



# **Après moi, le déluge!\***

## **Tech giants in the digital age**

**CRA**

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\* Karl Marx, Das Kapital, Vol. 1, Part III

Disclaimer: The views expressed are those of the author and cannot be regarded as stating an official position of the European Commission

# Digital platforms

What they promised:

- Multi-homing
- Seamless hopping
- Rational search
- Low transaction costs
- ...

... not really

First fundamental  
theorem of welfare  
economics often  
*fails*

# Mergers

Concentration debate (later **panel**) -> "superstars"

*Prevent* problems from arising (but cannot prevent organic growth)

*Problem*: acquisition of small firms (most below threshold) – "killer" mergers (later **panel**)



# [https://en.wikipedia.org/wiki/List\\_of\\_mergers\\_and\\_acquisitions\\_by\\_Alphabet](https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Alphabet)

August 6, 2014	Director	Mobile video	<span><span><span></span></span><span> </span></span> USA	—	YouTube, Android	[192]
August 17, 2014	Jetpac	Artificial intelligence, image recognition	<span><span><span></span></span><span> </span></span> USA	—	Picasa	[193]
August 23, 2014	Gecko Design	Mechanical design	<span><span><span></span></span><span> </span></span> USA	—	X	[194]
August 26, 2014	Zync Render	Cloud-based visual effects software	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[195]
September 10, 2014	Lit Labs	Lithium	<span><span><span></span></span><span> </span></span> USA	—	Vanity	[196]
September 11, 2014	Polar	Social polling	<span><span><span></span></span><span> </span></span> USA	—	Google+	[197]
October 21, 2014	Firebase	Application development platform	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[198]
October 23, 2014	Dark Blue Labs & Vision Factory	Artificial intelligence	<span><span><span></span></span><span> </span></span> UK	Stens of millions	Google DeepMind	[199]
October 24, 2014	Revolv	Home automation	<span><span><span></span></span><span> </span></span> USA	—	Nest Labs	[200]
November 19, 2014	RelativeWave	Mobile software prototyping	<span><span><span></span></span><span> </span></span> USA	—	Android	[201]
December 17, 2014	Vidmaker	Video editing	<span><span><span></span></span><span> </span></span> USA	—	YouTube	[202]
February 4, 2015	Launchpad Toys	On-to-friendly apps	<span><span><span></span></span><span> </span></span> USA	—	YouTube for Kids	[203]
February 8, 2015	Objase	Multimedia sharing and storage	<span><span><span></span></span><span> </span></span> USA	—	Google+	[204]
February 23, 2015	Softcard	Mobile payments	<span><span><span></span></span><span> </span></span> USA	—	Android Pay	[205]
February 24, 2015	Red Hat Labs	App advertising and discovery	<span><span><span></span></span><span> </span></span> USA	—	Google Play	[206]
April 16, 2015	Thrive Audio	Burround sound technology	<span><span><span></span></span><span> </span></span> IRL	—	Google Cardboard	[207]
April 16, 2015	Bklimen & Hackett	Virtual reality software	<span><span><span></span></span><span> </span></span> USA	—	Tilt Brush	[208]
May 4, 2015	Timeful	Mobile software	<span><span><span></span></span><span> </span></span> USA	—	Google Inbox, Google Calendar	[209]
May 28, 2015	Pulse.io	Mobile app optimizer	<span><span><span></span></span><span> </span></span> USA	—	Android	[210]
July 21, 2015	Plaxate	Mobile software prototyping	<span><span><span></span></span><span> </span></span> USA	—	Android	[211]
September 21, 2015	Oyster	E-book subscriptions	<span><span><span></span></span><span> </span></span> USA	—	Google Play Books	[212]
September 30, 2015	Jobe Mobile	Rich Communication Services	<span><span><span></span></span><span> </span></span> USA	—	Android	[213]
June 18, 2016	Agavi	Mobile application streaming	<span><span><span></span></span><span> </span></span> USA	—	Android, Google Play	[214]
October 17, 2016	Digiflora	360-degree photography	<span><span><span></span></span><span> </span></span> POR	—	Street View	[215]
November 11, 2016	Fly Labs	Video editing	<span><span><span></span></span><span> </span></span> USA	—	Google Photos	[216]
November 11, 2016	beop	Cloud software	<span><span><span></span></span><span> </span></span> USA	\$180,000,000	Google Cloud Platform	[217]
February 12, 2016	BandPage	Platform for musicians	<span><span><span></span></span><span> </span></span> USA	—	YouTube	[218]
February 18, 2016	Pie	Enterprise communications	<span><span><span></span></span><span> </span></span> QPR	—	Spaces (app)	[219]
May 2, 2016	Syneigyse	Interactive tutorials	<span><span><span></span></span><span> </span></span> CAN	—	Google Docs	[220]
June 22, 2016	Webpass	Internet service provider	<span><span><span></span></span><span> </span></span> USA	—	Google Fiber	[221]
July 6, 2016	Moodstocks	Image recognition	<span><span><span></span></span><span> </span></span> FRA	—	Google Photos	[222]
July 8, 2016	Arivio	Cloud-based video services	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[223]
July 12, 2016	Kiri	Link management	<span><span><span></span></span><span> </span></span> USA	—	Spaces (app)	[224]
July 27, 2016	LaunchKit	Mobile tool maker	<span><span><span></span></span><span> </span></span> USA	—	Firebase	[225]
August 8, 2016	Orbiters	Cloud software	<span><span><span></span></span><span> </span></span> USA	\$100,000,000	Google Cloud Platform	[226]
September 8, 2016	Adigee	API management and predictive analytics	<span><span><span></span></span><span> </span></span> USA	\$626,000,000	Google Cloud Platform	[227]
September 16, 2016	Urban Engines	Location-based analytics	<span><span><span></span></span><span> </span></span> USA	—	Google Maps	[228]
September 16, 2016	APLAI	Natural language processing	<span><span><span></span></span><span> </span></span> USA	—	Google Assistant	[229]
October 11, 2016	FameBit	Blended content	—	—	YouTube	[230]
October 24, 2016	Eyefluence	Eye tracking, virtual reality	—	—	Google VR	[231]
November 8, 2016	LeapDroid	Android Emulator	<span><span><span></span></span><span> </span></span> USA	—	Android	[232]
November 21, 2016	Quiklits	Cloud based hands-on training platform	—	—	Google Cloud Platform	[233]
December 13, 2016	Chronologica	Smartwatches	<span><span><span></span></span><span> </span></span> USA	—	Android Wear	[234]
January 6, 2017	Limes Audio	Voice communication	<span><span><span></span></span><span> </span></span> SWE	—	Google Duo, Google Hangouts	[235]
January 16, 2017	Fabric	Mobile app platform	<span><span><span></span></span><span> </span></span> USA	—	Firebase	[236]
March 8, 2017	Kaggle	Data science	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[237]
March 9, 2017	AppBridge	Productivity suite	<span><span><span></span></span><span> </span></span> USA	—	Google Docs	[238]
May 10, 2017	Outchemy Labs	Virtual reality studio	<span><span><span></span></span><span> </span></span> USA	—	Google VR	[239]
July 12, 2017	Hell Labs	Artificial intelligence	<span><span><span></span></span><span> </span></span> IND	—	—	[240]
August 16, 2017	AllMatter	Computer vision	<span><span><span></span></span><span> </span></span> BLR	—	YouTube	[241]
September 21, 2017	HTC (various)	Talent and intellectual property licenses	<span><span><span></span></span><span> </span></span> TWN	\$1,100,000,000	Google Pixel	[242]
September 26, 2017	Bitium	Single sign-on and identity management	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[243]
October 9, 2017	Relay Media	AIIP converter	<span><span><span></span></span><span> </span></span> USA	—	Accelerated Mobile Pages	[244]
October 11, 2017	520	Podcasts	<span><span><span></span></span><span> </span></span> USA	—	Google Play Music, Google Podcasts	[245]
March 27, 2018	Tenor	GIF image search	<span><span><span></span></span><span> </span></span> USA	—	Google Images	[246]
May 9, 2018	Velostate	Cloud Migration, Google Cloud Platform	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[247]
May 14, 2018	Cask	Big Data, Hadoop	<span><span><span></span></span><span> </span></span> USA	—	Google Cloud Platform	[248]

## Discussion/proposals

1. Systematically examine data for acquisitions, price paid, nature of business acquired, internal documents giving reasons for transactions (academia)
2. Value of the transaction is informative for digital:
  - Thresholds
  - Use evaluation methods to catch pre-emption (large, unexplained payments)
3. For super-dominant firms, shift the burden of proof (larger general debate on structural presumptions; more controversial):
  - Parties should show efficiencies, else adopt an anticompetitive presumption

## 4. Potential competition

4. Reinvigorate “potential competition”
- Do we have the 'right' *standard*?
  - Type I/Type II errors

A good rule should be “symmetric” around the *social value* created by good/wrong decisions

“More likely than not” vs **expected welfare**

Small probability of future competition can be sufficient to make it optimal to block mergers

# Advertising and attention

Move away from anonymous “eyeballs” analogy

Study how hyper-targeted advertising works:

- Markets defined at the *individual* level (and then apply standard economic analysis)

“Attention” markets (Wu, 2018; Prat and Valletti, 2018)

- Supply-side market shares not always informative (even unique visits) (later **panel**)

5. Look for attention “overlaps”: need micro-data/surveys<sub>7</sub>

# Abuse of dominance

Information (= data) is valuable

*Dominance* can come from control/access to data and their monetisation

Note: markets with zero prices to users. Chicago argument (one monopoly theory) not valid

*Claim*: Privacy is a competition problem





European  
Commission

# Learn about consumers

- Search activity



- Browsing activity



- Responses to targeted ads



DoubleClick  
Ad Exchange by Google

- Location



- Electronic communications



- Activity in social networks



- Past purchases



Competition

Some platforms  
can combine  
different sources

# Data extraction and market power

- *Russian dolls*: A consumer needs to accept ToS of a company and, therefore, its Privacy Policy:
  - Company X Privacy Policy: you agree to provide **personal** information. Cannot be shared ([GDPR](#)) *except...*
  - ...to X's **affiliates** and other trusted businesses, based on X's instructions and...
  - ... X can then share results with X's partners — like publishers, **advertisers**, or developers.
- **Absent such consent the consumer would not be able to obtain any of those services**

# How a platform *X* can use privacy policy to entrench dominance

1. *X*'s dominance allows it to impose restrictive ToS and privacy terms
2. Consumers agree to *X*'s ToS and privacy: *X* can then use and commercialise its users' data
3. *X* acquires data advantage vis-à-vis its competitors. Limited ability of *X*'s rivals to offer and monetise alternative platforms
4. The market tips towards monopoly
5. *X* entrenches its monopoly position, which allows it to extract rents and impose even more restrictive privacy policy on consumers

**Ancillary restrictions (zero price) to entrench dominance and exploit consumers** [Note: **AEC test** will not work in this environment]

**Platform envelopment and leverage**

# Is this a problem?

Possibly not *if*:

- Consumers cared and understood about privacy
- Consumers asked for money (e.g., Weyl and Posner: Labour Data Unions; see later **panel**)
- We believe in dynamic competition

# What can we do?

- Attack the symptoms
  - Preferencing
  - Tying
  - Exclusivity
  
- Regulate privacy policies?
  
- Data portability/interoperability? (eID)