

## CLOUD CAPITAL

Consider what cloud capital consists of: smart software, server farms, cell towers, thousands of miles of optic fibre. And yet all of this would be worthless without 'content'. The most valuable part of the stock of cloud capital is not its physical components but rather the stories posted on Facebook, the videos uploaded to TikTok and YouTube, the photos on Instagram, the jokes and insults on Facebook reviews on Amazon or, simply, our movement through space, allowing our phones to alert Google Maps to the latest spot of traffic. In providing these stories, videos, photos, jokes and movements, it is we who produce and reproduce outside any market – the stock of cloud capital.

This is unparalleled. Workers employed by General Electric, Exxon-Mobil, General Motors or any other major conglomerate collect in salaries and wages approximately 80 per cent of the company's income. This proportion grows larger in smaller firms. Big Tech's workers, in contrast, collect less than 1 per cent of their firms' revenues. The reason is that paid labour performs only a fraction of the work that Big Tech relies on. Most of the work is performed by billions of people for free.

Sure enough, most of us choose to do this, enjoy it even. Broadcasting our opinions and sharing our lives' intimate details with our digital tribes and communities seems to satisfy some perverse expressive need of ours. No doubt, under feudalism, serfs toiling away on their ancestral lands would have suffered great hardships but still found it undesirable, if not unfathomable, to have their way of life taken away from them, their shared culture and traditions. Still, the harsh reality remained: at the end of the harvest, the landlord would send the sheriff to extract the lion's share of their produce – without paying the serfs a penny for it. So it goes with the

## TECHNOFEUDALISM

billions of us unwittingly producing cloud capital. The fact that we do so voluntarily, happily even, does not detract from the fact that we are unpaid manufacturers – cloud serfs whose daily self-directed toil enriches a tiny band of multi-billionaires residing mostly in California or Shanghai.

This is the crux. The digital revolution may be turning waged workers into cloud proles, who live increasingly precarious, stressful lives under the invisible thumb of algorithmic bosses. And it may have replaced Don Draper with extraordinary behaviour modification algorithms, hidden behind elegant tabletop appliances like Alexa. But that's not the most significant fact about cloud capital. Cloud capital's singular achievement, a feat far superior to either of these, is the way it has revolutionised *its own reproduction*. The true revolution cloud capital has inflicted on humanity is the conversion of billions of us into willing cloud serfs volunteering to labour for nothing to reproduce cloud capital for the benefit of its owners.

## *Wither markets, bello cloud fiefs*

Enter amazon.com and you have exited capitalism. Despite all the buying and the selling that goes on there, you have entered a realm which can't be thought of as a market, not even a digital one. When I say this to people, which I frequently do in lectures and debates, they look at me as they would a madman. But once I start explaining what I mean, their fear for my sanity soon turns into fear for us all.

Imagine the following scene straight out of the science-fiction storybook. You are beamed into a town full of people going about their business, trading in gadgets, clothes, shoes,

Ownership of factories by capital

CLOUD CAPITAL

books, songs, games and movies. At first, everything looks normal. Until you begin to notice something odd. It turns out that all the shops, indeed every building, belong to a chap called Jeff. He may not own the factories that produce the stuff sold in his shops but he owns an algorithm that produces the cut for each sale and he gets to decide what can be sold and what cannot.

If that were all, the scene would evoke an old Western in which a lonesome cowboy rides into town to discover that a podgy strongman owns the saloon bar, the grocery store, the post office, the railway, the bank and, naturally, the sheriff. Except that isn't all. Jeff owns more than the shops and the public buildings. He also owns the dirt you walk on, the bench you sit on, even the air you breathe. In fact, in this weird town everything you see (and don't see) is regulated by Jeff's algorithm: you and I may be walking next to each other, to us by the algorithm is entirely bespoke, carefully curated according to Jeff's priorities. Everyone navigating their way around amazon.com - except Jeff - is wandering in algorithmically constructed isolation.

This is no market town. It is not even some form of hyper-capitalist digital market. Even the ugliest of markets are meeting places where people can interact and exchange information reasonably freely. In fact, it's even worse than a totally monopolised market - there, at least, the buyers can talk to each other, form associations, perhaps organise a consumer boycott to force the monopolist to reduce a price or to improve a quality. Not so in Jeff's realm, where everything and everyone is intermediated not by the disinterested invisible hand of the market but by an algorithm that works for Jeff's bottom line and dances exclusively to his tune.

Lord-based fiefs  
TECHNOFEUDALISM

If this is not scary enough, recall that it is the same algorithm which, via Alexa, has trained us to train it to manufacture our desires. The mind rebels at the enormity of the hubris. The same algorithm that we help train in real time to know us inside out, both modifies our preferences and administers the selection and delivery of commodities that will satisfy these preferences. It is as if Don Draper could not only implant in us desires for specific products but had attained the superpower instantly to deliver said products to our doorstep, bypassing any potential competitor, all in the interest of bolstering the wealth and power of a chap called Jeff.

Such concentrated power should scare the living daylights out of the liberally minded. Anyone committed to the idea of the market (not to mention the autonomous self) should recognise that cloud capital is its death knell. It should also shake market sceptics, socialists in particular, out of the complacent assumption that amazon.com is bad because it is a capitalist market gone berserk. Actually, it's something worse than that.

If it ain't a capitalist market, what in the sweet Lord's name are we stepping into when we enter amazon.com? a student at the University of Texas asked me a few years ago.

'A type of digital fief,' I replied instinctively. 'A post-capitalist one, whose historical roots remain in feudal Europe but whose integrity is maintained today by a futuristic, dystopian type of cloud-based capital.' Since then, I have come to believe that it was a reasonably accurate answer to a hard question.

Under feudalism, the overlord would grant so-called fiefs to subordinates called vassals. These fiefs gave the vassals the formal right to exploit economically a part of the overlord's realm - to plant crops on it, for example, or graze

TECHNOLOGY  
Back to your question

cattle - in exchange for a portion of the produce. The overlord would then unleash his sheriff to police the fief's execution and collect what he was owed. Jeff's relationship with the vendors on amazon.com is not too dissimilar. He grants them cloud-based digital fiefs, for a fee, and then leaves his algo-sheriff to police and collect.

Amazon was just the start. Alibaba applied the same techniques to create a similar cloud fief in China. Copycat e-commerce platforms, offering variations on the Amazon theme, are springing up everywhere, in the Global South as well as the Global North. More significantly, other industrial sectors are turning into cloud fiefs too. Take for example Tesla, Elon Musk's successful electric car company. One reason financiers value it so much higher than Ford or Toyota is that its cars' every circuit is wired into cloud capital. Besides giving Tesla the power to switch off one of its cars remotely, if for instance the driver fails to service it as the company wishes, merely by driving around Tesla owners are uploading in real time information (including what music they are listening to) that enriches the company's cloud capital. They may not think of themselves as cloud capital. They precisely what the proud owners of cloud serfs but, alas, that's dynamically gleaming Teslas are.

It took mind-bending scientific breakthroughs, fantastical-sounding neural networks and imagination-defying AI programs to accomplish what? To turn workers toiling in warehouses, driving cabs and delivering food into cloud proles. To create a world where markets are increasingly replaced by cloud fiefs. To force businesses into the role of vassals. And to turn all of us into cloud serfs, glued to our smartphones and tablets, eagerly producing the cloud capital that keeps our new overlords on cloud nine.

If I had to name one thing I learned from you, it would be the ability to relish contradictions.

You worshipped iron, but were moved to tears by Hesiod's tirades against the Iron Age. You threw your lot in with the communists, knowing full well that, if your side won, you would end up in the gulag. You fell in love with every furnace, pipe, conveyor belt and crane in the steel factory where you worked, but remained horrified by their tendency to mechanise, alienate and dehumanise the workers appended to them.

It is why I wanted to talk to you about cloud capital. Because you would know how to admire and detest it at once. And because, through this contradiction, you would recognise that cloud capital is the key to answering your question about the internet's impact on capitalism.

Capitalism surfaced when owners of capital goods (steam engines, machine tools, spinning jennies, telegraph poles, etc.) acquired the power to command people and nations - powers that far exceeded, for the first time, those of landowners. It was a Great Transformation made possible by the prior privatisation of common lands. Same with cloud capital. To acquire its even greater powers to command, it too required the prior privatisation of another crucial commons: Internet One.

Like all capital since capitalism's inception, cloud capital can be thought of as a vast production and behaviour-modification machine: it produces marvellous devices and the power (for its owners) to command humans who do not

Why is the control of workers and consumers  
CLOUD CAPITAL

own it. But that's where the similarity between terrestrial and cloud capital ends and where the difference between conventional capitalists and cloudalists begins.

Previously, to exercise capital's power to command and make other humans *work faster* and *consume more*, capitalists required two types of professionals: managers and marketers. Especially under the auspices of the post-war technostucture, these two service professions achieved greater prominence even than bankers and insurance brokers. Gleaming business schools were set up to initiate MBA students in the dark arts of quick-marching a workforce towards explosive labour productivity. Advertising and marketing departments nurtured a generation of Don Drapers.

Then, cloud capital arrived. At one fell swoop it automated both roles. The exercise of capital's power to command workers and consumers alike was handed over to the algos. This was a far more revolutionary step than replacing auto-workers with industrial robots. After all, industrial robots simply do what automation has been doing since before the Luddites: making proletarians redundant, or more miserable, or both. No, the truly historic disruption was to automate capital's power to command people *outside* the factory, the shop or the office—to turn all of us, cloud proles and every-one else, into cloud serfs in the direct (unremunerated) service of cloud capital, unmediated by any market.

Meanwhile, conventional capitalist manufacturers increasingly have no option but to sell their goods at the discretion of the cloudalists, paying them a fee for the privilege, development vis-a-vis their feudal overlords.

So, back to your question: Now that computers speak to each other, will this network make capitalism impossible to

ground conventional  
also cloud proles

TECHNOFEUDALISM

Overthrow? Or might it finally reveal its Achilles heel? On the one hand, the rise of cloud capital has solidified, augmented and massively expanded capital's triumph over mented and society and, catastrophically, nature. And yet, here is labour, society and, catastrophically, nature. And yet, here is the contradiction: in doing so, cloud capital has simultaneously ushered in the technofeudal system that has killed capital in so many realms and is in the process of replacing it everywhere else.

In your youth, you dreamed of a time when labour would shake off the yoke of the capitalist market. So did I. Alas, something more like the opposite happened: it is capital that has shaken off the yoke of the capitalist market! And while capital is taking its victory lap, capitalism itself is receding. A sophism to sweeten the pill of our defeat? Not so — as I intend to show in Chapter 5. For now, however, let us address perhaps the most surprising and compelling aspect of capitalism's demise: the story of how the cloudalists pulled off this astonishing feat and how, for them, profit, once the driving force of our capitalist economies, became . . . optional.

capital has shaken off capitalist market

[so what is capital]  
[towards? means?]

[what are the conditions of capitalism]  
getting rid of capitalist market]