


Big Data, Data Trading, and Data Protection

VERONA & UPITT SUMMER SCHOOL, 30 MAY – 1 JUNE 2019

(PROF. DR. T.W. DORNIS)



Overview

- I. The “Data Economy“
- II. Regulatory background
- III. Selected questions
 - 1) “Sale“ of personal data and privacy
 - 2) Dynamic and personalized pricing
 - 3) Algorithms and antitrust
- IV. Summary and outlook

The “Data Economy”

Introduction

data = information

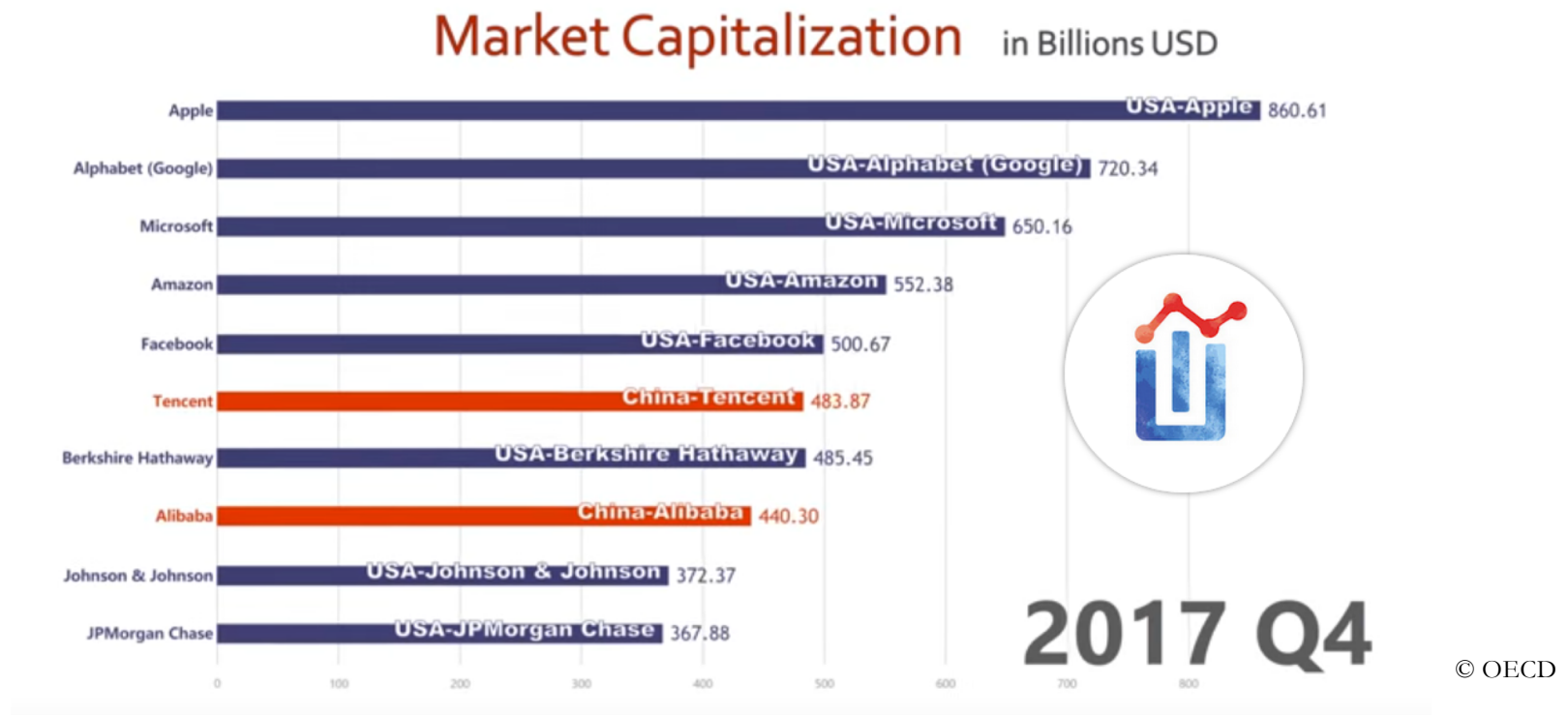
= “facts about a situation, person, or event“

(Cambridge Dictionary)

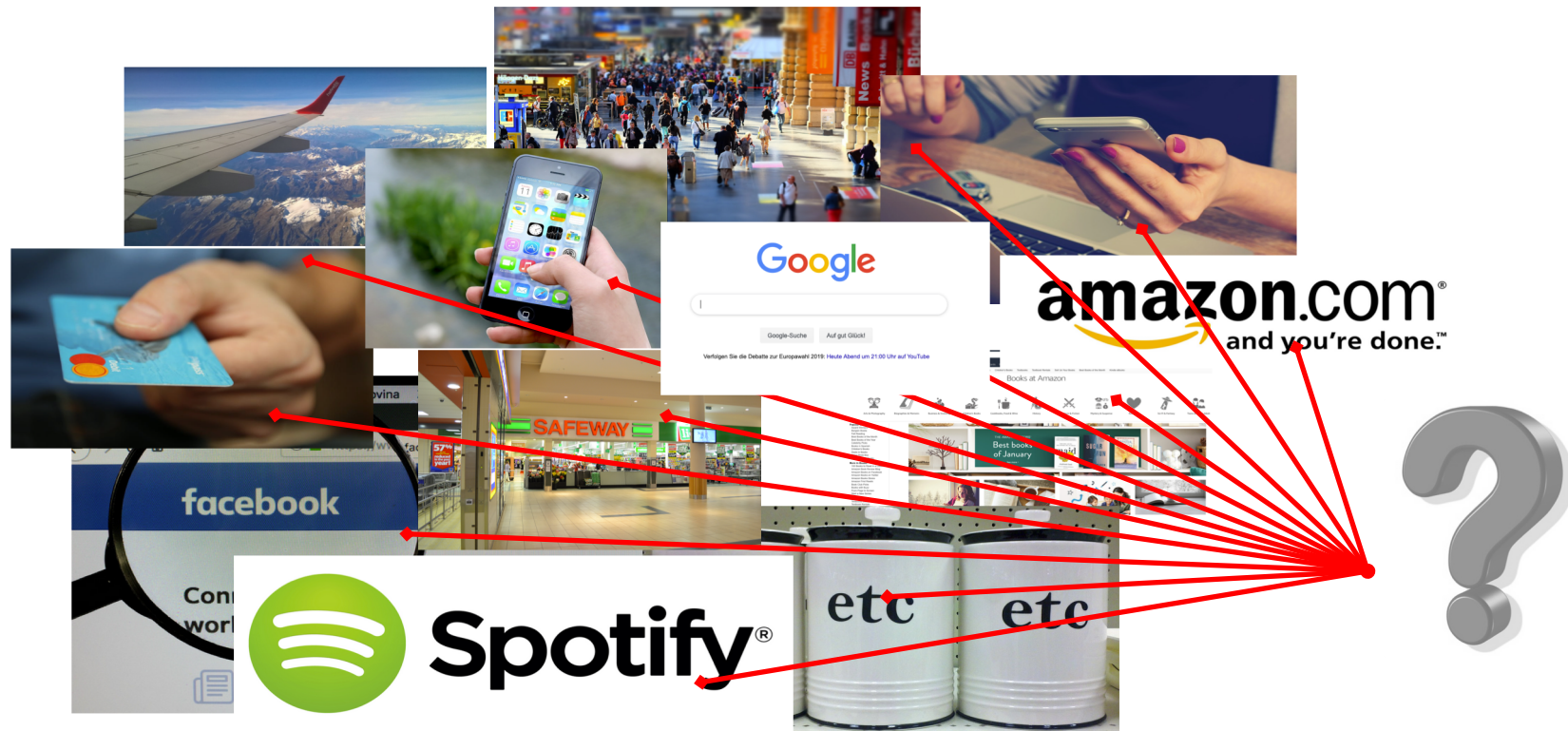
Introduction



Introduction



Introduction



Introduction

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Ihre zuletzt angesehenen Artikel und besonderen Empfehlungen

Inspiriert von Ihrem Browserverlauf

Seite 1 von 5

									
Lindt Napolitains Mini Schokoladentafeln, Milch Extra, Milch-Nuss, Lindor Milch, Cresta Milch,...	Ritter Sport mini Bunter Mix, 84 x 16,67 g	Ben & Jerry's - TK Chunky Monkey Eiscreme vegan Fairtrade - 500ml	Ben & Jerry's - Topped Salted Caramel Brownie Eiscreme Eis TK Fairtrade - 470ml	Lindt Floretto Marzipan 600g	Lindt Lindor Mischbeutel 2 kg, gefüllt mit zartschmelzenden einzeln verpackten Lindor...	Lindt Lindor Office Box 2, 930g, gefüllt mit zartschmelzenden Lindor Kugeln in den Sorten...	Lindt Lindor Beutel Pistazie, Promotion, Vollmilchschokolade mit zartschmelzender...	Lindt Lindor Mischbeutel gefüllt mit ca. 48 zartschmelzenden einzeln verpackten Lindor Kugeln in den Sorten Vollmilch,...	Lindt Bunte Mischung, 37 Lindor Kugeln, 24 Hello Mini Sticks, 10 Mini Floretto, 815 g
★★★★★ 21	★★★★★ 67	★★★★☆ 2	★★★★☆ 1	★★★★★ 1	★★★★★ 18	★★★★★ 20	★★★★☆ 3	★★★★★ 8	★★★★★ 8
EUR 24,99 (EUR 24,99 / kg)	EUR 14,99 (EUR 10,71 / kg)	EUR 9,49 (EUR 18,98 / l)	EUR 7,49 (EUR 15,94 / l)	EUR 17,00 (EUR 28,33 / kg)	EUR 38,74 (EUR 19,37 / kg)	EUR 24,90 (EUR 26,77 / kg)	EUR 17,94 (EUR 21,82 / kg)	EUR 19,99 (EUR 33,48 / kg)	EUR 22,99 (EUR 28,21 / kg)
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Marx und Keynes lernen können

FREDRIC JAMESON

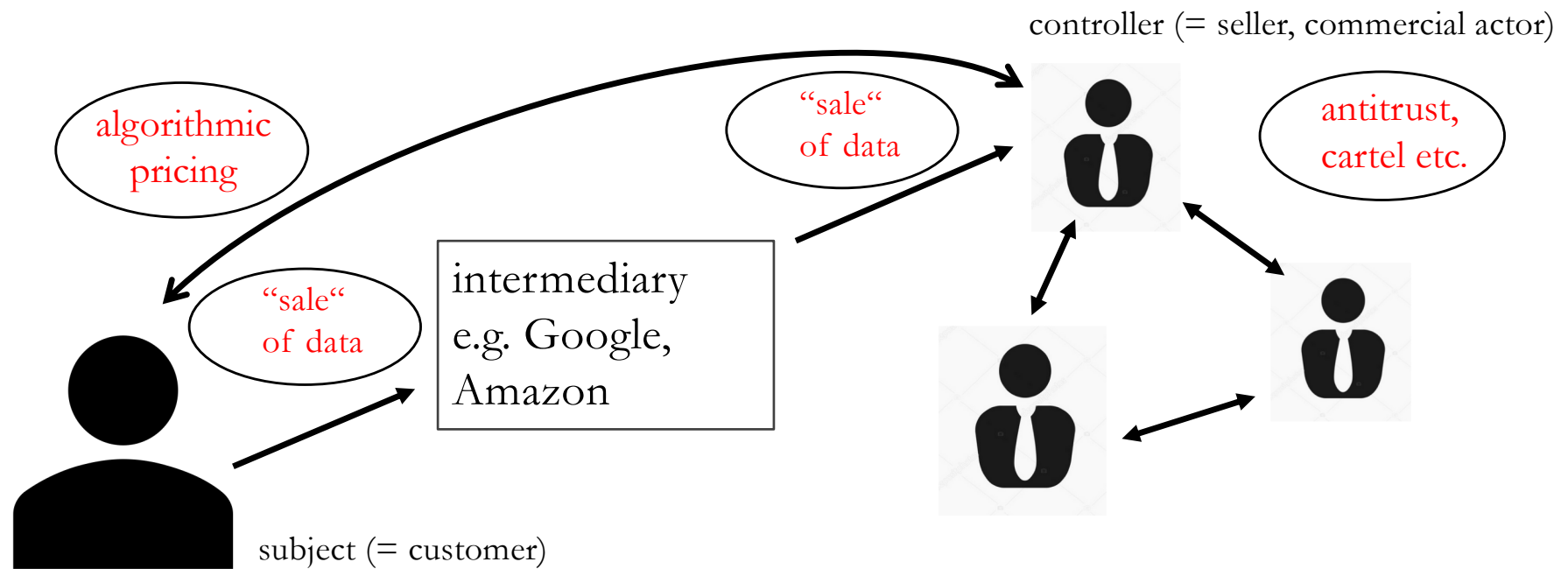
C-H Beck

DARON ACEMOGLU & JAMES A. ROBINSON

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Introduction



Regulatory background

The European Concept of “Data Protection” and “Privacy”

Foundations: Fundamental Rights

Art. 8 ECHR

(1) Everyone has the right to **respect for his private and family life**, his home and his correspondence.

(2) **There shall be no interference** by a public authority with the exercise of this right **except** such as is in accordance with the law and is necessary in a democratic society in the interests of **national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.**

Foundations: Fundamental Rights

Art. 16 TFEU

(1) Everyone has the right to the **protection of personal data** concerning them.

(2) The **European Parliament and the Council**, acting in accordance with the ordinary legislative procedure, **shall lay down the rules relating to the protection of individuals with regard to the processing of personal data by Union institutions, bodies, offices and agencies, and by the Member States ...**

Foundations: Fundamental Rights

Charter of Fundamental Rights (EU)

Art. 7 CFR

Everyone has the right to **respect for his or her private and family life**, home and communications.

Art. 8 CFR

(1) Everyone has the right to the **protection of personal data** concerning him or her.

(2) Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified. ...

Foundations: Fundamental Rights

Art. 52 CFR

(1) Any limitation on the exercise of the rights and freedoms recognised by this Charter must be provided for by law and respect the essence of those rights and freedoms.

Subject to the principle of proportionality, limitations may be made only if they are necessary and genuinely meet objectives of general interest recognised by the Union or the need to protect the rights and freedoms of others. ...

Foundations: Fundamental Rights

ECtHR, *Vereinigung bildender Künstler v. Austria* (2007)

- Austrian Copyright Act: remedy against publication of a person's picture where this would violate the legitimate interests of the person concerned
- ECtHR balancing: Freedom of expression vs. “rights of others” ...



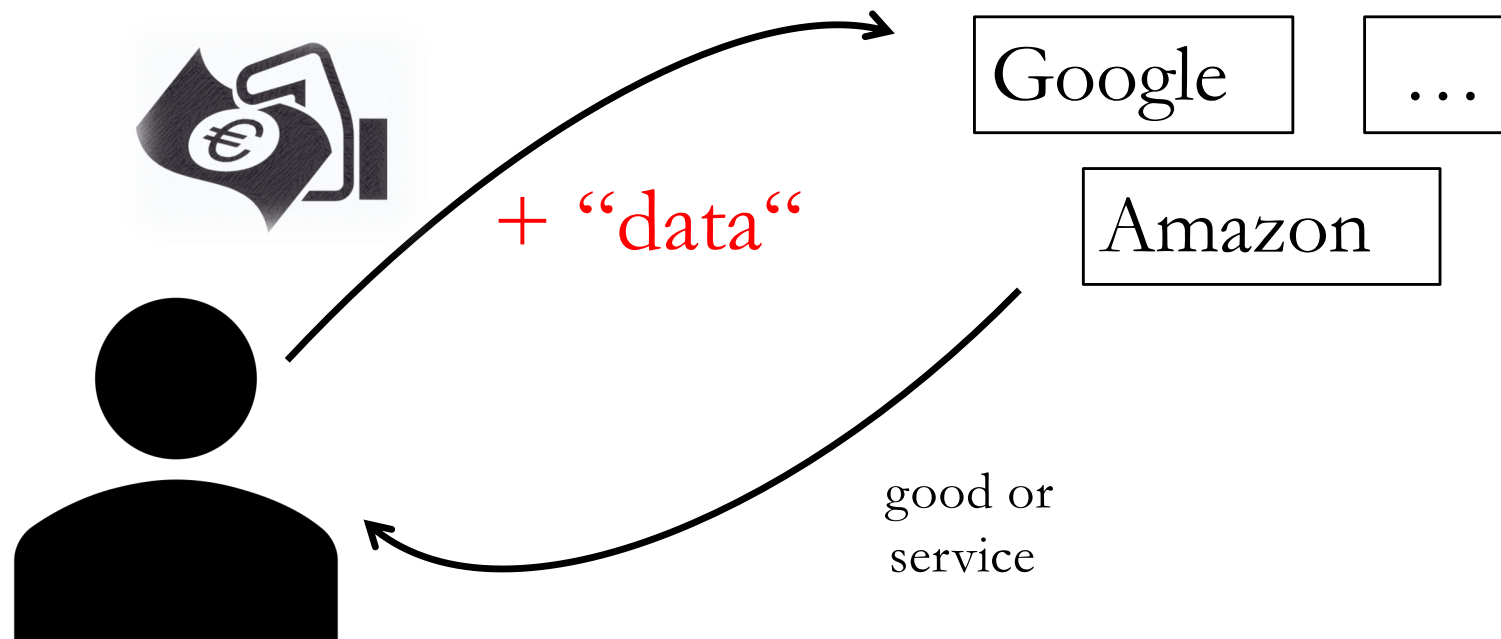
“Apocalypse“ by Otto Mühl
(picture detail, damaged)

EU Directives & Regulations: Overview

- Data Protection Directive (1995): harmonization of data protection laws at the national level (repealed on 25 May 2018)
- EU Institutions Data Protection Regulation (2001): concerns data protection standards with respect to the processing of data by institutions of the EU
- Directive on privacy and electronic communications (2002)
- New (2018)
 - General Data Protection Regulation and
 - Data Protection Directive for Police and Criminal Justice Authorities

”Sale” of personal data and privacy

”Sale” of personal data and privacy



Ownership

- Problem: data/information does not allow a traditional application of the concept of “ownership”
 - Ownership: right to “exclusive use of an asset” or “right to dispose of a thing at will”
 - So far: no “data *property* statutes” exist
- No comprehensive protection under
 - real and personal property laws, or
 - intellectual property laws/statutes, and
 - trade secret regulations

No “data property”

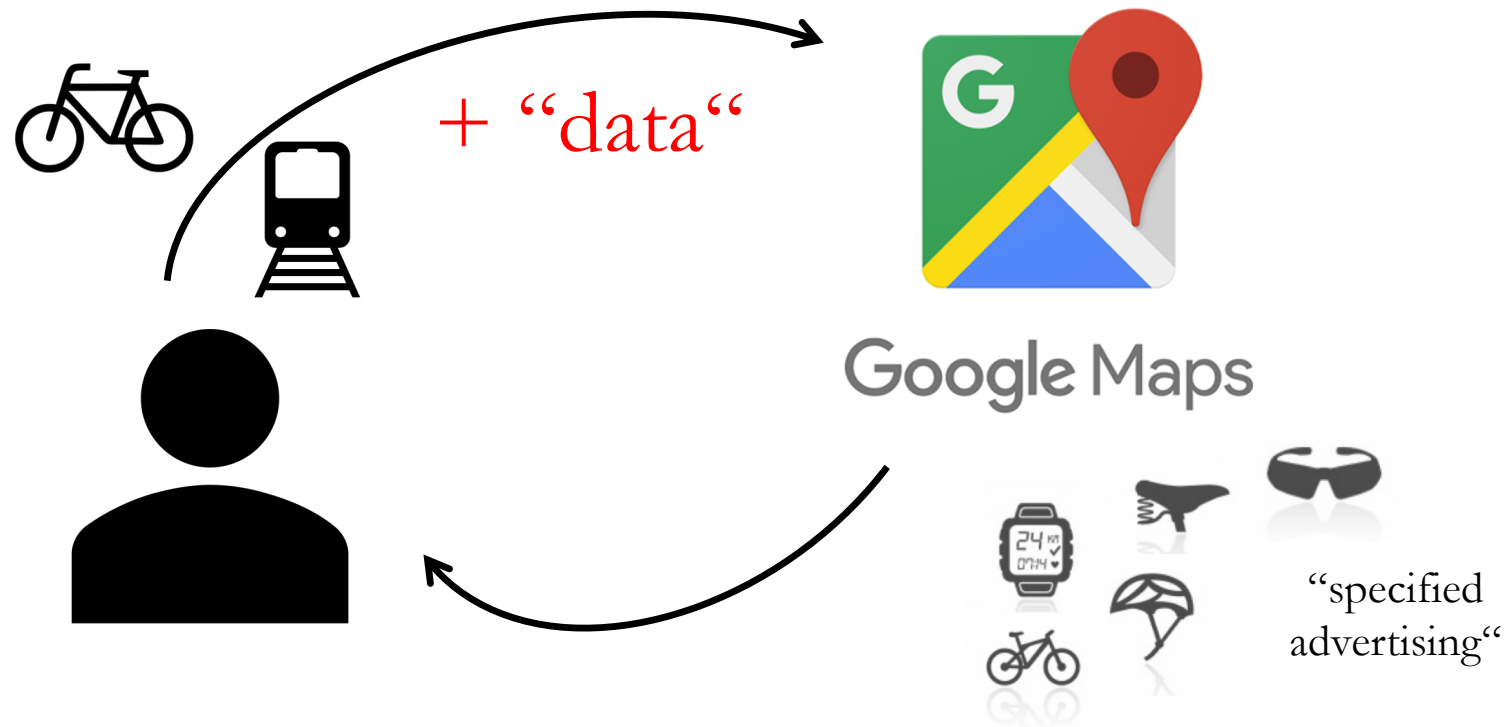
- Different from property law
 - right to exclude others from acquisition and use only
 - no “exclusivity”, no “right to dispose of”, no general “transferability”...
- Policy background (contra propertization)
 - Economics: no incentives needed
 - Practice: issue is access to and flow of data
 - *Caveat*: no proliferation of rights (“tragedy of the anti-commons”)

”Sale” of personal data and privacy

- But: data can be the subject of rights (cf. Art. 810 Codice civile), and it can be the object of a transfer and sale (cf. section 453 German Civil Code)
- ECJ, C-128/11 (*UsedSoft v. Oracle*, 2012)
... The on-line transmission method is the functional equivalent of the supply of a material medium.
- Note: transfer of data is non-proprietary – creates relative obligations only

Consumer data protection

Consumer data protection



Consumer data protection

- How to characterize the contract?
 - Gift or donation?
 - Sales contract (cf. recital 19 Directive 2011/83/EU)?
 - Services contract?
 - *Sui generis* ...
- Is there a “contract”?
 - Remuneration (EU debate) or consideration?

Consumer data protection

- Is there a “contract”? (cont’d)
- EC Proposal (2015) for Directive on certain aspects concerning contracts for the supply of digital content, Art. 3(1)

This Directive shall apply to any contract where the supplier supplies digital content to the consumer or undertakes to do so and, in exchange, a price is to be paid or the consumer actively provides counter-performance other than money in the form of personal data or any other data.

Consumer data protection

- Consumer information and right of withdrawal (Art. 6 et seq. Directive 2011/83/EU)
 - Right of withdrawal?
 - App can be deleted ... GDPR provides comprehensive protection!
 - But: What about the personal data transferred?

Consumer data protection

- Consumer information and right of withdrawal (cont'd)
- Directive 2011/83/EU (consumer rights), Art. 13(1)

The trader shall reimburse all payments received from the consumer, including, if applicable, the costs of delivery without undue delay and in any event not later than 14 days from the day on which he is informed of the consumer's decision to withdraw from the contract in accordance with Article 11.

Consumer data protection

- Consumer information and right of withdrawal (cont'd)
 - Right of withdrawal?
 - App can be deleted
 - But: What about the personal data "sold"?
 - Restitution – what is the value of personal data?
 - And: What about the value of services that have been received?

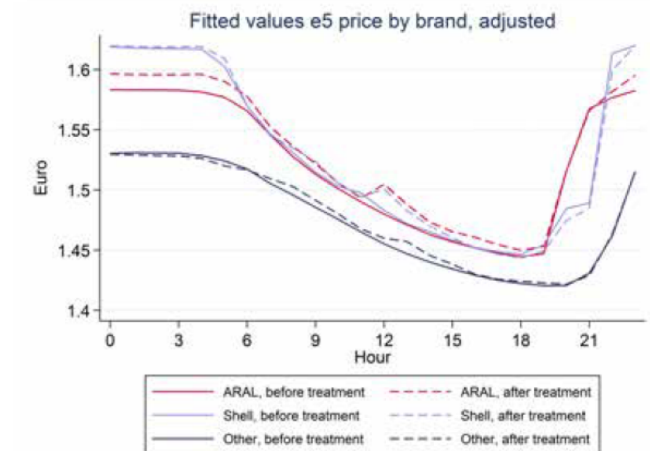
Dynamic and personalized pricing

Dynamic and personalized pricing

- What is “dynamic” pricing?
 - Setting of flexible prices based on current market demands (e.g. tourist industry, travel and entertainment services, utility/electricity)



Cabral et al., 2018



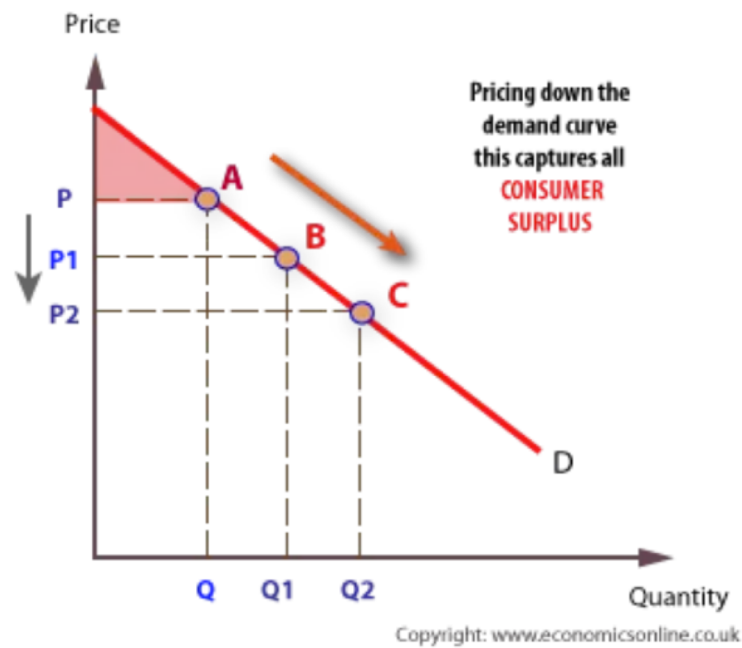
Dynamic and personalized pricing

- What is “personalized” pricing?
 - Setting of prices based on customer characteristics and preferences
 - Distinguish
 - “haggling” where there is no information asymmetry
 - dynamic pricing (*supra*) where the price still is “universal”
- Note: 2015 study on “Facebook likes” ... 10>colleagues, 70>friends, 150>parents & family, and 300>self ...

Dynamic and personalized pricing

- Today: use of “algorithms”
 - Data-economy applications: scan and analysis of individual behavior and preferences
 - Upside: fast price adjustments, lower consumer search and transaction costs, better matching between supply and demand ...
 - Downside: so-called first-degree price discrimination (= perfect discrimination) is possible on the basis of data-driven algorithms

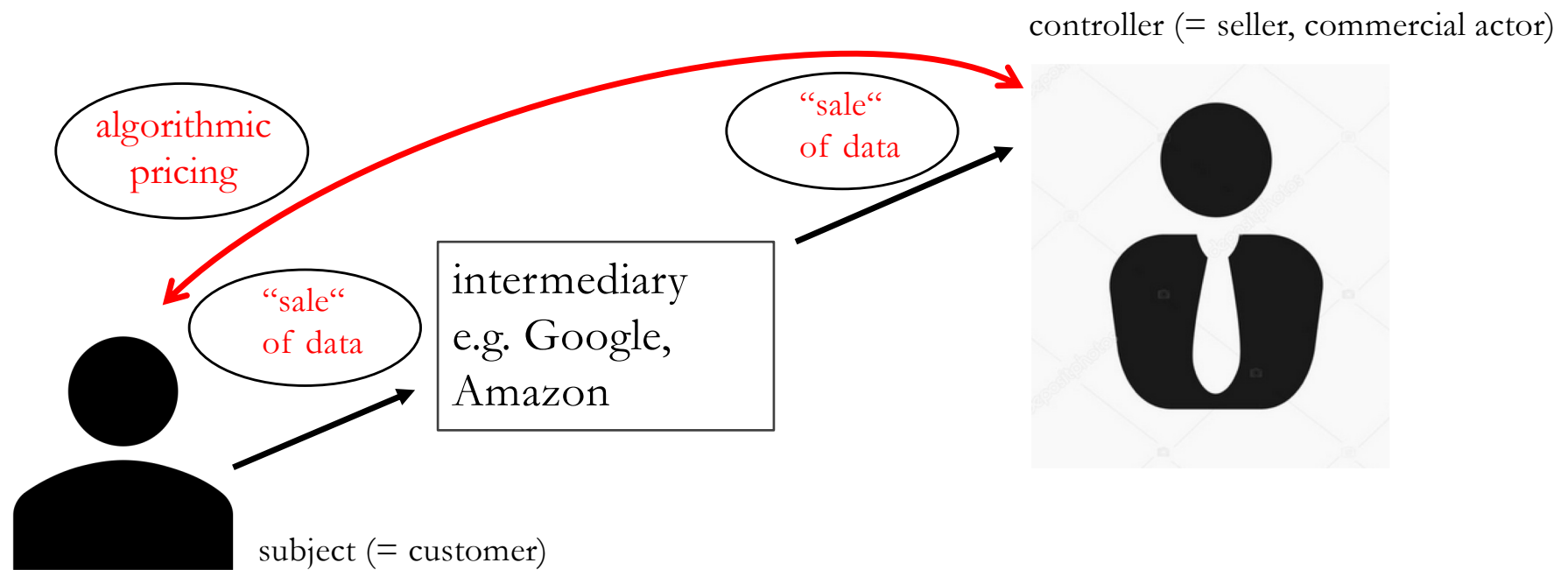
Dynamic and personalized pricing



Dynamic and personalized pricing

- Legal implications
 - Tort law?
 - Price discrimination as illegal discrimination – e.g., against women or foreigners?
 - See, e.g., Directive 2000/43/EC (2000) (equal treatment irrespective of racial or ethnic origin) or Directive 2006/123/EC (services in the internal market)
 - Contract law?
 - Unconscionability? Usury? Daylight robbery?
 - “Classical” application: only applies when overcharge by 100 percent or more compared to market prices (cf. *laesio enormis* of Roman law)
 - Unfair competition law?

Recap



Dynamic and personalized pricing

Unfair Commercial Practices Directive (2009)

Annex I: Misleading commercial practices [are] ...

18. Passing on **materially inaccurate information on market conditions** or on the possibility of finding the product with the intention of inducing the consumer to acquire the product at conditions less favourable than normal market conditions.

Dynamic and personalized pricing

Unfair Commercial Practices Directive (2009)

Art. 7: Misleading omissions

1. A **commercial practice** shall be regarded as **misleading** if, in its factual context, taking account of all its features and circumstances and the limitations of the communication medium, it **omits material information that the average consumer needs, according to the context, to take an informed transactional decision and thereby causes or is likely to cause the average consumer to take a transactional decision that he would not have taken otherwise.**

...

Dynamic and personalized pricing

- What does it mean?
 - “omit material information” and
 - “take a transactional decision that he would not have taken otherwise”
- Perspective?
 - “Average consumer who is reasonably well informed and reasonably observant and circumspect” (ECJ, *Gut Springenheide* (1998))
- Compare the so-called ultimatum game ...

Dynamic and personalized pricing

- Empirical data
 - Germany: 90% of internet users consider price discrimination based on the user's hardware, operating system, or the use of a certain website or app as “unfair”
 - Spain and Germany: 90% consider discrimination on the basis of willingness to pay, place of residence, or personal preferences as “unfair”
 - USA: majority of consumers reject price discrimination on the basis of collected online information/data

Dynamic and personalized pricing

Unfair Commercial Practices Directive (2009)

Article 8: Aggressive commercial practices

- A commercial practice shall be regarded as aggressive if, in its factual context, taking account of all its features and circumstances, by harassment, coercion, including the use of physical force, or undue influence, it significantly impairs or is likely to significantly impair the average consumer's freedom of choice or conduct with regard to the product and thereby causes him or is likely to cause him to take a transactional decision that he would not have taken otherwise.

Dynamic and personalized pricing

Article 9

In determining whether a commercial practice uses harassment, coercion, including the use of physical force, or undue influence, account shall be taken of:

- (a) its **timing**, location, nature or persistence; ...
- (c) the **exploitation by the trader of any specific misfortune or circumstance of such gravity as to impair the consumer's judgement**, of which the trader is aware, to influence the consumer's decision with regard to the product; ...

Dynamic and personalized pricing

Example

A commuter without a valid train ticket is in a hurry. Approaching the train station, she attempts to purchase the ticket online. Due to personalized pricing, the price is ca. 200% of the regular price.

Is this an "aggressive commercial practice" under Art. 8 UCP Directive?

Algorithms and antitrust

Algorithms and antitrust

Art. 101 TFEU

The following shall be prohibited as incompatible with the internal market: all **agreements between undertakings**, decisions by associations of undertakings and **concerted practices** which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular those which:

(a) directly or indirectly fix purchase or selling prices or any other trading conditions; ...

Algorithms and antitrust

- Concerted practices: “safety net“ to catch all forms of collusive conduct falling short of an actual agreement
- *Caveat*: not all “parallel“ behavior does constitute a concerted practice
- e.g., parallel raising of prices may be actual competition, not a restriction (ECJ, *Anic Partecipazioni* (1992))

Algorithms and antitrust

Sec. 1 Sherman Act

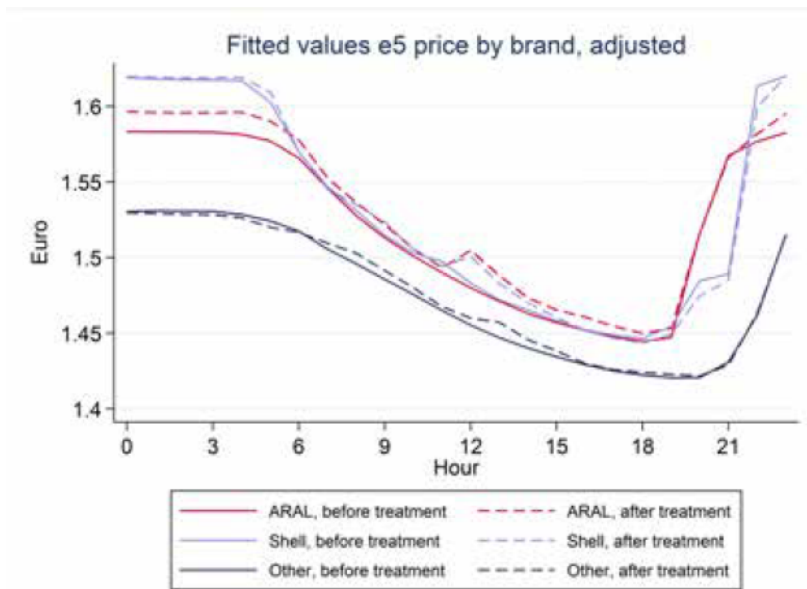
Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States or with foreign nations, is declared to be illegal.

- Competition, not restriction: conscious parallelism or interdependent pricing (without agreement)

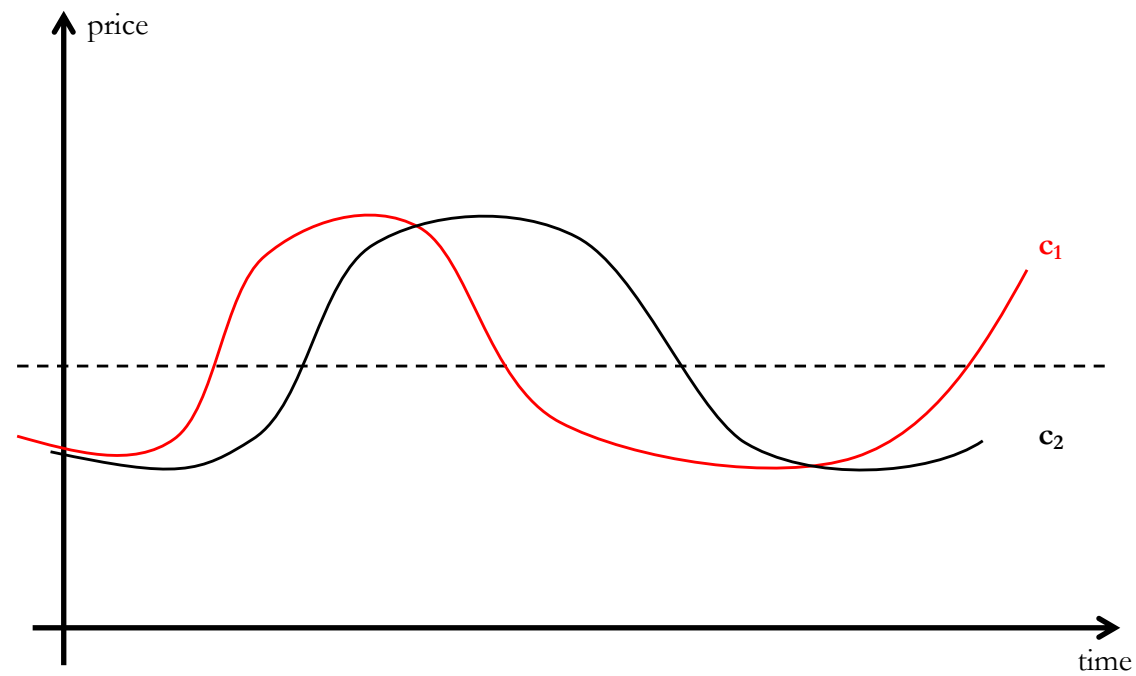
Algorithms and antitrust



Cabral et al., 2018



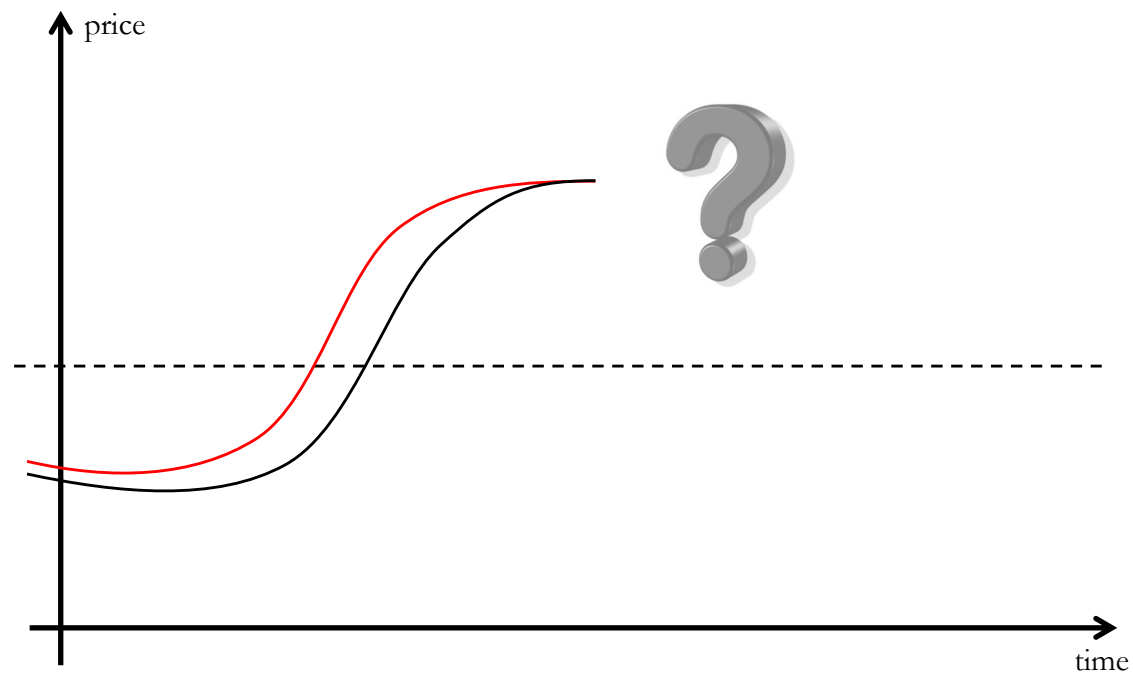
Algorithms and antitrust



Algorithms and antitrust

- Antitrust relevance?
 - Recap: fast price adjustments, lower consumer search and transaction costs, better matching between supply and demand ...
 - Question: Can algorithms cooperate in a way that constitutes “collusion” – overt or tacit?

Algorithms and antitrust



Algorithms and antitrust

EU approach (M. Vestager, 2017)

*What businesses can—and must—do is to ensure antitrust **compliance by design**. That means pricing algorithms need to be built in a way that doesn't allow them to collude. . . .*

*And **businesses also need to know that when they decide to use an automated system, they will be held responsible for what it does**. So they had better know how that system works.*

Algorithms and antitrust

EU approach (EU-OECD roundtable note, 2017)

... Algorithms that are used to facilitate tacit collusion.

Firms that are involved in illegal competition practices cannot avoid legal liability on the basis that their algorithm acted in an autonomous manner. The way an employee, agent, or third-party works under a firm's "direction or control", an algorithm remains under a firm's control, and thus the firm will be liable for an algorithm's actions.

Summary and outlook

- Evaluation of data and privacy – cost-benefit analysis
 - Consumer: “Privacy paradox”
 - Intermediaries, content providers & sellers: cross-benefits of data collection and processing
- Market power, data ownership, and algorithms
 - Dividing line between monopoly/detrimental effects and innovation
 - How far can algorithms “optimize” the market mechanism?
- Societal effects of data and privacy deprivation
 - De-solidarization, e.g., in health insurance
 - Trust mechanisms and other exclusionary effects (“unfairness”)

Thank you!



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Before his appointment, Professor Dornis spent several years practicing in an international law firm and as a judge. He also is a Global Professor of Law at NYU Law School, and he is admitted to practice in New York.

