vinson & Elkins LLP



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Joanna Tsai

Charles River Associates



Defining Relevant Markets and Establishing Market Power in Cases Involving Multi-Sided Markets

Panel Discussion

Tasneem Chipty, Eric Citron,
Joseph Farrell, Michael Salinger,
Joanna Tsai, Darren Tucker

Moderator: Daniel Francis



Thank You, Join Us Tomorrow



Hearings on Competition and Consumer Protection in the 21st Century
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