Automation, fauxtomation, and the future of work

Digital platform labor and the globalisation of AI

Antonio A. Casilli
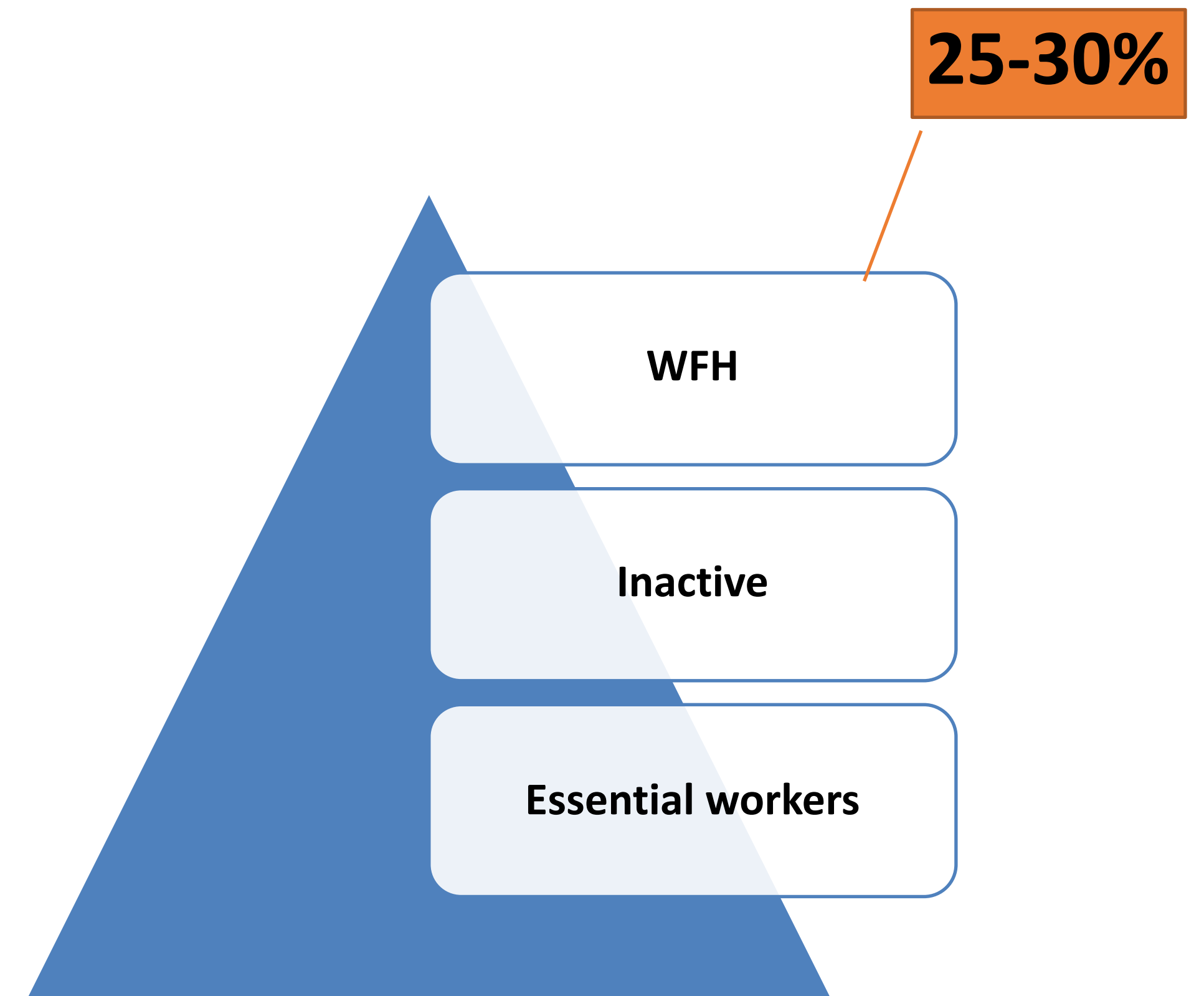
A pandemic in the era of digital platforms

- Covid-19 and the triumph of platforms
- Work from home and the "social distancing of work"
- An opportunity to automate?
- The Future of Employment (2013): 47% of jobs gone by 2030?

Carl Benedikt Frey says increasing automation is likely in the wake of the pandemic © FT montage; Getty Images

P Tubaro & AA Casilli (2022). Who bears the burden of a pandemic? Covid-19 and transfer of risk on digital platform workers. *American Behavioral Scientist,* DOI: 10.1177/0002764221066027.

Fragmentation of the labour market

- "Grand work from home experiment" (ILO)
- Accessible especially to the most privileged socio-professional categories with
  - good equipment and connectivity
  - good housing
  - no household and care chores
- Essential jobs remain face-to-face

25-30%

WFH

Inactive

Essential workers

P Tubaro & AA Casilli (2022). Who bears the burden of a pandemic? Covid-19 and transfer of risk on digital platform workers. *American Behavioral Scientist*, DOI: 10.1177/0002764221066027.

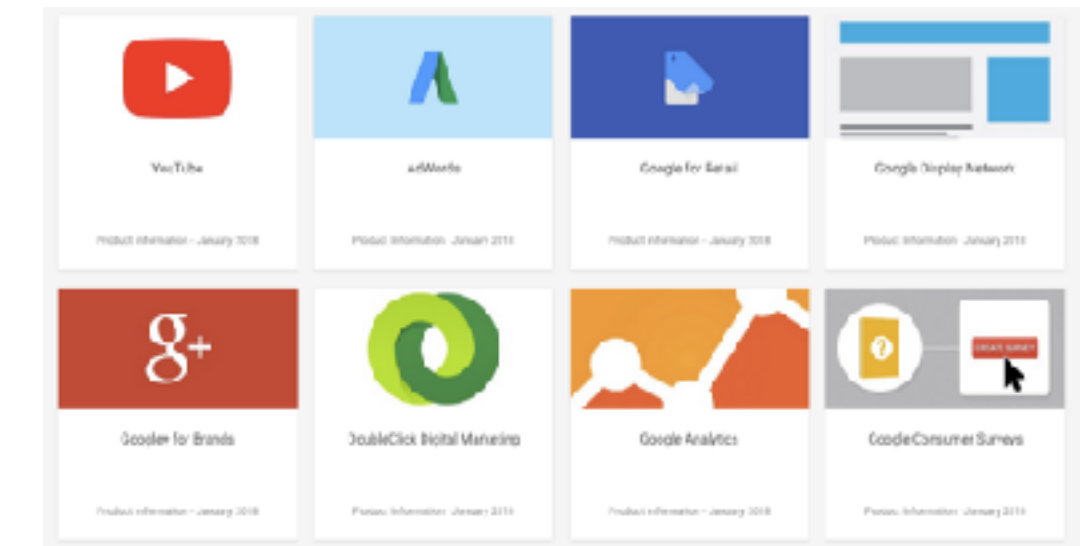# The weight of global interdependencies

- Increased visibility of local logistics
- Increased visibility of global logistics
- Disruption of global supply networks
- Role of data infrastructures

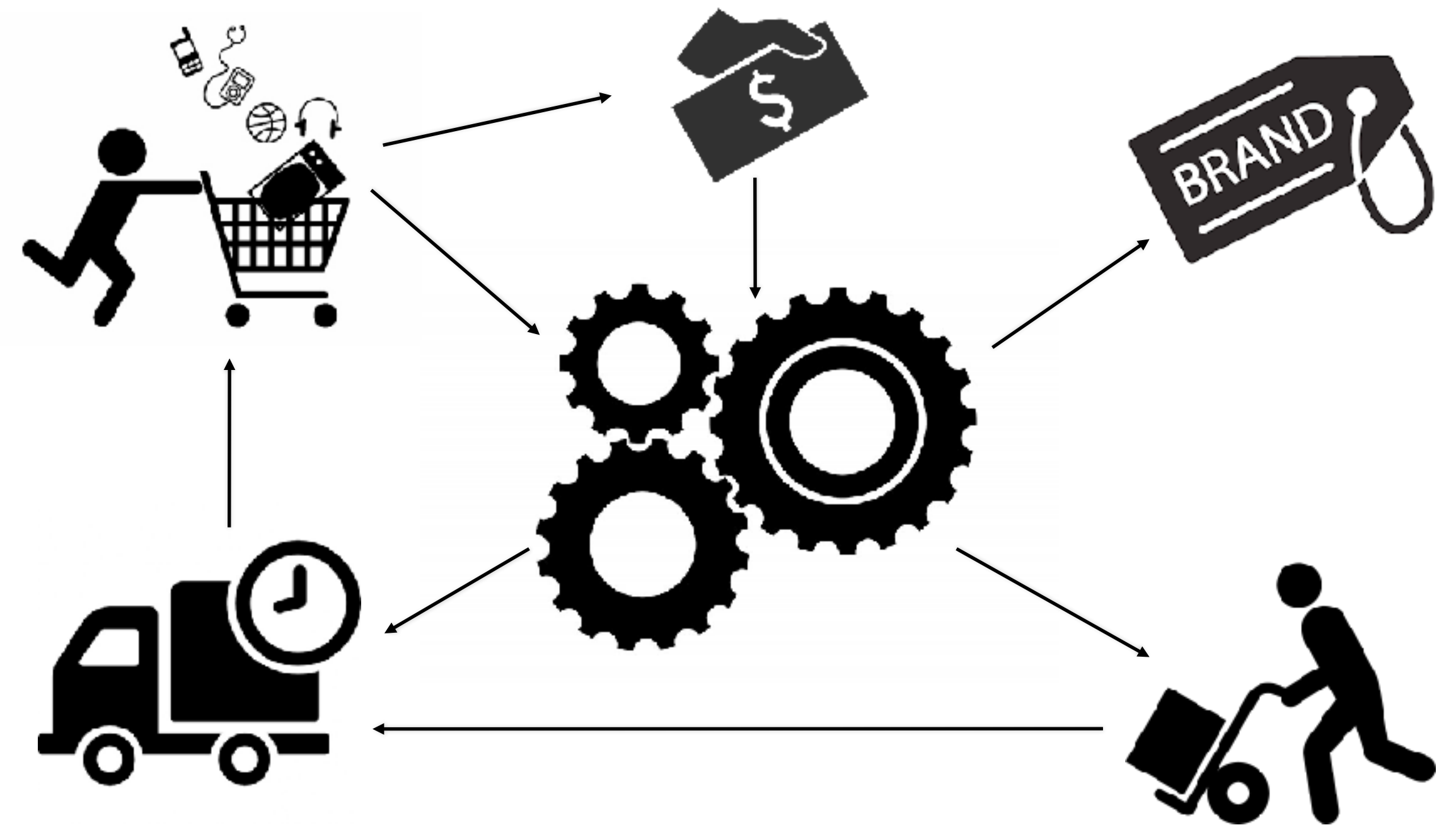March 2021 - Ever Given container ship blocks the Suez Canal for six days

Platformisation

- Market/company hybrids
- Productive ecosystems
- Multi-sided markets
- Algorithmic matching systems
- Models that focus on value (and mainly data) capture
- Data-intensive automation

AA Casilli & J Posada (2019). The Platformization Of Labor and Society. In M Graham & WH Dutton (eds), *Society and the Internet; How Networks of Information and Communication are Changing Our Lives*, (2nd edition): 293-306, Oxford University Press.
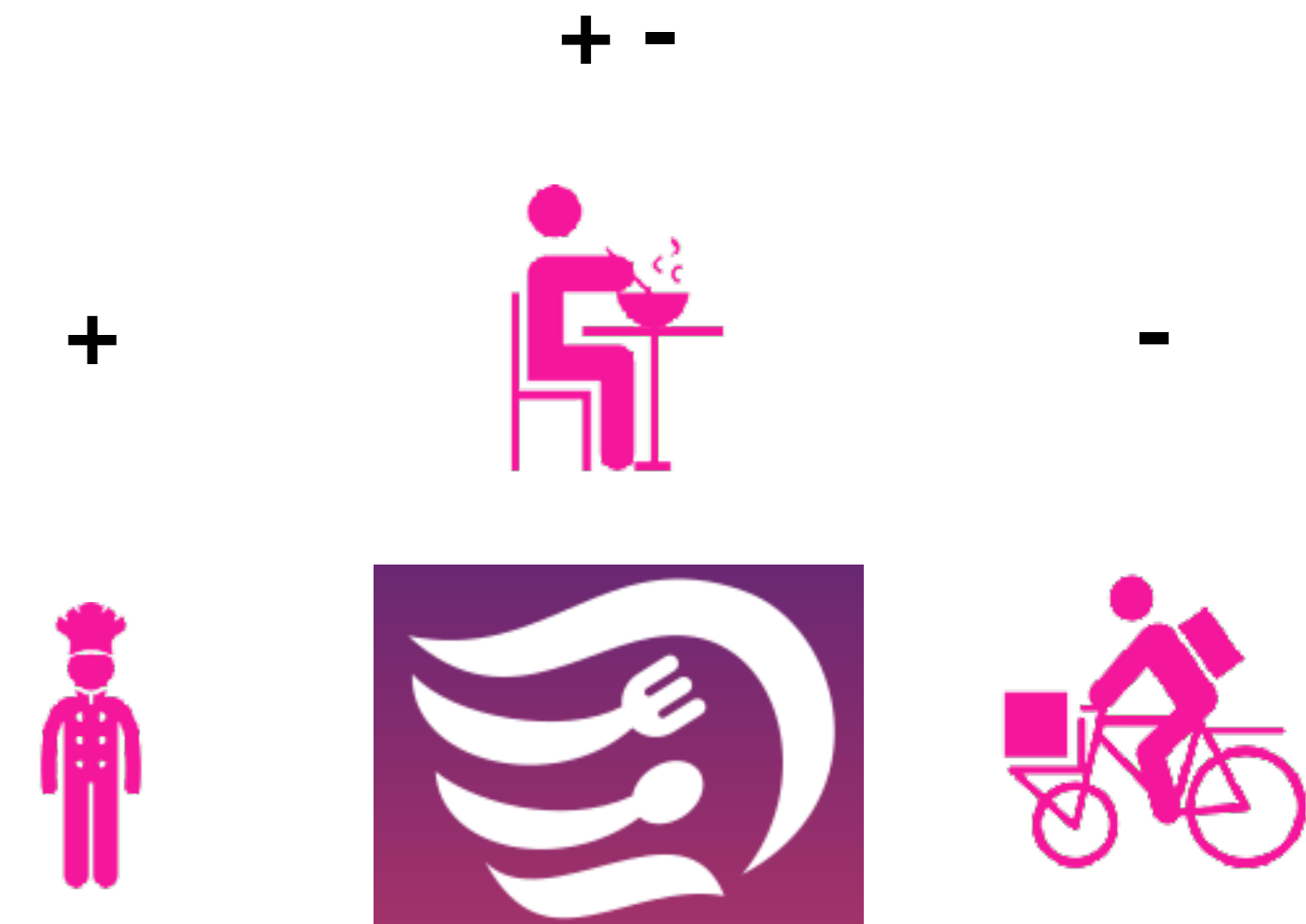
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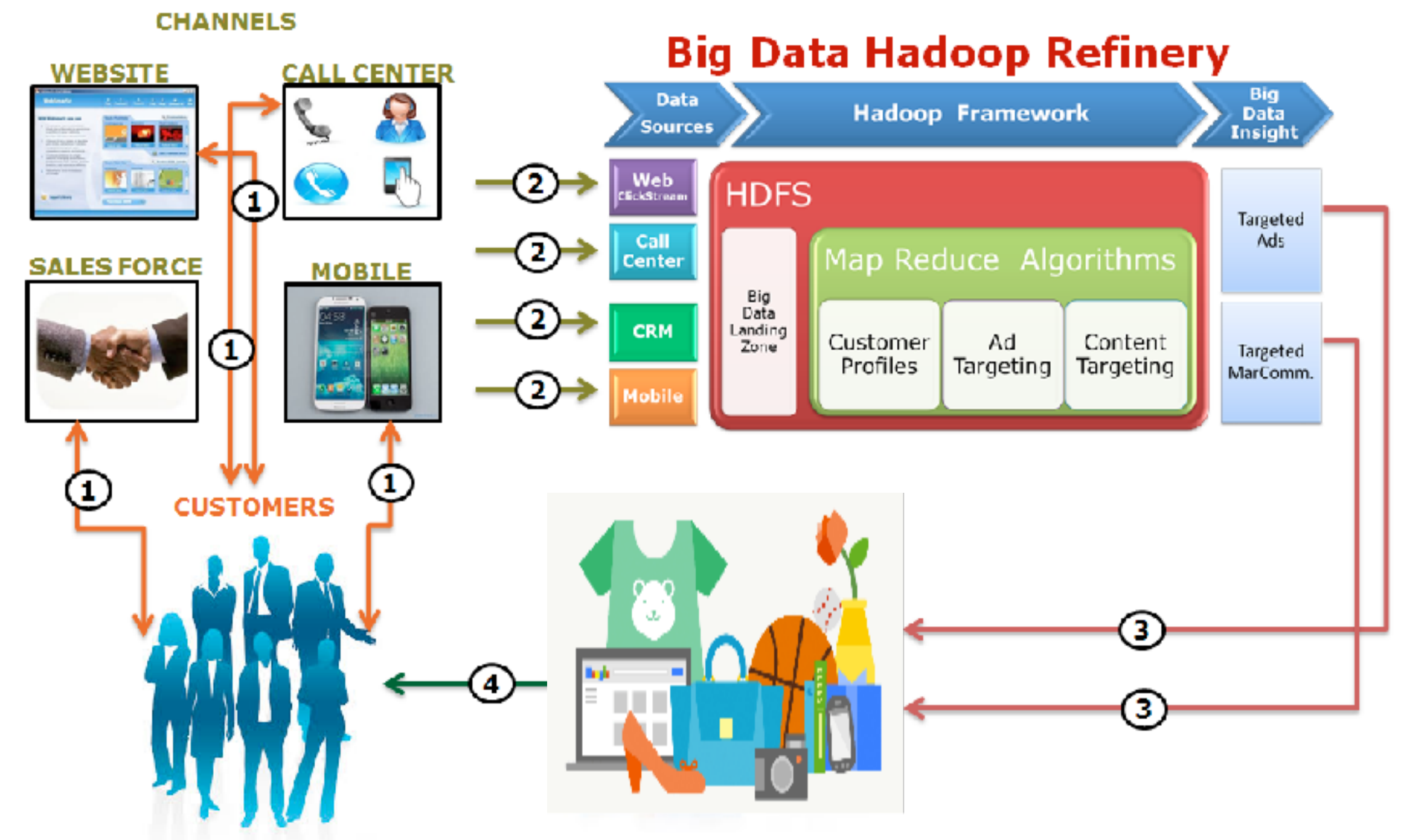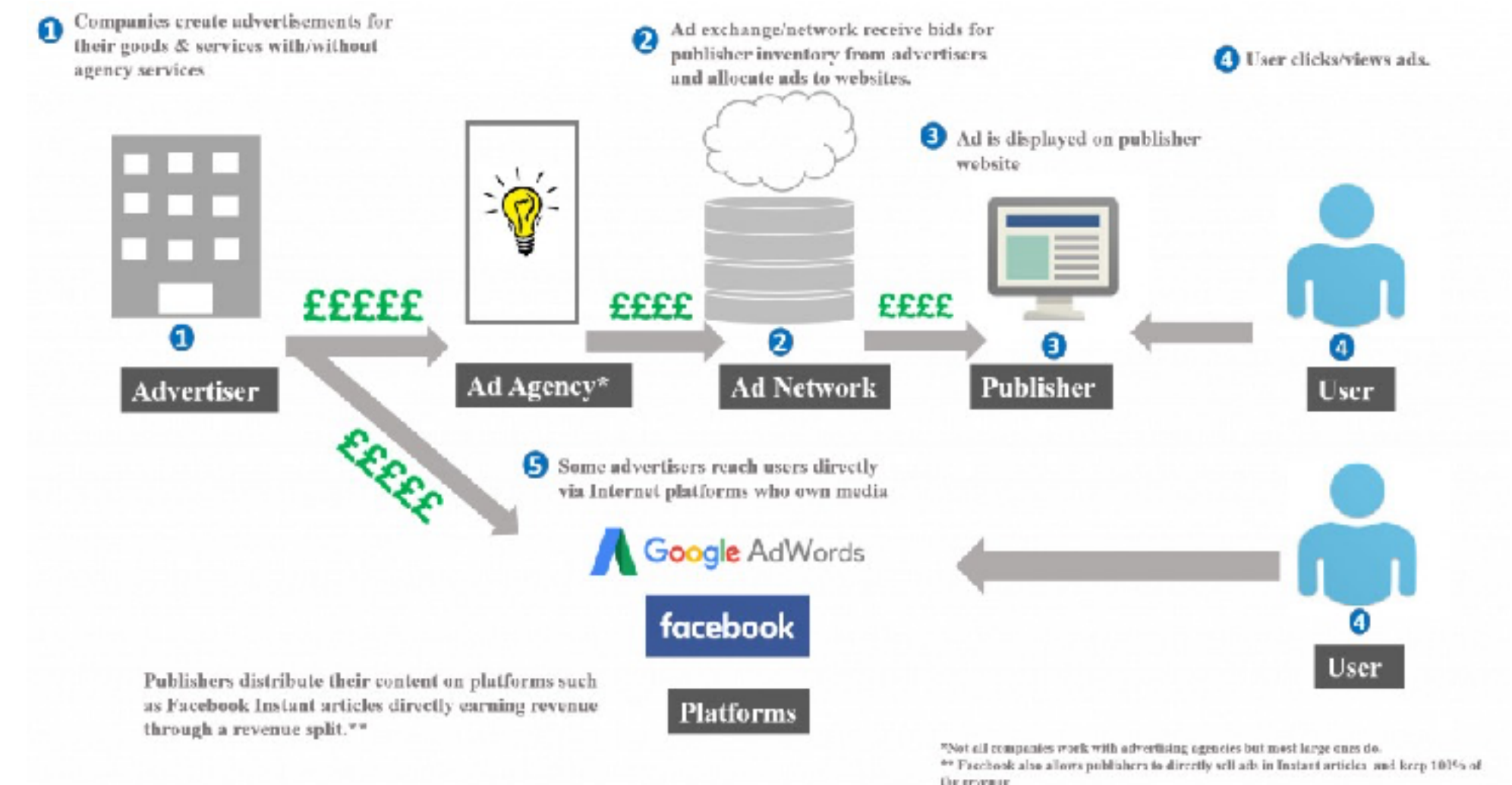
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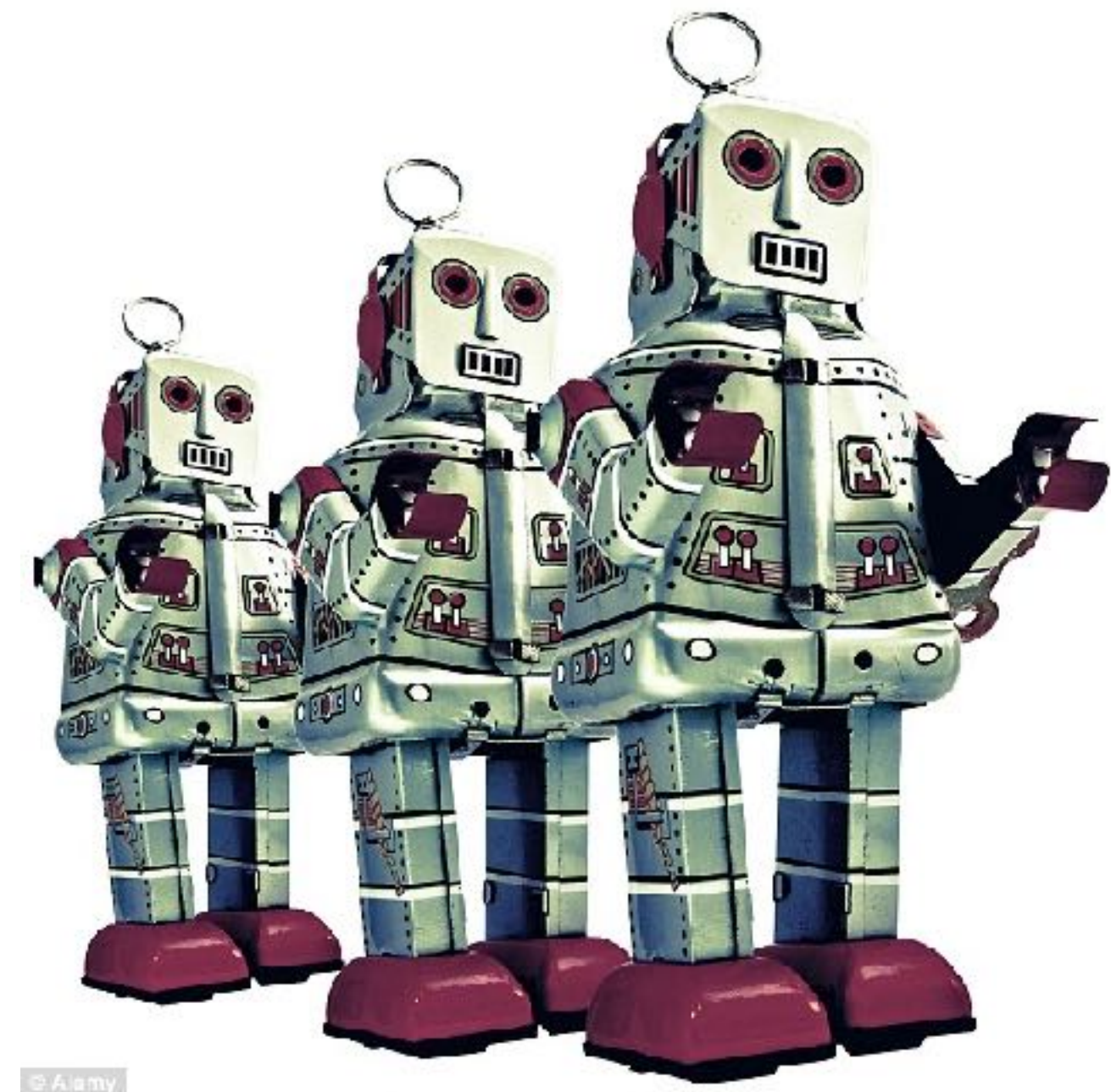- Data-intensive automation

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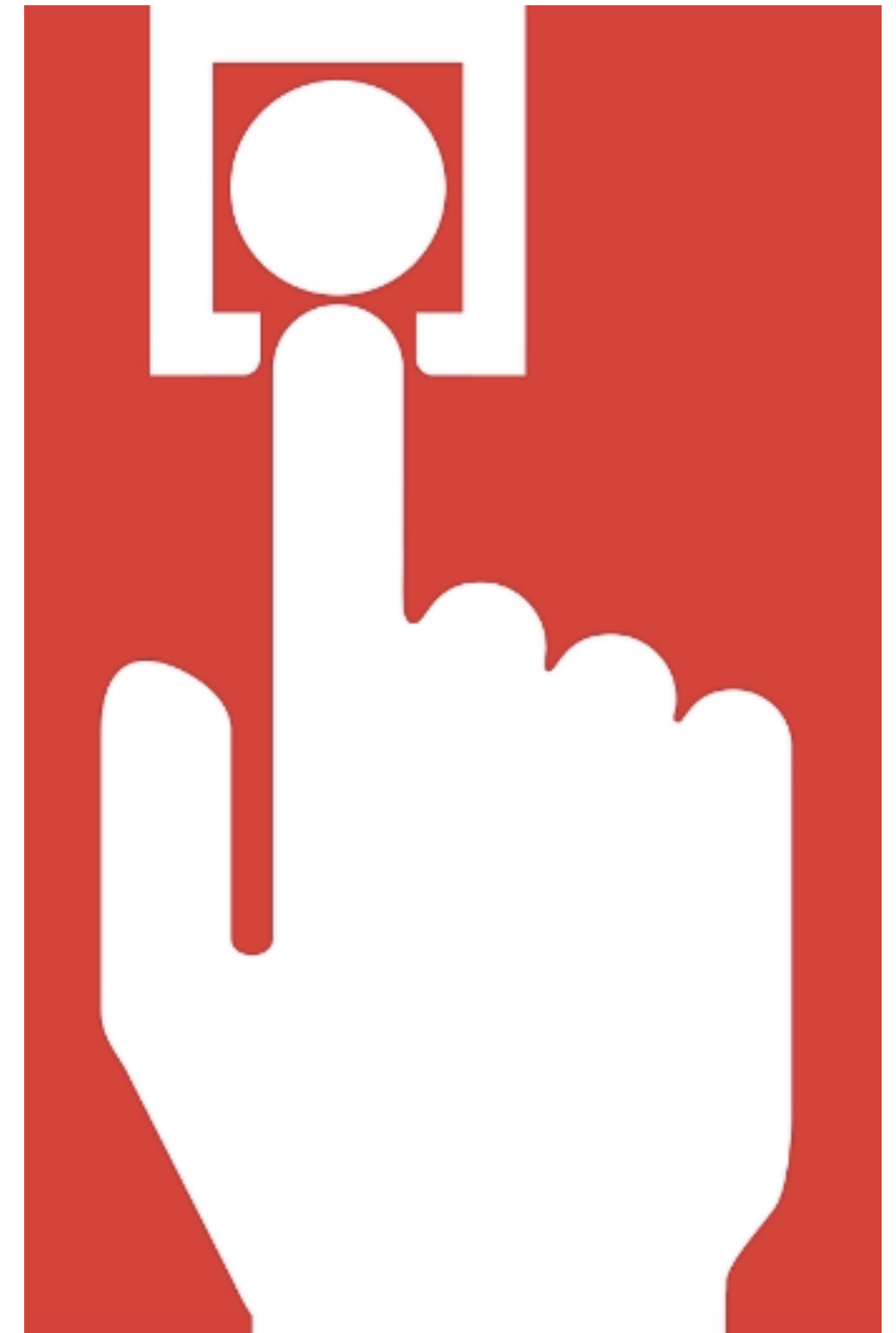
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Your data is for monetisation

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Taking into account *digital labor*

- Living labour (performed by actual humans) that has been
  - taskified
  - datafied
- Mediated by platforms
- Brings to surface "heteromation" processes

AA Casilli & J Posada (2019). The Platformization Of Labor and Society. In Mark Graham & William H. Dutton (eds), *Society and the Internet; How Networks of Information and Communication are Changing Our Lives*, (2nd edition): 293-306, Oxford University Press.

Working on platforms

On-demand labour   Micro-work   Socially networked labour

Underpaid   **Micro-paid**   **Unpaid**

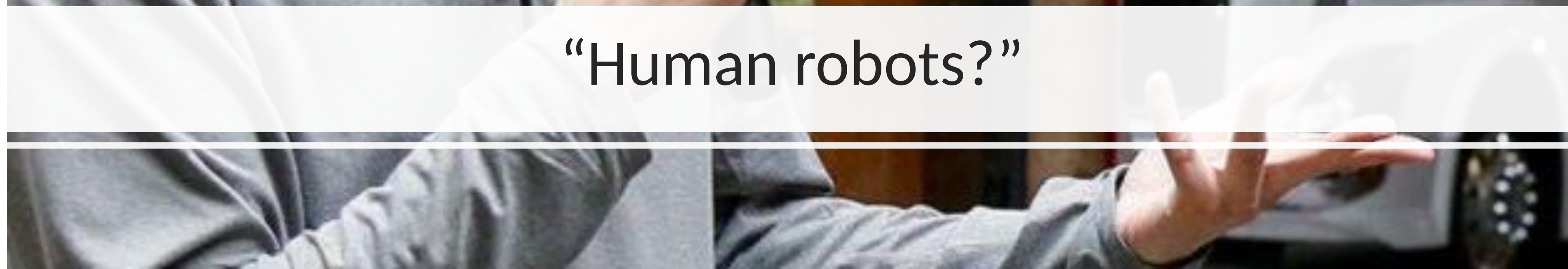AA Casilli (2021). Waiting for Robots: The ever-elusive myth of automation and the global exploitation of digital labor. *Sociologias*, 23(57): 112-133.

P Tubaro & AA Casilli (2019). Micro-work, artificial intelligence, and the automotive industry. *Journal of Industrial and Business Economics*, 46(3): 333–345

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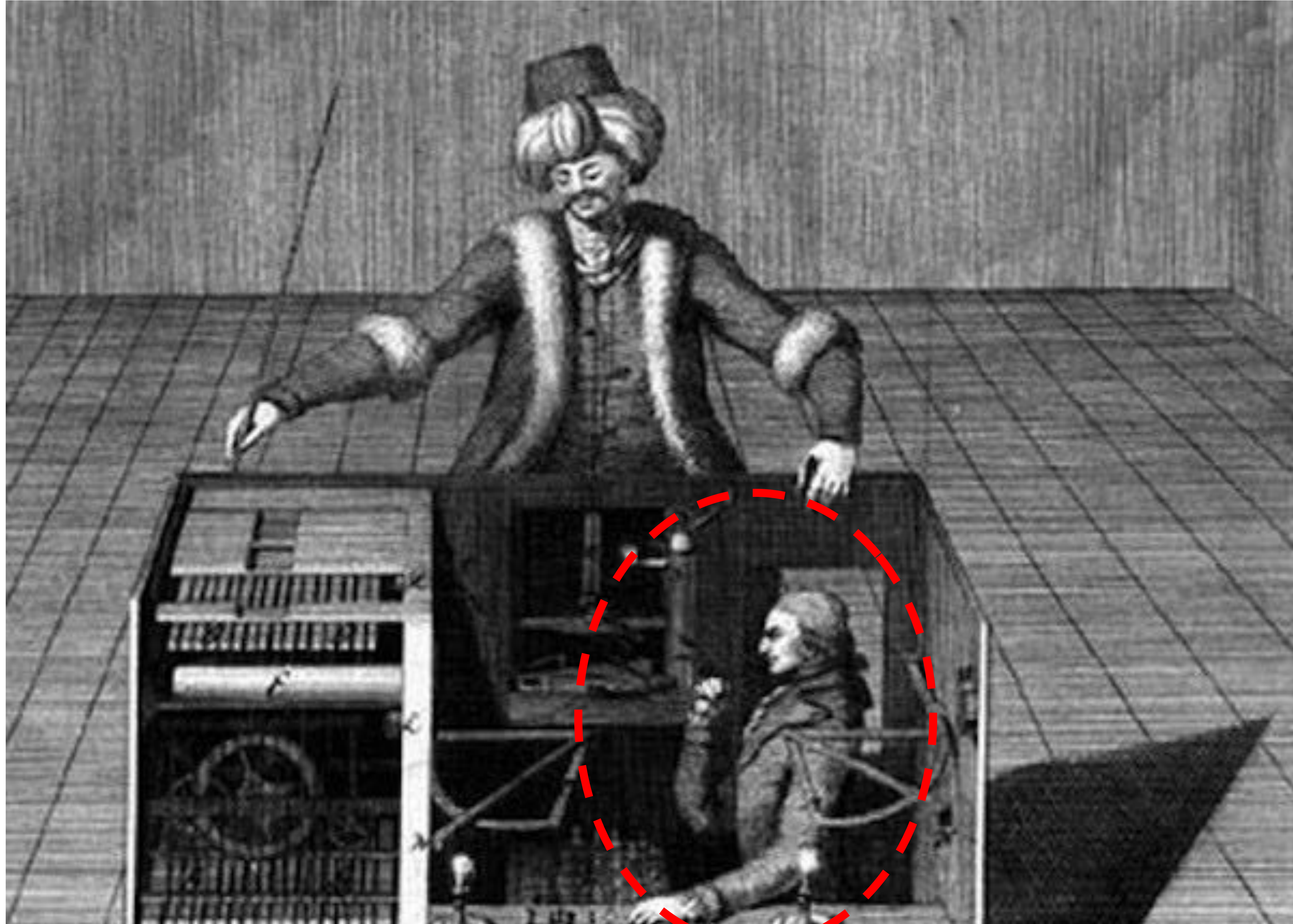
P Tubaro & AA Casilli (2019). [Micro-work, artificial intelligence, and the automotive industry](). *Journal of Industrial and Business Economics*, 46(3): 333–345

UBER
ATG

Top mounted lidar units provide a 360° 3-dimensional scan of the environment

Side and rear facing cameras work in collaboration to construct a continuous view of the vehicle's surroundings

Roof mounted antennae provide GPS positioning and wireless data capabilities

Forward facing camera array focus both close and far field, watching for braking vehicles, crossing pedestrians, traffic lights, and signage

360° radar coverage

Custom designed compute and storage allow for real-time processing of data while a fully integrated cooling solution keeps components running optimally

Self Driving Uber sensor suite

7 Cameras
1 Laser
Inertial Measurement Units

Custom compute and data storage
360° radar coverage

Advanced Technologies Group

UBER

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"Human robots?"

AA Casilli (2021). Waiting for Robots: The ever-elusive myth of automation and the global exploitation of digital labor. *Sociologias*, 23(57): 112-133.

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Classify Receipt — View a HIT in this group
Requester: Jon Brelig
HIT Expiration Date: Mar 8, 2016 (6 days 23 hours)
Time Allotted: 20 minutes
Reward: $0.02

Inv_B_2 — View a HIT in this group
Requester: rohzit0d
HIT Expiration Date: Mar 24, 2016 (3 weeks 1 day)
Time Allotted: 48 minutes
Reward: $0.00

Classify Receipt — View a HIT in this group
Requester: Jon Brelig
HIT Expiration Date: Mar 8, 2016 (6 days 23 hours)
Time Allotted: 20 minutes
Reward: $0.03

Find the exact "seconds time" that each word is sung in the song. — View a HIT in this group
Requester: Patrick Colangelo
HIT Expiration Date: Mar 4, 2016 (3 days 3 hours)
Time Allotted: 7 days
Reward: $0.01

Find email addresses and web page of American High Schools! — View a HIT in this group
Requester: Olga Svensen
HIT Expiration Date: Mar 2, 2016 (19 hours 14 minutes)
Time Allotted: 30 minutes
Reward: $0.03

Type the text from the images, carefully. Productivity and bonuses guaranteed. — View a HIT in this group
Requester: CopyText Inc.
HIT Expiration Date: Mar 8, 2016 (6 days 23 hours)
Time Allotted: 10 minutes
Reward: $0.01

Get Product Codes and Prices from a receipt ($$ BONUS UP TO 50 CENTS) — View a HIT in this group
Requester: Shopping Receipts US
HIT Expiration Date: Mar 22, 2016 (2 weeks 6 days)
Reward: $0.01

AA Casilli (2021). Waiting for Robots: The ever-elusive myth of automation and the global exploitation of digital labor. *Sociologias*, 23(57): 112-133.

How many people micro-work online?

Counting 'micro-workers':
societal and methodological challenges around new forms of labour

Paola Tubaro, Clément Le Ludec and Antonio A. Casilli

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Clément Le Ludec is a PhD student at the Interdisciplinary Institute for Innovation (i3) in Telecom Paris at the Institut Polytechnique de Paris, France.
Antonio A. Casilli is a Professor in the Interdisciplinary Institute for Innovation (i3), in Telecom Paris, at the Institut Polytechnique de Paris, France.

ABSTRACT
'Micro-work' consists of fragmented data tasks that myriad providers execute on online platforms. While crucial to the development of data-based technologies, this poorly visible and geographically spread activity is particularly difficult to measure. To fill this gap, we combined qualitative and quantitative methods (online surveys, in-depth interviews, capture-recapture techniques and web traffic analytics) to count micro-workers in a single country, France. On the basis of this analysis, we estimate that approximately 260,000 people are registered with micro-work platforms. Of these, some 50,000 are 'regular' workers who do micro-tasks at least monthly and we speculate that using a more restrictive measure of 'very active' workers decreases this figure to 15,000. This analysis contributes to research on platform labour and the labour in the digital economy that lies behind artificial intelligence.

KEY WORDS
micro-work, digital platforms, labour statistics

Introduction
Micro-work is the most elusive form of labour in the digital economy. Specialised platforms like Amazon Mechanical Turk 'unbundle' (Pesole, Urzì-Brancati, Fernández-Macías & González-Vázquez, 2018) larger work packages into tiny 'tasks' that they

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How Many Online Workers are there in the World? A Data-Driven Assessment

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✉ otto.kassi@etla.fi

[1] ETLA Economic Research
[2] Oxford Internet Institute, University of Oxford
[3] Alan Turing Institute

ABSTRACT
An unknown number of people around the world are earning income by working through online labour platforms such as Upwork and Amazon Mechanical Turk. We combine data collected from various sources to build a data-driven assessment of the number of such online workers (also known as online freelancers) globally. Our headline estimate is that there are 163 million freelancer profiles registered on online labour platforms globally. Approximately 19 million of them have obtained work through the platform at least once, and 5 million have completed at least 10 projects or earned at least $1000. These numbers suggest a substantial growth from 2015 in registered worker accounts, but much less growth in amount of work completed by workers. Our results indicate that online freelancing represents a non-trivial segment of labour today, but one that is spread thinly across countries and sectors.

JEL classification: F6, F16, J24, J31, L14, O15, O32
Keywords: Platform Economy, Online Labour Markets

1 Introduction
Development in digital communication technologies has made transacting work remotely far easier and more economical. At the forefront of this phenomenon are so-called online labour platforms, also known as online outsourcing, crowdwork, or online gig platforms. They allow workers to serve multiple clients at varying hours remotely from their homes or co-working spaces instead of working full-time for a single employer. In this short paper, we refer to the phenomenon as online freelancing, though the employment status of platform-based work is in some cases contested.

Current economic statistics are not well suited to measuring the online freelance economy, in terms of both capturing its full extent as well as distinguishing its impact from other activities (Abraham et al. 2017). Kässi and Lehdonvirta (2018) give several reasons for this: the standard definition of employment is someone who has done at least one hour in the tracking period.

Electronic copy available at: https://ssrn.com/abstract=3810843

P Tubaro, C Le Ludec, AA. Casilli (2020). Counting 'micro-workers': societal and method- ological challenges around new forms of labour. *Work Organisation, Labour & Globalisation, Pluto Journals*, 14 (1): 67-82..

O Kässi, V Lehdonvirta, F Stephany (2021). How Many Online Workers are there in the World?. SSRN.

AA Casilli (2021). Waiting for Robots: The ever-elusive myth of automation and the global exploitation of digital labor. *Sociologias*, 23(57): 112-133.

Query: recycling center near me
Locale: English (US)
User Location: DeKalb, IL, USA

Show Map

User Location   Reset

L1 - Same as R5. - select dupes

rePLANET Recycling, largest collector of aluminium cans and plastic ...
replanetusa.com/
rePLANET **LOCATIONS** ... With more than 450 **recycling centers** throughout California, rePLANET Recycling provides a ...

Needs Met Rating   EAT Rating
N/A FailsM SM MM HM FullyM   N/A Lwst Low Med High Highst
Porn: No | Foreign Language: No | Did Not Load: No | Hard to Use: No   Comment

L2 - select dupes

Local Recycling Centers and Recycling Information and Statistics ...
www.**recyclingcenters**.org/
Find **recycling centers** and recycling information in your **local** area with maps and driving directions, recycling news, ...

Needs Met Rating   EAT Rating
N/A FailsM SM MM HM FullyM   N/A Lwst Low Med High Highst

R1 Ⓐ Ⓑ Ⓒ - select dupes

Dekalb Iron & Metal Co
4 reviews
Metal Supplier • Oak Street
Website
CALL

Waste Management
No reviews
Waste Management Service • Somonauk Road
Website
CALL

De Kalb County Refuse-Derived Fuel
No reviews
Gas Station • Somonauk Road
Website
CALL

● ○ ○

AA Casilli (2021). Waiting for Robots: The ever-elusive myth of automation and the global exploitation of digital labor. *Sociologias*, 23(57): 112-133.

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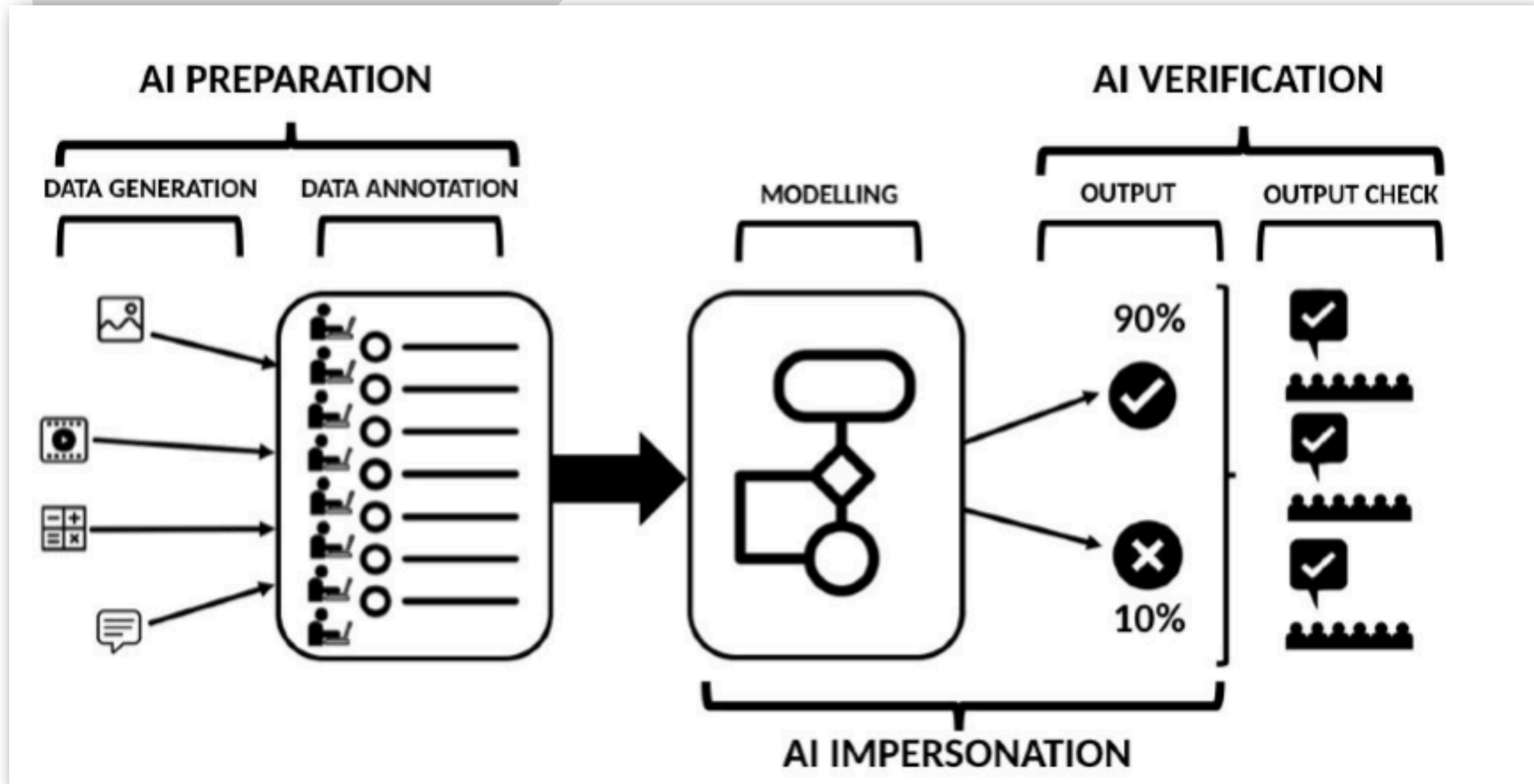AA Casilli (2021). Waiting for Robots: The ever-elusive myth of automation and the global exploitation of digital labor. *Sociologias*, 23(57): 112-133.

AI production and international arbitrage of digital labour

Three contributions of human digital labour to AI

P Tubaro, M Coville & AA Casilli (2020). The trainer, the verifier, the imitator: Three ways in which human platform workers support artificial intelligence. *Big Data & Society*, 7(1).

AI preparation

- "Box a tomato. We have the image of a dish and we are told to "draw a box around a tomato", we don't know why, everyone knows what a tomato is, I hope... Afterwards, if it's there, I think it must be useful to someone for something, but... Why, I don't know."
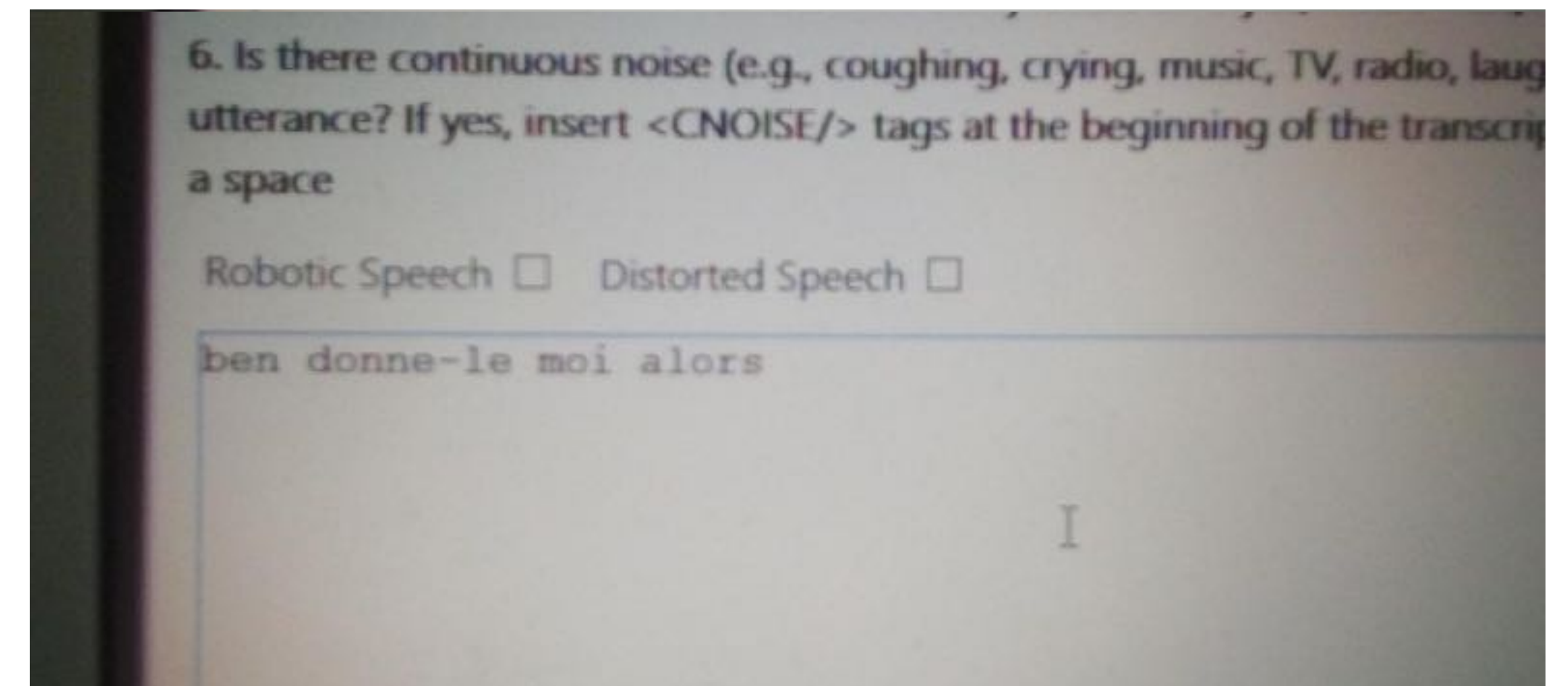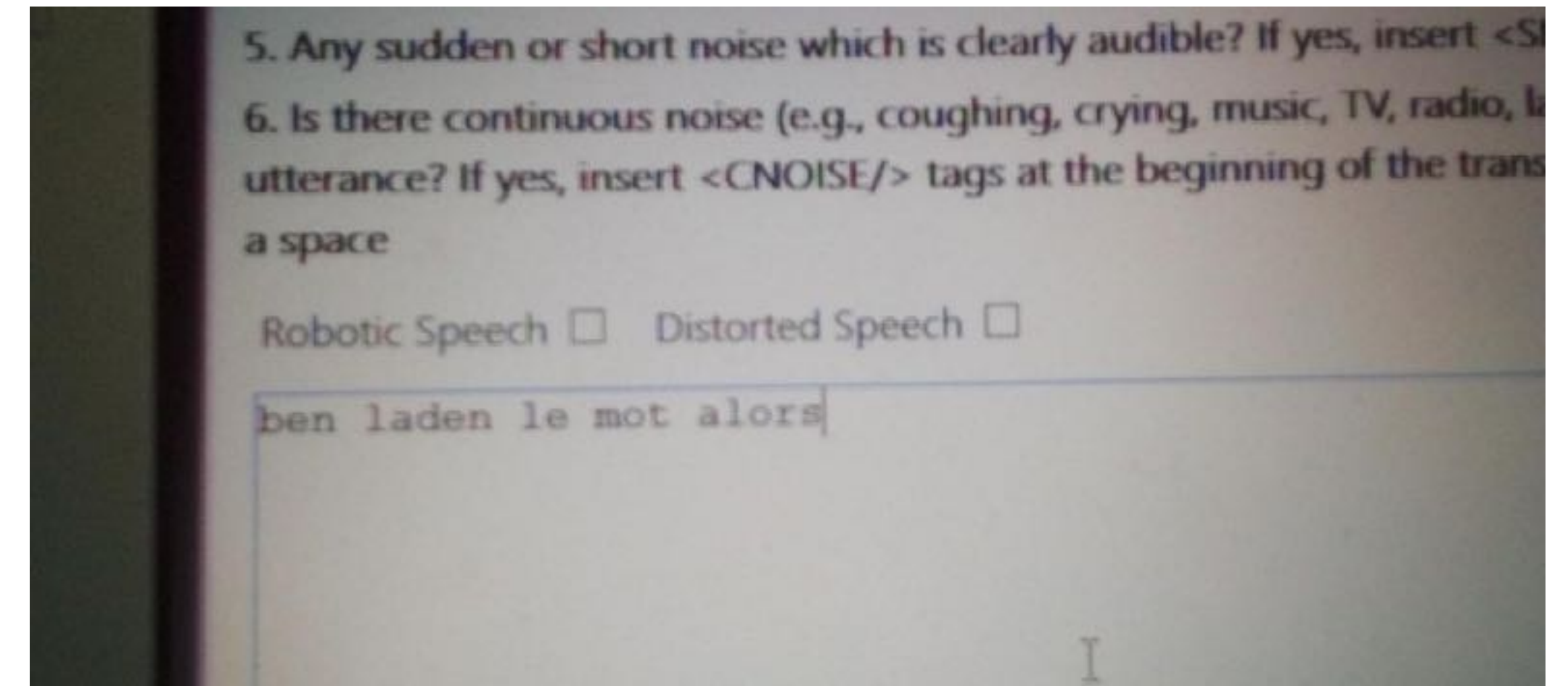
T., 45, 2017

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AI preparation

Principal employer's country

Subcontractors' country

Data and labor flow

DiPLab OPLa "Organizing Platform Labor" (2017-2019); HUSh "The Human Supply Chain Behind Smart Technologies" (2020-2024)

AI verification

- "Transcribers would log on, and listen to the recordings one by one. The tracks were usually very short, 3 to 15 seconds on average, but could sometimes be several minutes long. Depending on the project we were working on, we would do between 120 and 170 transcriptions per hour..."

  J., 26, 2018

P Tubaro, M Coville & AA Casilli (2020). The trainer, the verifier, the imitator: Three ways in which human platform workers support artificial intelligence. *Big Data & Society*, 7(1).

AI verification

Legend:
- Principal employer's country
- Subcontractors' country
- Data and labor flow

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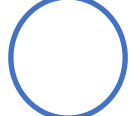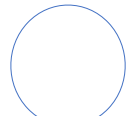
AI impersonation

- "People do not realise that the vast majority of B2B startups [that produce AI solutions] are human-based (…) But I empathise, because what they do is a bet on the future. They have to create their own data (…) and then implement machine learning and then hope that— one of these days—the process will be automated."

  K., 42 yo, 2018

DiPLab HUSH © Antonio Casilli
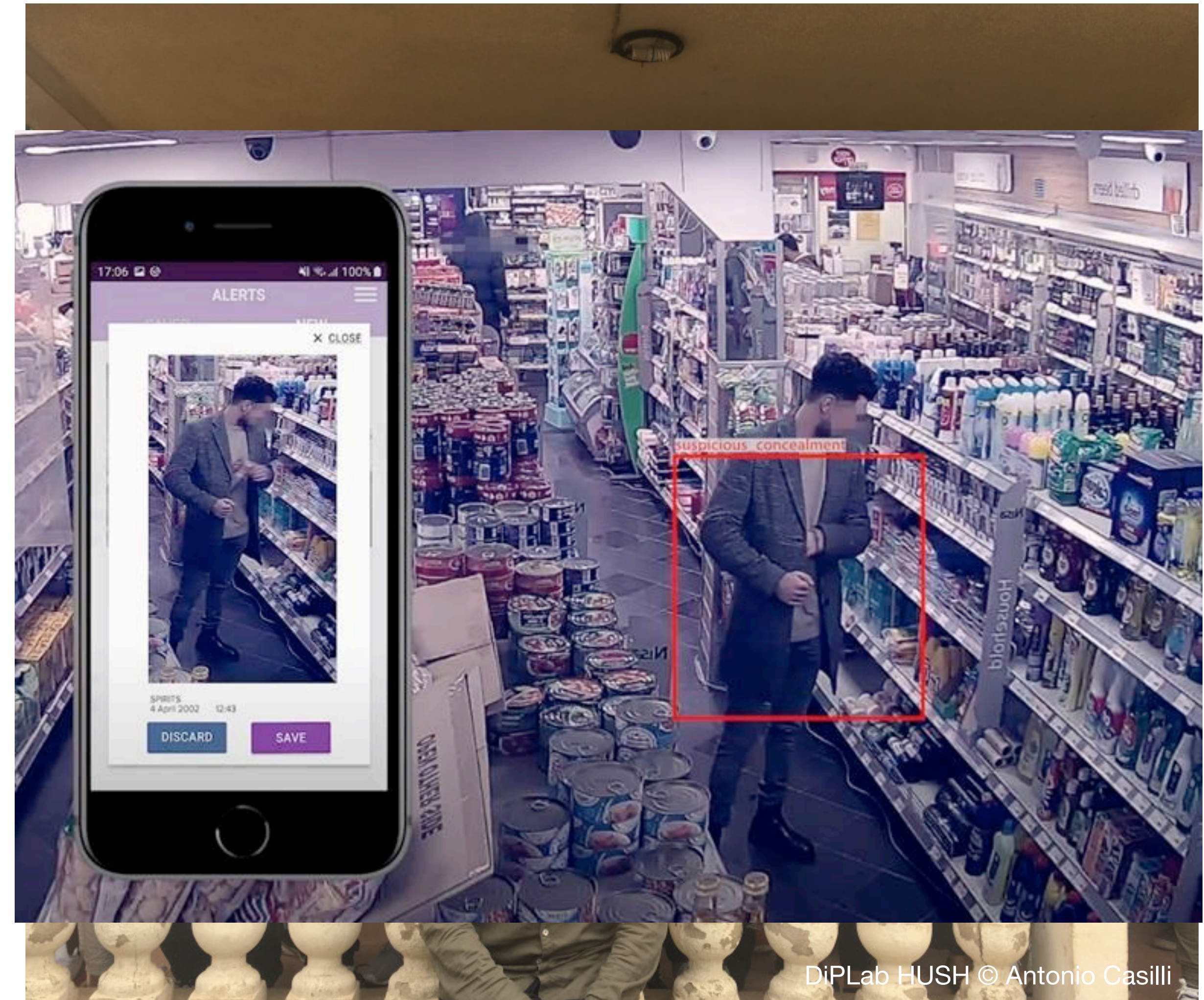
AI impersonation

Principal employer's country

Subcontractors' country

Data and labor flow
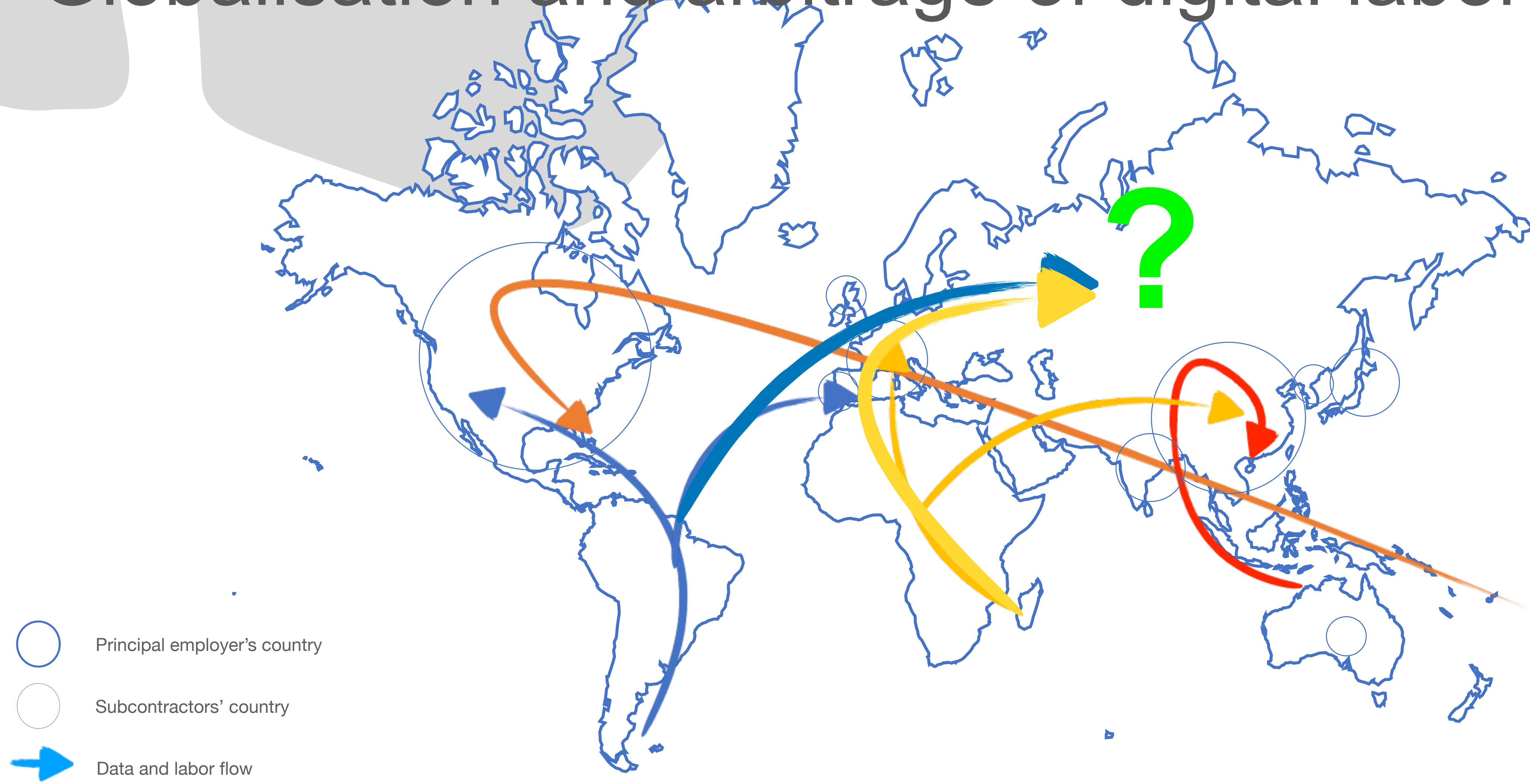
Fauxtomation is not a bug of AI.
It's a feature.

For a labour-saving technology, sure it takes a lot of labour to manufacture AI

Globalisation and arbitrage of digital labor for AI

France 2017-19

Espagne 2020-22

Egypte 2020

Mexique 2020-22

Venezuela 2020-22

Colombie 2020-22

Madagascar 2020-22

Bolivie 2018

Cameroun 2019-22

○ Principal employer's country

○ Subcontractors' country

➤ Data and labor flow

Argentine 2020-22

DiPLab HUSH "The Human Supply Chain Behind Smart Technologies" (2020-2024); TRIA "The Labor of Artificial Intelligence: Ethics and Governance of Automation" (2021-2024)

Globalisation and arbitrage of digital labor for AI

Principal employer's country

Subcontractors' country

Data and labor flow

Thank you!

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