

Plateformes et algorithmes

Plateformes

Sites collaboratifs, marketplaces, réseaux sociaux...
Comment ils influencent nos choix



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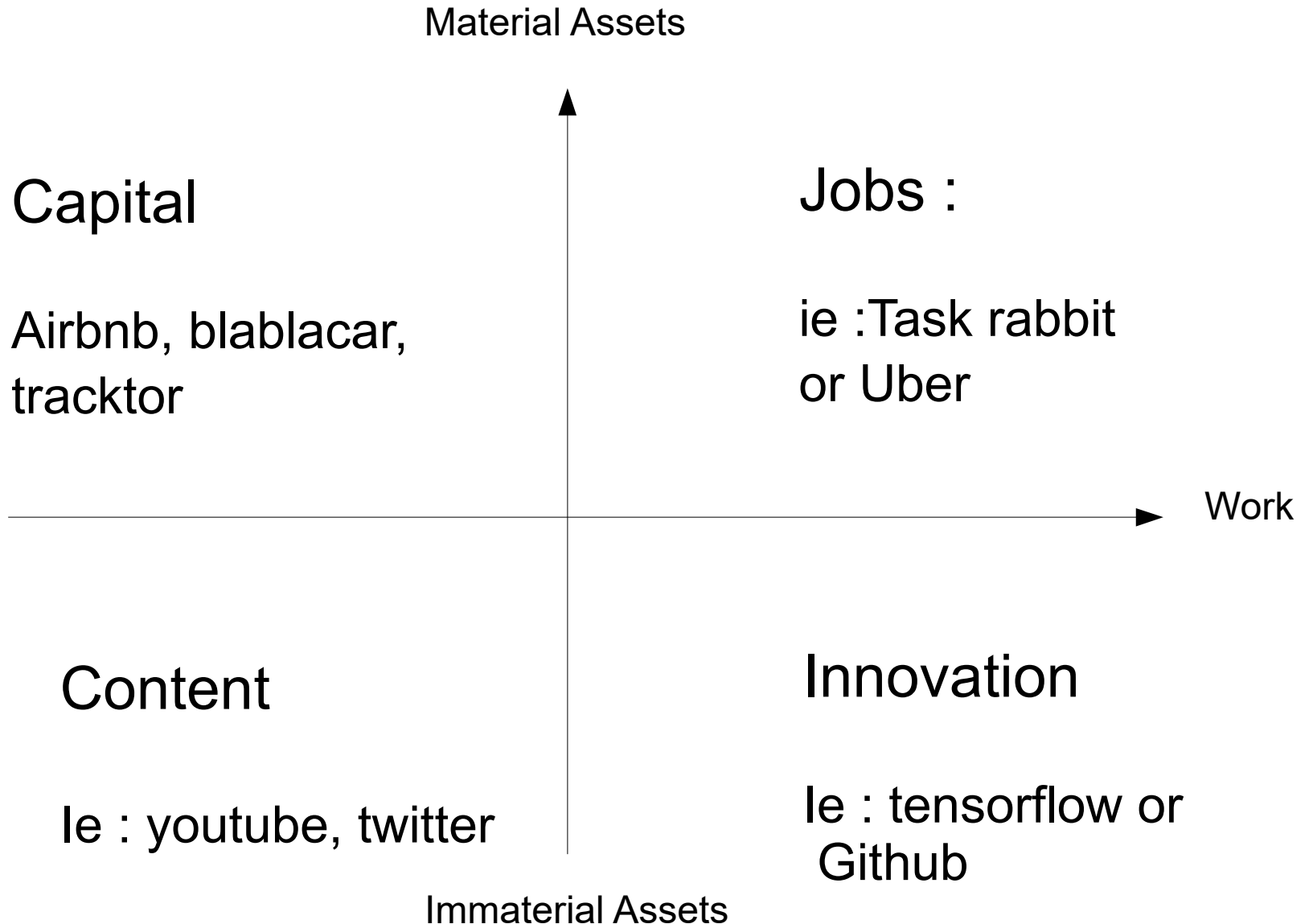
Université Paris Nanterre - Obsoco

Geography of platforms

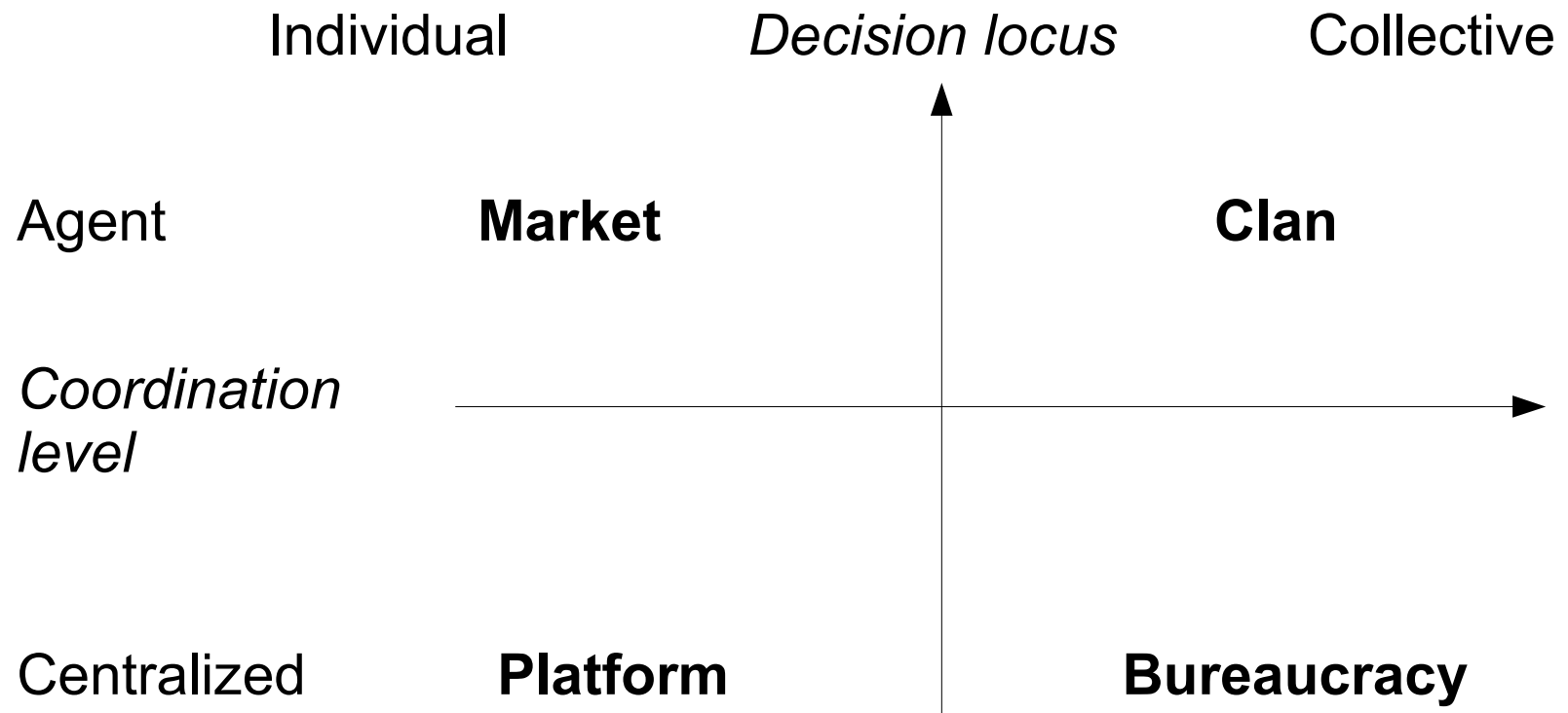
Headquarters location 170 platforms with market caps of \$1 billion or more



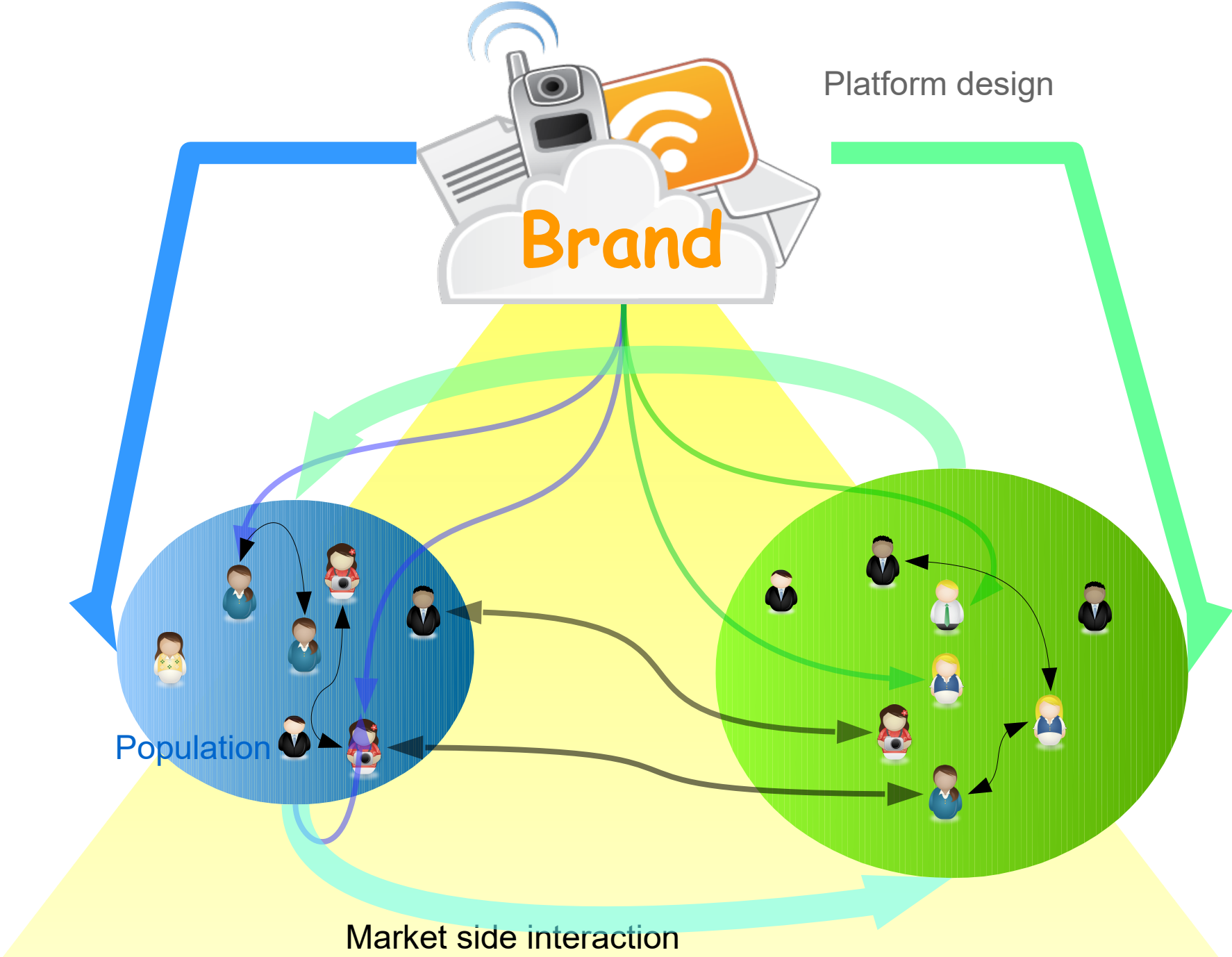
A rough taxonomy



New species of organization?



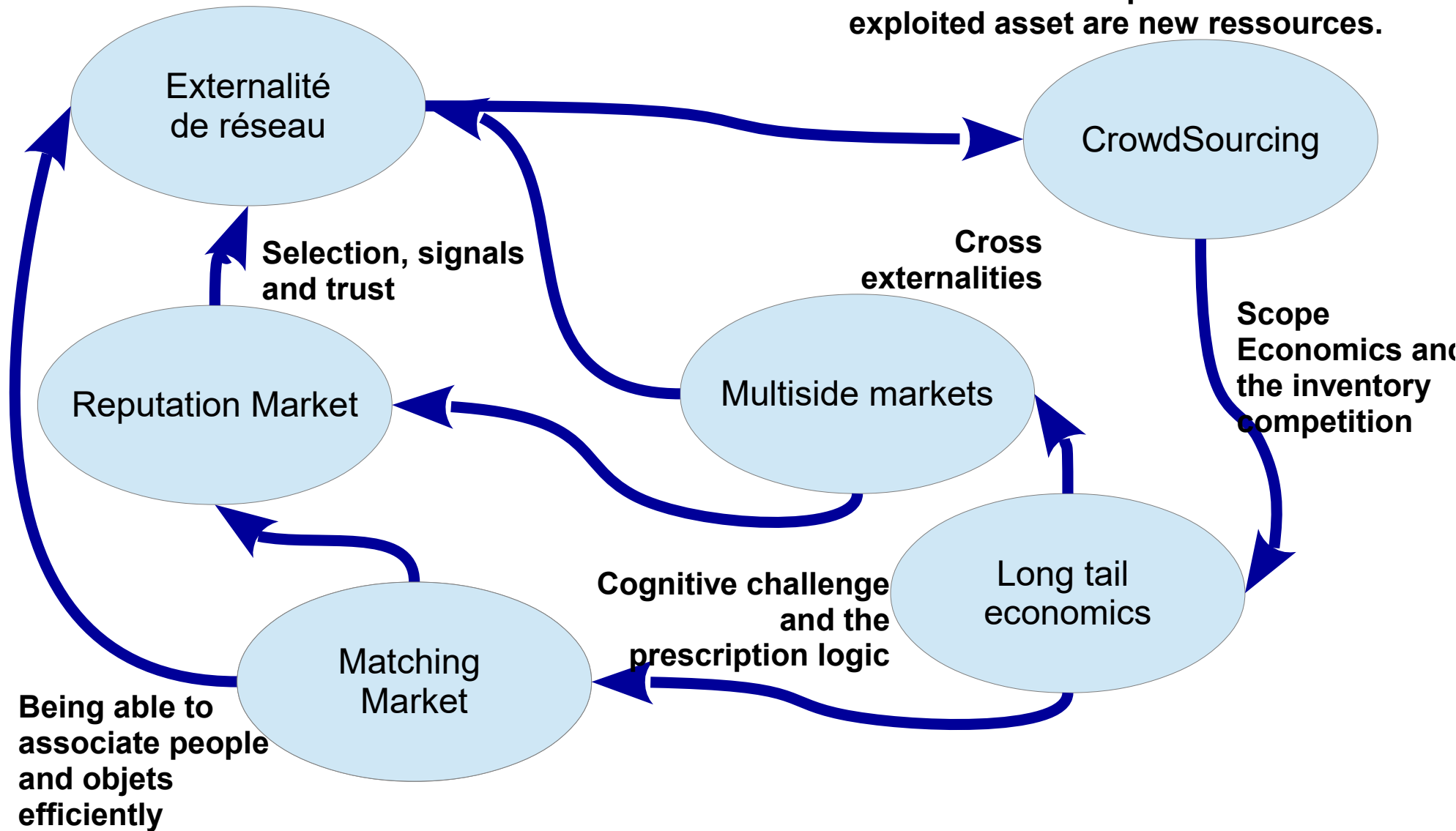
Governementability



The economics and virtuous circle of platforms

The critical size

Amateurs become producer and under exploited asset are new ressources.

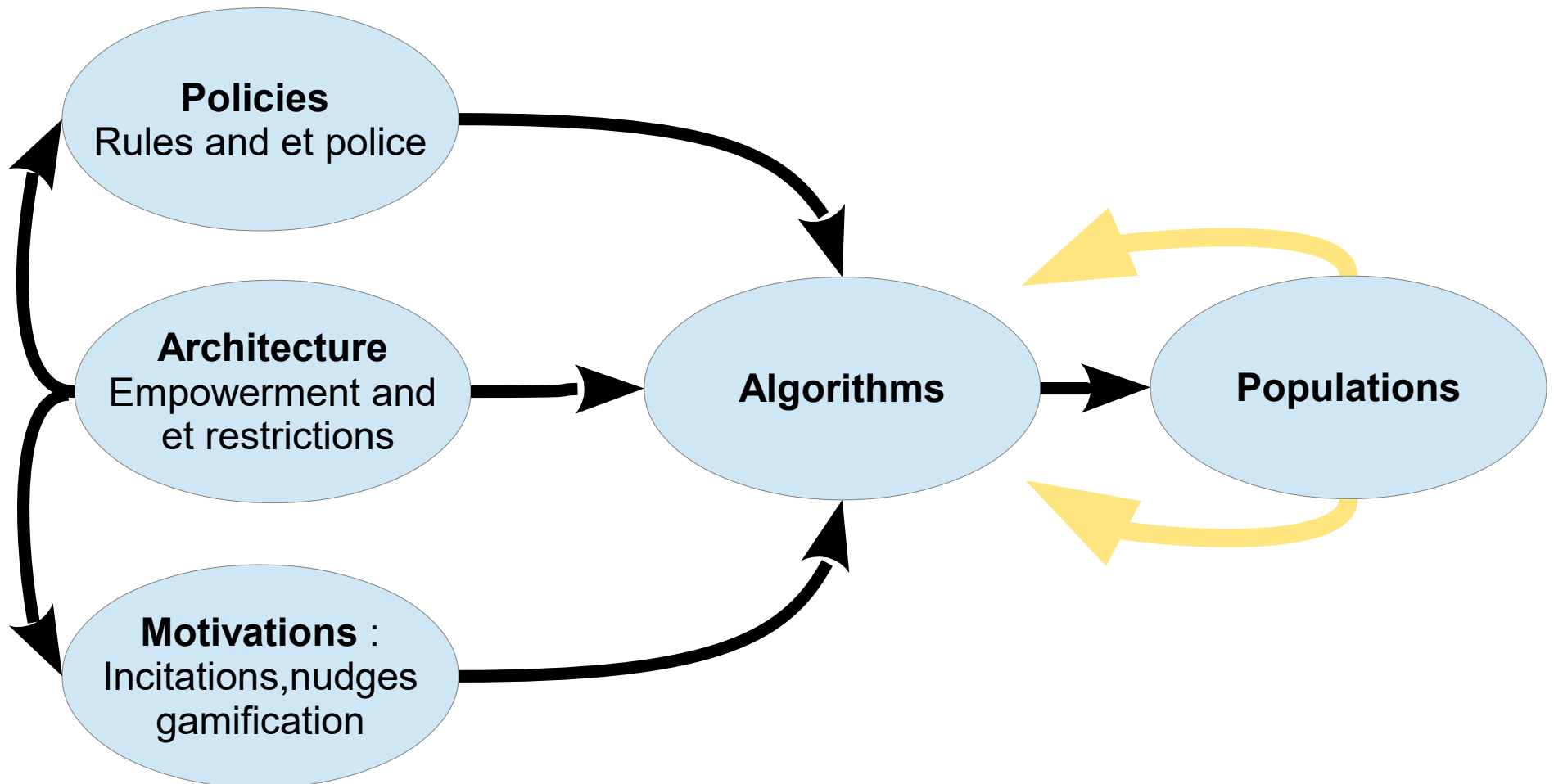


Enable or control (Agiu 2014)

Table 1: Examples

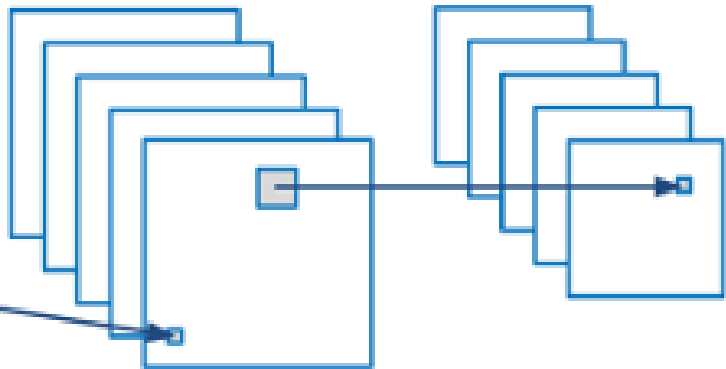
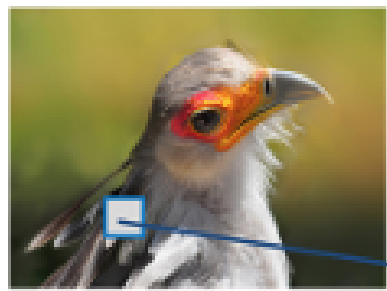
	<i>Transferable decisions</i>	<i>Non-transferable investment decisions made by professionals</i>	<i>Non-transferable investment decisions made by the firm</i>
Hair salons	investments in equipment and uniforms; advertising of individual professionals' services to customers (online and offline)	effort regarding service quality and/or customer experience (friendliness, before and after service, etc.)	investments in maintenance of the salon (cleanliness, signage), common washing and coloring facilities and advertising of the salon to customers; training and guidance provided to professionals
Uber & Lyft vs. traditional taxi companies	quality, maintenance and cleanliness of car subject to minimal requirements; work schedule	customer service (e.g. friendliness, politeness); investment in local information	advertising the service (company) to customers; investments in the quality of the corresponding app and back-end infrastructure (e.g. payment processing, dispatch system)
Elance-oDesk vs. traditional staffing and outsourcing agencies (e.g. Adecco, Infosys)	advertising of individual professionals services; work schedule and scope	investments in development of skills and expertise; effort put into understanding and responding to customer needs; effort supplied in the provision of the service	investments in the (online) infrastructure that allows communication and monitoring by the client; investment in payment functionality; advertising the firm to corporate clients
Hospitals & their clinics	equipment; support staff; work schedule and scope; advertising of individual clinics services	investments in development of skills and expertise; customer service; effort supplied in the provision of the service	development and maintenance of common infrastructure (e.g. physical space, common staff, any shared equipment); advertising the hospital (e.g. website)
Coursera vs. University of Phoenix	curriculum design (topics, length, assessment); advertising of individual instructors and courses	quality of content and its delivery; effort put into understanding and responding to students needs	investments in online infrastructure for content delivery, interactions, feedback and evaluations (both ways); advertising the brand
eBay Motors vs. Beepi	advertising and presentation of individual cars; after-sale customer service and guarantees	quality and/or maintenance of the product	investments in the website and related infrastructure (e.g. payment system, fulfillment, delivery, customer service, etc.); advertising of the website to users

« Par « **gouvernementalité** », j'entends l'ensemble constitué par les institutions, les procédures, analyses et réflexions, les calculs et les tactiques qui permettent d'exercer cette forme bien spécifique, quoique très complexe, de **pouvoir**, qui a pour cible principale **la population**, pour forme majeure de **savoir** l'économie politique, pour instrument technique essentiel les **dispositifs** de sécurité. » **Michel Foucault**



Population : a key concept

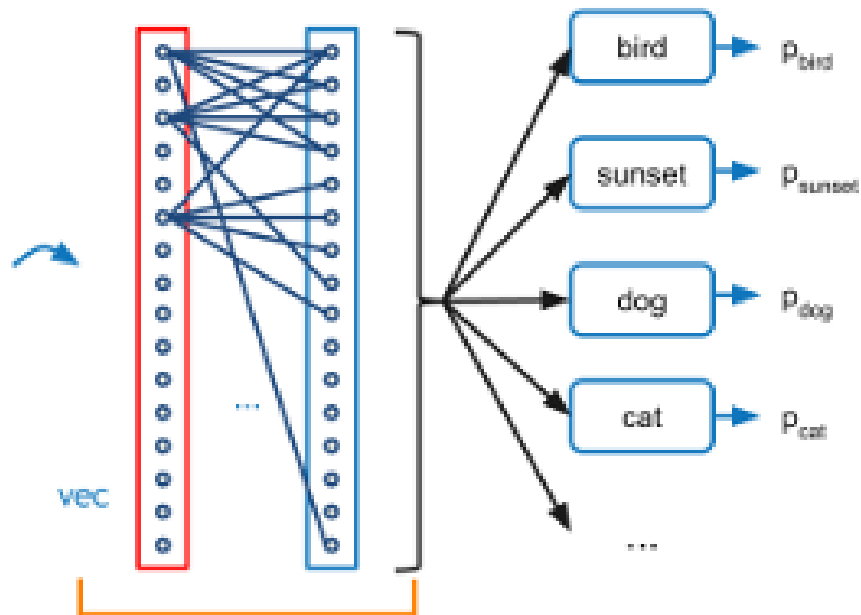
- More than **crowd** :
 - A quasi-body (not only the agregation of individuals)
 - Bute overdetermination through technological objectivation.
- But less than a **community**
 - Heterogeneous agents : human being, institutions, machines and ghosts
 - Individual interactions are a big part, but no need of sense of belonging, or identity.



convolution + nonlinearity

max pooling

convolution + pooling layers



vec

fully connected layers

Nx binary classification

bird P_{bird}

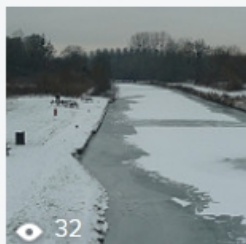
sunset P_{sunset}

dog P_{dog}

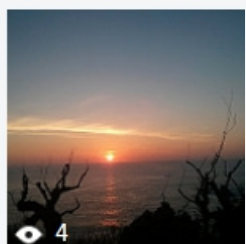
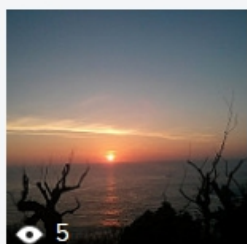
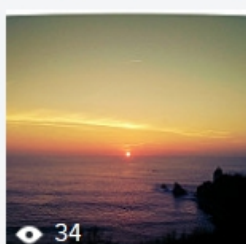
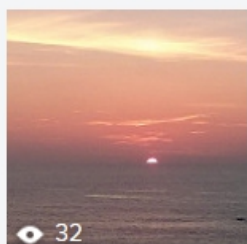
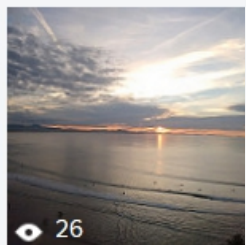
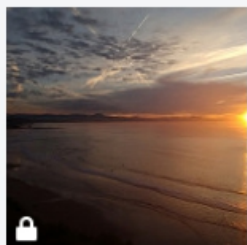
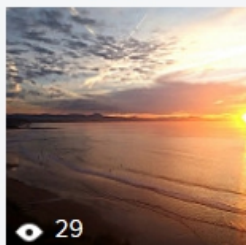
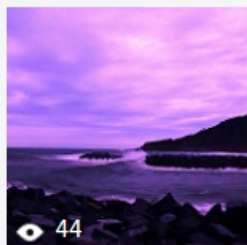
cat P_{cat}

- Animal
- Architecture
- Food
- Landscape**
- field 4
- mountain 3
- rock 7
- shore 77
- **snow 2**
- sunset 15
- water 31
- other 23
- People
- Plant
- Style
- Text
- Vehicle
- Other

landscape: snow 2 [Select all](#)



landscape: sunset 15 [Select all](#)



Motorola XT1072



Biarritz, Aquitaine, France

$f/2.0$

3.5 mm

$1/1149$

ISO 80

Flash (auto, did not fire)

[Show EXIF](#)

This photo is currently not in any groups

[Add to group](#)

This photo is in 1 album

[Add to album](#)



Biarritz

12 items

Tags **BETA** [?](#)

[Add tags](#)

People in photo

[Add people](#)

[sunset](#)

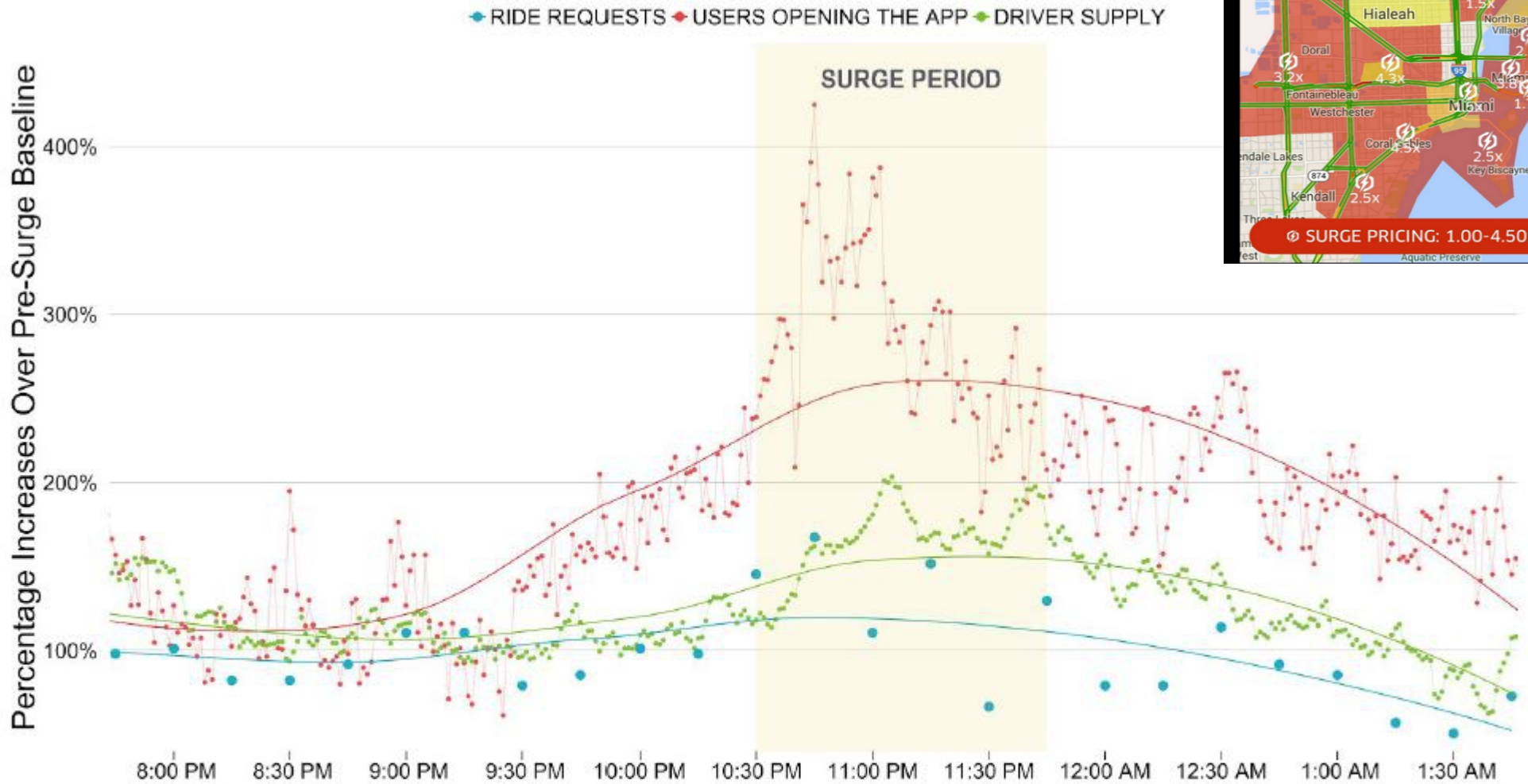
[serene](#)

[outdoor](#)

[skyline](#)

[sky](#)

Surge Pricing : smart pricing



Note: Figure reports the number of users opening the Uber app each minute over the course of March 21, 2015 (in red), as well as the sum of total requests for Uber rides in 15-minute intervals over the same time period (blue circles), and the number of “active” uberX driver-partners within the same geospatial box (noted above) each minute (green line). In this case, “active” means they were either open and ready to accept a trip, en route to pick up a passenger, or on trip with a passenger. Pure volume counts have been normalized to a pre-surge baseline, defined as the average of values between 9:00 and 9:30 PM that

Propagating emotion (FB experiment)

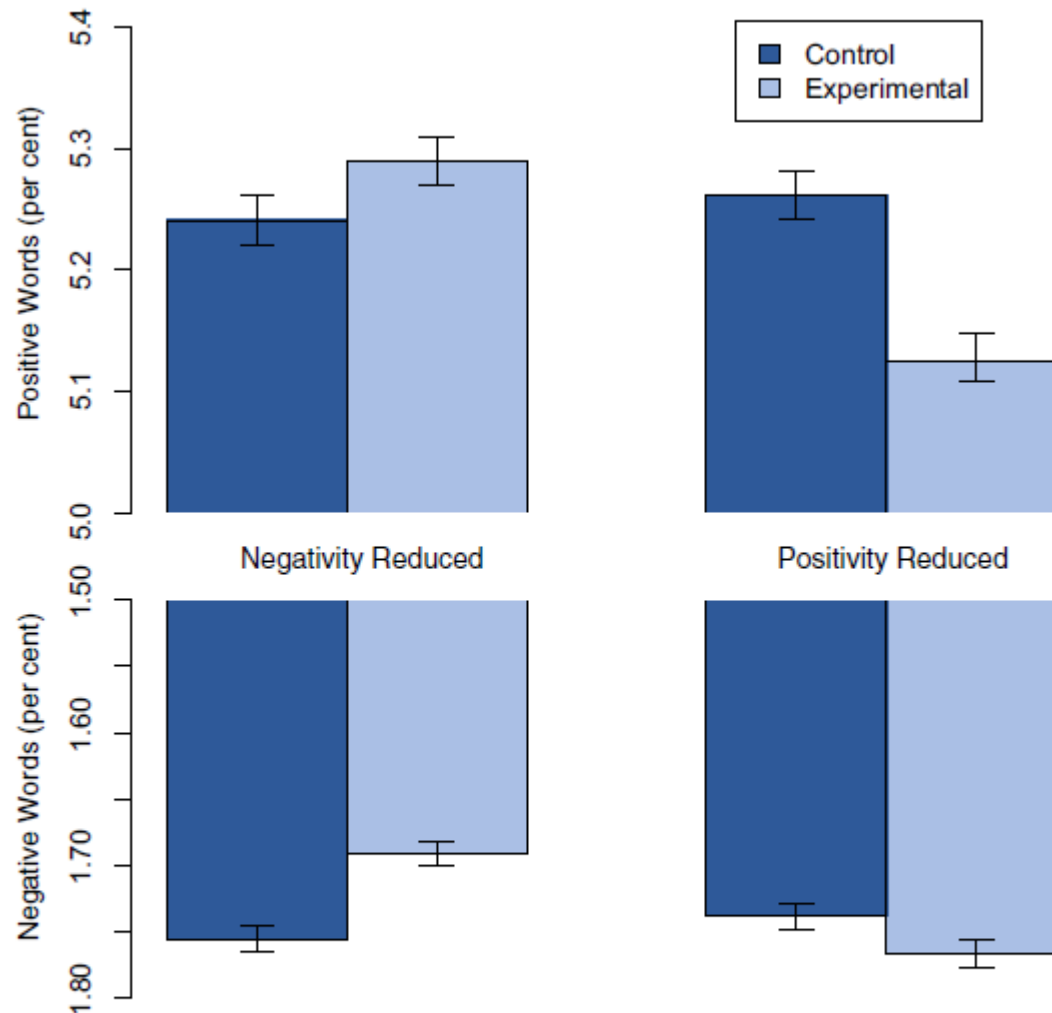
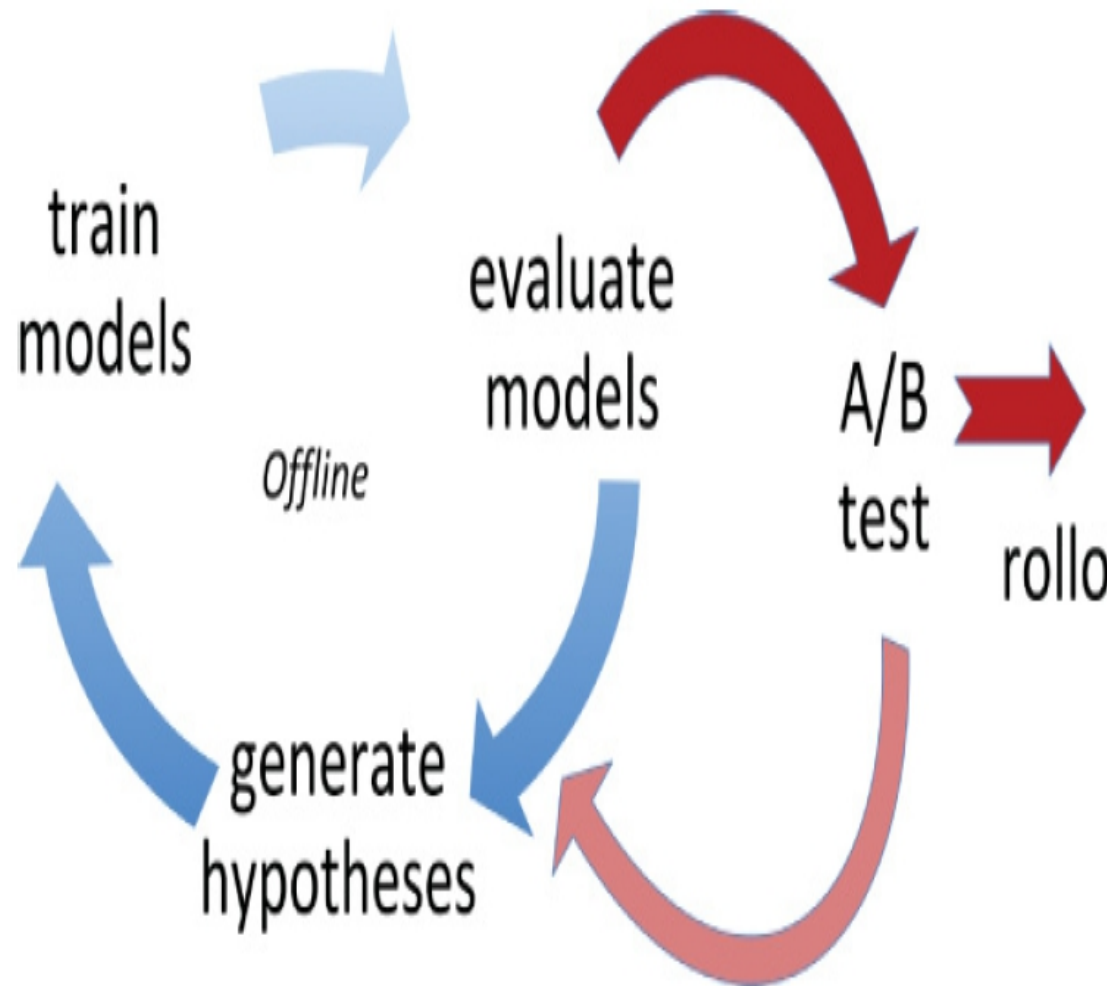


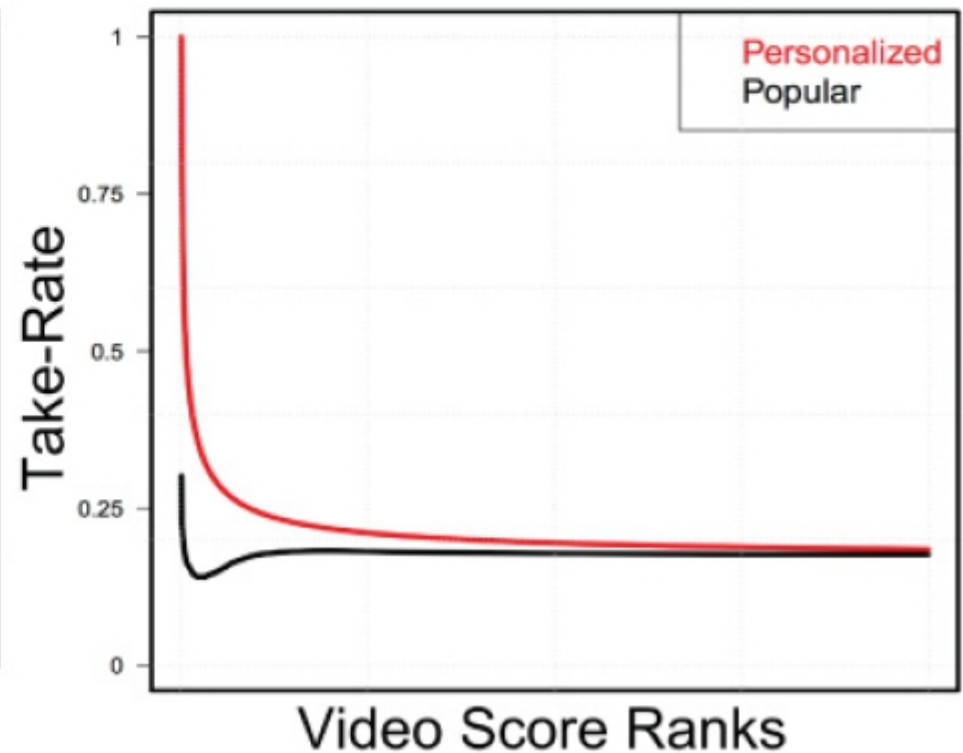
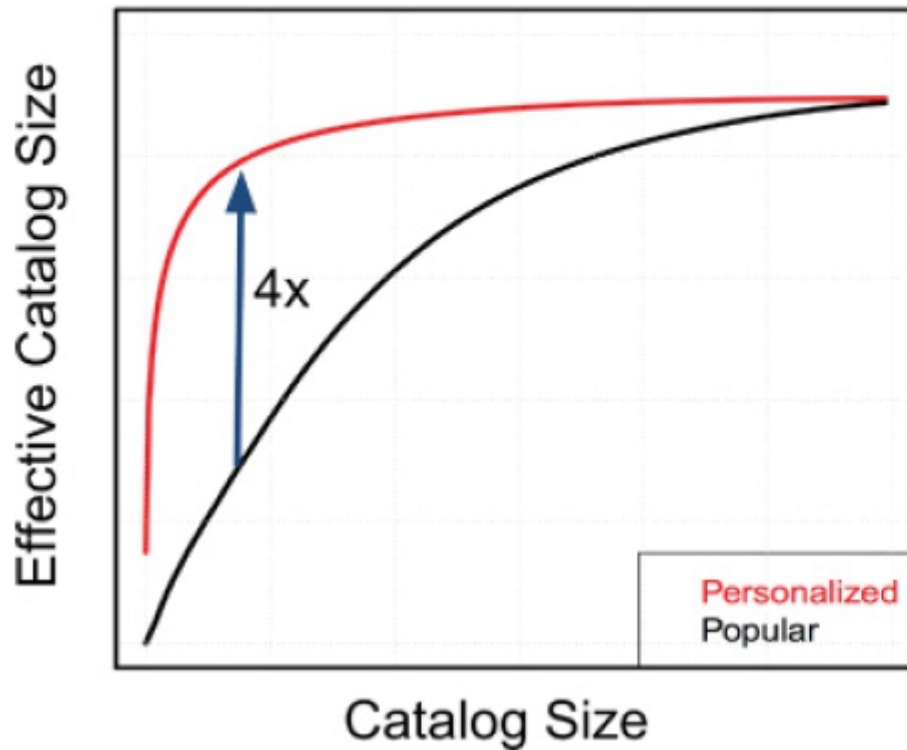
Fig. 1. Mean number of positive (Upper) and negative (Lower) emotion words

How to build a recommendation system



Netflix : algorithmic architecture and metrics

The Netflix Recommender System: Algorithms, Business Value, and Innovation



Grades and ranking

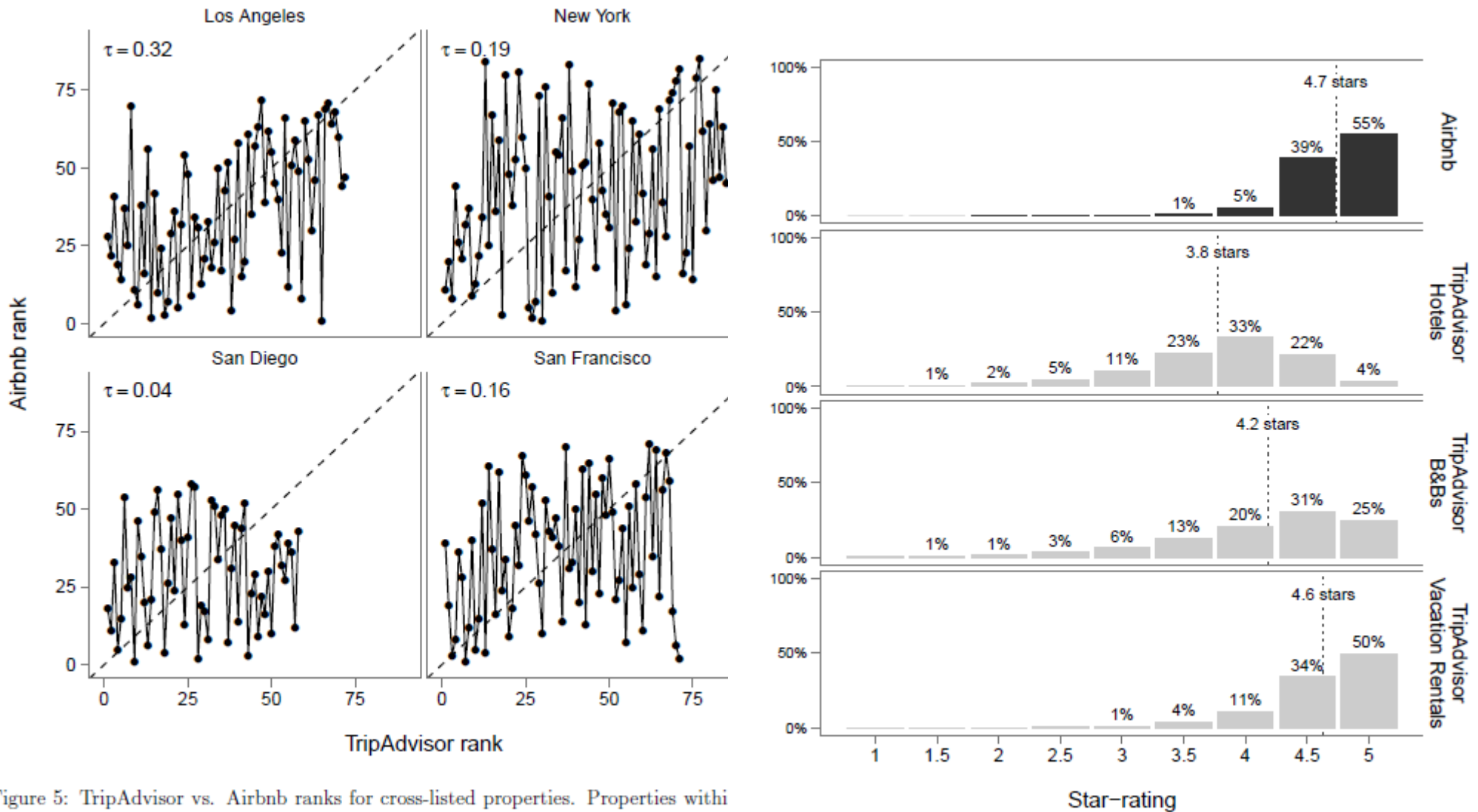
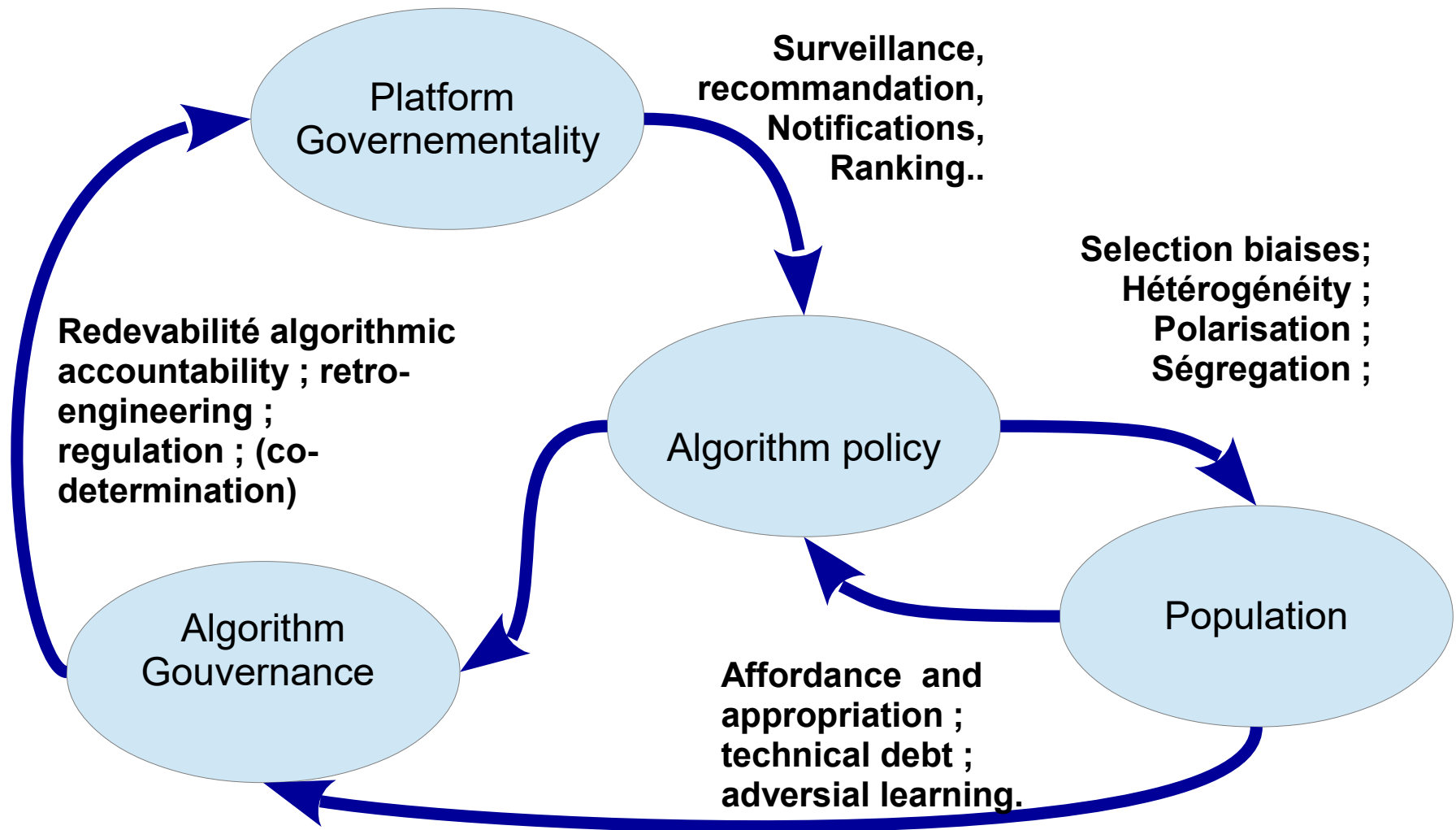


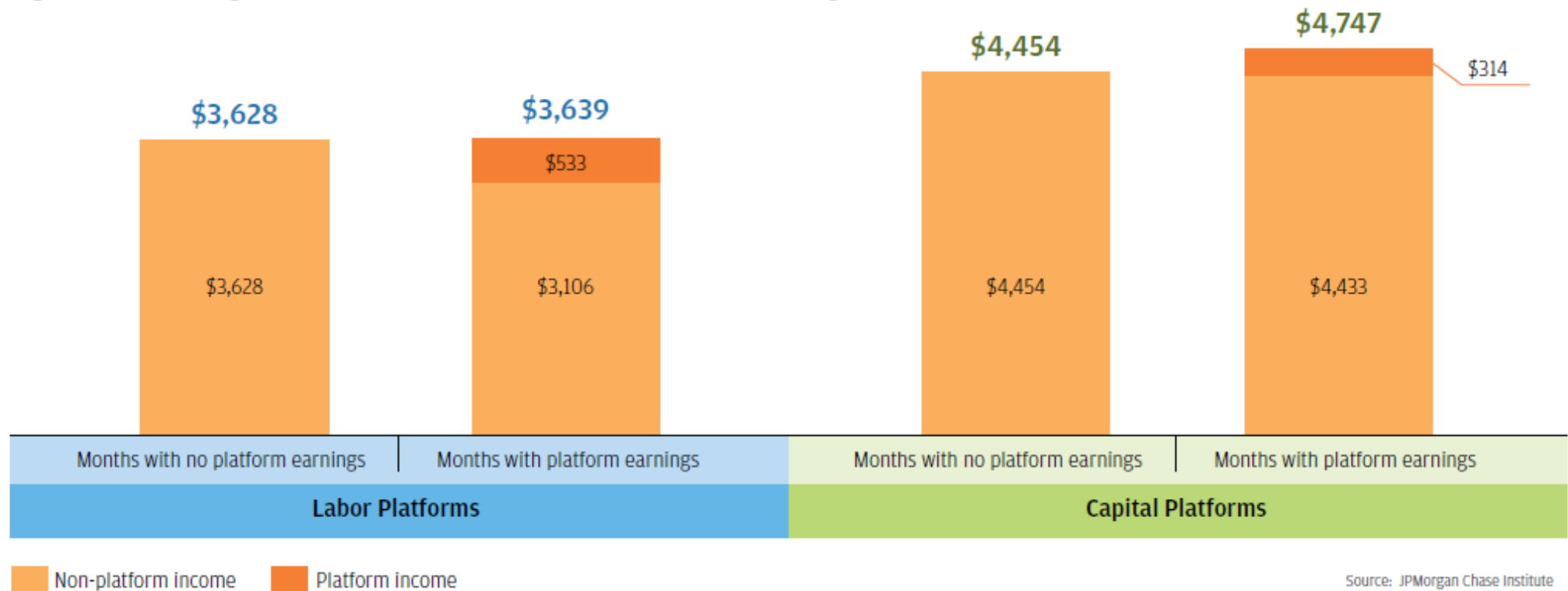
Figure 5: TripAdvisor vs. Airbnb ranks for cross-listed properties. Properties with city are ranked first by star-rating, then by number of reviews, and remaining ties are broken lexicographically.

From Algorithmic governmentality to Governance of algorithm



A word about revenues

Figure 29: Earnings in months with and without platform earnings



« platformization »

- Do traditional organizations could transform themselves as platforms ? (ACCOR, MAIF)
- How traditional organizations could partially integrate platforms approach (after sales,...) ? (ie : Sosh, Leroy-merlin)
- How small business could integrate the platformscape (ie : Construction industry) ?
- Do platforms are a new layer in the organization ecology (when Ikea sell through Amazon) ?
- **Is it the end ?** (of firms and markets)