DIGITAL CAPITALISM

6 week essential course for activists to understand how digitalisation is shaping our world



What is digital capitalism?



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Different conceptions of digital capitalism – technofeudalism, surveillance capitalism, platform capitalism



THE CAPITALIST SYSTEM HAS BEEN DEEPENING FOR YEARS. It finds new frontiers, new ways of subsuming and transforming into money those things that surround us. Space travel and deep sea mining are examples of this. These are new ways to exploit the earth's resources and expand the frontiers to continue accumulating capital and deepen the economic system we live in: a world where there seems to be no limit to the capacity to generate profits, and where not even a pandemic that left a destructive toll of millions of deaths seems to have stopped. Moreover, many companies saw their profits increase as a result of the pandemic and the crisis.

In the capitalist system, our main function consists of consuming goods or services. Big business then had the focus on how to make us choose their products, or how to make us consume more. As time went by, Big Tech companies found a way to make a greater influence. We started to open the door to our homes, we showed them every step we took, our tastes and preferences. All this in exchange for a priori free services, such as "your monthly timeline on Google Maps" or Instagram. While we think we watch videos or consume these services at no cost, the reality is that by doing so we give the key to these technological giants to predict our behavior.

There are today a diversity of authors who have different denominations and explanations to the world we live in. Surveillance Capitalism,¹ Digital Capitalism, Platform Capitalism,² and technofeudalism.³ All definitions that seek to raise awareness about the impact that technology companies have had in recent years in the capitalist system and understand how they have changed it. Each of these definitions tries to explain a particular point regarding this new reality. Each one shows a different face of the system. But they all converge in the same thing: the technological giants or "big tech" companies are the protagonists and drivers of this change, and therefore, the big winners.

The gurus at Davos emphasize this change as a "4th industrial revolution",⁴ and show various images of robots interacting with human beings as if that were the difference and the engine of change. The truth is that we have been interacting with robots since the middle of the last century. There is nothing new in that. What is new and significant is the emergence of a new raw material in the economy: data, or "big data" as it is called. This data, correctly analyzed through algorithms, is the one that explains and shows our behavior and our productive processes. And if a behavior can be systematically explained, it can be predicted. And if it can be predicted, incentives can be generated to modify it. For example, imagine you commute to work every day and choose to take the subway unless it's raining. When it rains you prefer to take an Uber or Lyft to work. By the time you do that consistently, your phone will have already collected that data through Google Maps, Uber, Lyft and maybe the weather app.

Now imagine that Uber or Lyft want you to choose them: how hard would it be for them to send you a small discount once you check your Instagram on a rainy day? This way they encourage you to choose them among other platforms without you even noticing it.

This is what author Shoshana Zuboff called Surveillance Capitalism (see **What is Surveillance Capitalism**?). For his part, author Nick Snircek spoke of Platform Capitalism, referring to the market power that these technology companies have. Indeed, the platforms we use every day have become market organizers at their convenience, positioning themselves as monopolies and changing the rules of the game of capitalism. The most emblematic case of gamification is Pokemon Go. This game requires you to move to be able to add more benefits. Therefore, leaving it on while you move around can be advantageous. This results in a playful way of sharing the data of our movements to companies. These companies find it key, since they can know our route and make suggestions based on it. These suggestions can vary from highlighting places that are on our way, or even suggesting routes to other places that have invested more for our data. Imagine you love coffee and you often go to different coffee shops to try different things, wouldn't it be convenient to find your next Picachu inside your closest Starbucks?

These companies that process and sell our data to smaller companies have become so big that it is increasingly difficult to evade the use of certain services and companies, restricting free competition and generating a dangerous monopoly in the markets. But let's note something: monopoly is not a necessary condition for them to work properly, as we will see later in the course. They monopolized the markets but buying competitors, making themself not interoperable and investing big tons of money in advertisement, data analytics and dumping practices to eliminate competitors. These platforms are also "austere" since they are financed with venture capital and only make profits after several years of life. Amazon, for instance, was created in 1995, but had to wait until 2001 to make its first profitable year.⁵ They finance themselves with venture capital hoping to eliminate everyone else who can compete and having the monopoly of the market, being able to set their own rules.

So, if the company is better positioned today than it was a year ago, why is the stock price so much lower than it was a year ago? As the famed investor Benjamin Graham said, **"In the short term, the stock market is a voting machine; in the long term, it's a weighing machine."** Clearly there was a lot of voting going on in the boom year of '99—and much less weighing. We're a company that wants to be weighed, and over time, we will be—over the long term, all companies are. In the meantime, we have our heads down working to build a heavier and heavier company.⁶

Some other platforms like UBER are still not profitable and investors are still waiting for that to change⁷. It is a bet by capital itself to generate monopolistic actors that impose the new rules in our democracies, in our labor market and in our social, cultural, communicational, educational, health and other systems.

The technofeudalism theory argues that there is a new invisible hand of algorithms that turns companies like Google and Facebook into a sort of digital vacuum cleaners of wealth, and would be leading us to a techno-feudal regression in which giant digital and unproductive forces will dominate society and the economy, making the political powers of the State lose strength.

Durand argues that Big Tech – Google, Amazon, Facebook, Apple, Microsoft – recreates a bit the political and economic logic of feudal times. The big platforms and digital environments would be dematerialized real estate, "medieval" fortresses that colonize cyberspace and prey on it: they gain all the land of their business and acquire the competition and complementary companies. In feudalism, the peasant serf was very attached to the land: he did not belong to the feudal lord, but to the land, which belonged to that lord. When we use Facebook or Google, we become inseparable from the data we generate on the digital earth. From these traces, a relationship of extreme dependence is created, from which it is difficult to escape because they make our lives easier. Is it possible to live without using any Google services? It is possible, but it would complicate our existence a lot! Durand states that, far from favoring the autonomy of individuals, the most striking aspect of the digital economy is the return to relationships of dependency.

Being as it may be, the truth is that there is nothing "revolutionary" about this process. There is no change of paradigm or system, but rather a deepening of the economic system we live in, which continues to expand without limits. Indeed, with technology integrated into the human being, and the development of the cyborg, even our biological processes and our thoughts are eventually susceptible to being monetized. Neuralink, an enterprise owned by Elon Musk, has been trying to read minds for a while now. The company's initial aim is to implant chips in the brain that would allow people with severe spinal cord injuries to walk again, but the technology can also be used in other ways: imagine having a chip inside of you, and being able to control all the technological equipment and social media you own just with only thinking about it. Now imagine how much will be worth your thoughts, or what is worse: would the company be able to erase or change memories? It certainly looks like science fiction, but there are concrete projects going that way.⁸





Data is the foundational resource of the modern economy that drives everything from the smart home to the smart city. It undergirds critical sectors such as finance, education and health and more, as well as core processes of society and economy such as production and governance.⁹

Data is more than simply knowledge about the world. It is discrete bits of information – digitally collected/recorded, machine processable, easily agglomerated, and highly mobile. **Data is not out there waiting to be discovered as if it already exists in the world like crude oil and raw ore.¹⁰ Rather, it is a recorded abstraction of the world, created through technological systems and social, political and economic lenses.¹¹ This process, also referred to as 'datafication' happens through interconnected and convergent information infrastructures including, smart devices, cloud based platforms, data analytics, network cables, and server farms, all of which allow for the continual capture and circulation of data.**

While many lenses and frames exist to conceptualize data, framing data as a form of capital allows us to understand the ways in which value can be derived from data, thus helping us unpack the motives behind its use by corporations and why data extraction within has become central to the economy.¹² Data as a form of capital is distinct from, but has roots in economic capital. Much like social and cultural capital, data capital is convertible, under certain conditions to economic capital.

BOX 1. Data as a driving force of contemporary capitalism.

At the heart of the current economic "transformation," is data with UNCTAD projections from 2019¹³ suggesting that data-intensive businesses will account for 70 percent of the new value generated in the global economy over the next decade.

What the numbers suggest:

The US and China dominate the global AI economy, with these two countries accounting for

- 94 percent of all funding of AI startups in the past five years
- 70 percent of the world's top AI researchers
- 90 percent of market capitalization value of the world's 70 largest digital platform companies

See also: Infographics of Geopolitics of Data in TNI's State of Power report: https://www.tni.org/en/geopolitics-of-digital-power

B Problems of technological solutionism



In this era of "technological solutionism"¹⁴ we live with the idea that technology based on data is impartial and perfect, since it judges based on billions of data. A kind of all-seeing God that can make an informed judgment or decision that benefits us all. Thus, technologies based on data processing enjoy a sort of "virtue" in that they are not questioned or are partially questioned by our societies.

An example of technological solutionism is the use of "smart" technology to address urban problems such as traffic congestion. Smart traffic lights, for example, use sensors and algorithms to adjust traffic flow based on real-time data. While this technology may improve traffic flow in the short term, it doesn't address the underlying causes of congestion, such as urban planning policies that prioritize cars over public transportation or the lack of affordable housing in city centers that forces people to commute long distances.

According to Morozov, technological solutionism can lead to a narrow focus on technical fixes, rather than addressing the complex social, economic, and political issues that underlie many of the problems we face today. Or for instance, lets imagine a company that creates a smart fork that uses sensors and algorithms to monitor how fast you eat and alerts you if you're eating too quickly. While this may seem like a helpful way to encourage healthy eating habits, it ignores the fact that eating quickly may be a symptom of deeper issues, such as stress or anxiety, that cannot be solved by simply slowing down one's eating pace. In other words, the smart fork addresses a superficial symptom of a problem without addressing the underlying causes.

Algorithms and bias



Now, what is an algorithm? In this era, we seem to be talking about this little-understood word all the time. It is mentioned "the algorithm" and it is pointed out as the culprit of ordering our lives and the information we see on the Internet.

To understand what an algorithm is and the problems it can have, Cathy O Neil wrote a book called "Weapons of Math Destruction".¹⁵ In it she explains with examples the problems derived from the design of data processing algorithms. (see **The era of blind faith in big data must end | Cathy O'Neil**). She tells a great truth: what is the objective in the analysis? Who decides? Definitely if the companies are the ones who make the decisions to program and process information, that information will have as its objective the maximization of profits and not social welfare.

An algorithm is a set of ordered steps that determines how and with what degree of valuation the data will be processed. If we understand that this decision is not arbitrary, but seeks an objective determined by a multinational company, it is not difficult to understand the implications: they want to increase profits, regardless of whether this decision benefits us or not. Cathy O'Neil offers a very clear example in her book. She posits that she has an algorithm in her head that decides each night what to cook for dinner. The variables it uses are nutritional value, what ingredients she has in the fridge, how much time she has to spend cooking and whether she is in the mood for it, what she ate at lunchtime, her family's tastes, etc. Her head processes all this and decides what to cook on that particular day. What would happen if her son were to take control of the algorithm? Nutrition would certainly be a secondary consideration and taste would take precedence, resulting in chips rather than grilled fish. Biases are numerous and they have a huge impact on society. If we add to this the fact that most of the algorithms we use every day are programmed in industrialized countries by white men with a certain socio-economic status and level of education, we run the risk that minorities, dissidents and women will never be taken into account. Indeed, only 22% of programmers worldwide are women. In the US, the largest economy in the industry, 67.7% of programmers are white, 19.5% are Asian and fewer than 13% are black or have other ethnic identities. Latinos are not even counted in the statistics.¹⁶

5 From persuasion to prediction



This new capitalist phase modifies the forms of production and consumption, basic elements of the economic system. In the first stage, digital capitalism succeeded in this industrial engineering by explaining our consumption habits and persuading the consumer to buy this or that product. For example, if we were thinking of buying a pair of jeans, we might be sent an ad from a company whose store is around the corner from our best friend's house. Maybe there is another company with a store around the corner from our house, but here it is another actor that concentrates the information and decides how to influence our behavior. Or for instance if we searched to go on holidays to the beach, probably we will get tons of ads the next day telling us there are available the last tickets in a certain platform or that the hotel we want to go has a special discount for us ready to go.

The second stage of digital capitalism came to understand that if they could predict and influence us as consumers, they could also do the same with citizens: through social networks they began to experiment with incentive systems to motivate the votes of certain types of voters and the expansion of fake news as fuel for these incentives. In effect, we only saw the news that social media companies wanted us to see in order to exacerbate hatred on the internet. The Cambridge Analytica¹⁷ scandal was not long in coming. In it, it was discovered how a company motivated Trump voters in the US, Bolsonaro in Brazil and Macri in Argentina (to name a few) to go to the polls to vote, lowering desertion in those voters. It is estimated that the company was responsible for 1% of the US election result.

Today we are facing a third stage of digital capitalism where this behavioral engineering is being performed on us as workers. The pandemic exacerbated and enabled it, plunging us into technological environments at work, so that private life and work life merged. Platforms, telecommuting, surveillance software on our computers, and the constant checking of our social networks to extract data from our lives, among other factors, are now commonplace in the lives of millions of workers around the world. All this data is used to mold workers' behavior. Imagine a delivery platform worker that is told it is its own boss and can reject orders if he/she wants to. Now imagine for a second this worker one day decides to reject an order because it is not convenient. The next day he/she probably will be "punished by the platform, lowering his/her status or receiving less orders, so he/she will adjust his/her behavior the next day to get upgraded again. The design of incentives was made by the data collected and the workers do not know exactly how he/she is judged by the platform. The same can be said for a worker who has a surveillance system in the computer she/he uses everyday.

S Worker alienation



The alienation at work that was once Fordist, continues to deepen through the same watertight compartments in the production chain. The factory worker did not understand the importance of his task because he had no dimension of the final product, but he knew that he was part of an assembly line. This asymmetry of information allowed the employer to have more power when negotiating working conditions. This same alienation is present today through the fragmentation of the value chain through technological intermediation. Once again, rather than a revolution, what we see is an ever sharper deepening of an economic system that promotes inequality and subsumes more and more aspects of human life. In this digital capitalism the worker thinks he is a delivery worker and what the company actually dies are delivery services, but this is not even close to reality. What a delivery platform really does is control the retail markets in the cities, making a monopoly of the selling in little shops and restaurants, controlling the financial circuit and extracting data from the social interactions that can be used for the business and sold. Delivering is just a small piece of the business and it is not even the core part. This is alienation: the asymmetry of information between the workers and the company deepens and the workers do not know exactly where it works or what it does and what it means for the company.



7 Impacts on rights and development



The steady capture of data by Big Tech and their host countries has major implications for development, justice and global equity. The disparities in control over data and its economic value has widened the gap between developed and developing countries, and between capital and labor. UNCTAD in its Digital Economy Report 2021¹⁸ highlights a 'data-divide' between countries of the Global South and North when it comes to the ability to own, control and harness data resources into valuable intelligence, and translate the same into opportunities for development.

10 economies account for 90 per cent of all global patents, and 70 per cent of all exports directly associated with advanced digital production technologies including Artificial Intelligence (AI), big data analytics, cloud computing, internet of things (IoT), advanced robotics and additive manufacturing.¹⁹

In an economy where digital intelligence is ever more central to production, countries and communities of the Global South that lack data processing and Al capabilities will be unable to optimize their data resources. Forced to relinquish control of their own data, extracted and locked up within Al systems of transnational capital, they have limited means to fair share of the benefits.. This results in gross economic unfairness in the global digital economy and 'algorithmic coloniality'.²⁰

The lack of a globally accepted governance regime to regulate data's social and economic applications only perpetuates this status quo of economic concentration and deepens inequalities in the AI paradigm. Compounding this inequity, is the aggressive push for cross border data flows in the global economy, that benefit a few powerful countries whose corporations enclose data and assert de facto ownership over the same.

Further, as datafication alters how value is counted and distributed and therefore shapes the structures of choice in the economy, the substance of people's rights also gets redefined in the process. A visceral illustration of this is the way capital uses data as a way of both exerting control as well as withholding value over labor.²¹ Through data based systems of work allocation, incentives and various other behavioral nudges, as well as surveillance the platform model can control endless reserves of cheap labor, turning them into atomized cogs for the 'algorithmic wheel'. Data is thus not only monopolized by platforms but weaponized against workers and used to impose new forms of control and discipline. Another arena this is seen is in the crucial sector of welfare. Data based systems have become increasingly integrated with welfare and governance functions. Without thoughtful design principles and techno-legal frameworks that safeguard citizen rights, the potential for exclusion and denial of rights is high. Australia's Robodebt scheme, for example, deployed a deeply flawed automated debt assessment and

recovery on welfare recipients. Through an automated data-matching system that compared Centrelink records with averaged income data from the Australian Taxation Office, the system issued false or incorrectly calculated debt notices to hundreds of citizens.²²

Digital Capitalism is a reality nowadays. Understanding its architecture, its core tools and how it affects us, it's essential to construct a different world where inequality wont deepend, and exploitation and alienation are not the rule. This course aims to give us all some tools to understand and design strategies to counterbalance the huge amount of power capitalist have in this digital age.

NOTES

- 1 Zuboff, S. (2019). The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. Profile Books.
- 2 Srnicek, N. (2017). Platform Capitalism. Wiley.
- 3 Durand, C. (2021) Technofeudalism Critique of the digital economy.
- 4 WeForum. (2016, January 14). The Fourth Industrial Revolution: what it means and how to respond. The World Economic Forum. https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-itmeans-and-how-to-respond/
- 5 CNN Money. (2002, January 22). Amazon posts first-ever profit in 4Q Jan. 22, 2002. CNN Business. From https://money.cnn.com/2002/01/22/technology/amazon/
- 6 Bezos, J. (2001). Letter to shareholders. To our shareholders: Ouch. It's been a brutal year for many in the capital markets and certainly for Amazon.com shareholders. https://s2.q4cdn.com/299287126/files/doc_financials/annual/00ar_letter.pdf
- 7 Pereira, D. (2023, January 13). Is Uber Profitable? Business Model Analyst. https://businessmodelanalyst.com/is-uber-profitable/
- Finlay, M., Cooper, G., Jagatia, A., King, S., & Sanderson, M. (2022, February 10).
 Why does Elon Musk want to read your mind? The Guardian.
 https://www.theguardian.com/science/audio/2022/feb/10/why-does-elon-musk-want-to-read-my-mind
- 9 Kitchin, R. (2014). Big Data, new epistemologies and paradigm shifts. Big data & society.
- 10 Gitelman (2013) "Raw Data" Is an Oxymoron
- 11 Sadowski, J. (2019). When data is capital: Datafication, accumulation, and extraction. Big data & society. https://journals.sagepub.com/doi/full/10.1177/2053951718820549
- 12 Op cit, Sadowsi (2019)
- 13 UNCTAD. (2019). Digital Economy Report 2019. Value Creation and Capture: Implications for Developing Countries. UNCTAD. https://unctad.org/system/files/official-document/der2019_en.pdf
- 14 Morozov, E. (2011). The Net Delusion: How Not to Liberate The World. Penguin Books Limited.
- 15 O'Neil, C. (2016). Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Crown.
- 16 Data USA. (2023, March 14). https://datausa.io/profile/soc/computer-programmers?redirect=true
- 17 Cruz, T. (n.d.). Escándalo Facebook-Cambridge Analytica. Wikipedia. https://es.wikipedia.org/wiki/Esc%C3%A1ndalo_Facebook-Cambridge_Analytica
- 18 UNCTAD. (2021). Digital Economy Report 2021. Cross-border data flows and development: For whom the data flow. UNCTAD. https://unctad.org/system/files/official-document/der2021_en.pdf
- 19 UNIDO. (2020). Industrial Development Report. UNIDO. https://www.unido.org/resources-publications-flagship-publications-industrial-development-report-series/idr2020
- 20 Paris Peace Forum. (2021). Beyond the North-South Fork on the Road to Al Governance: An Action Plan for Democratic and Distributive Integrity. https://digitalrights.ai/report/
- 21 Gurumurthy, A., Bharthur, D., Korjan, A. (2022). The future of work we seek- a global, cross-sectoral agenda for philanthropy on workers and the digital economy. IT for Change; Athreya, B. (2021). Social Relations under Surveillance Capitalism: Is Solidarity Still Possible? Bot Populi. https://botpopuli.net/social-relations-under-surveillance-capitalism-is-solidarity-still-possible/
- 22 https://www.bbc.com/news/world-australia-54970253



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