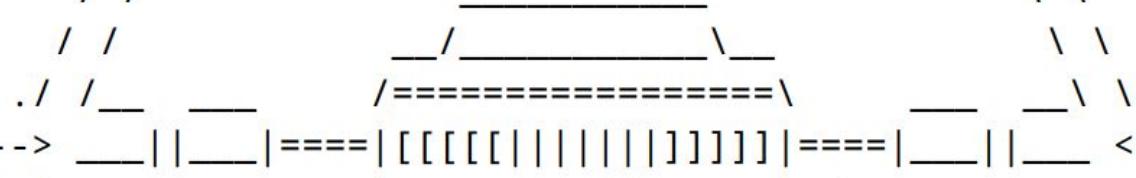
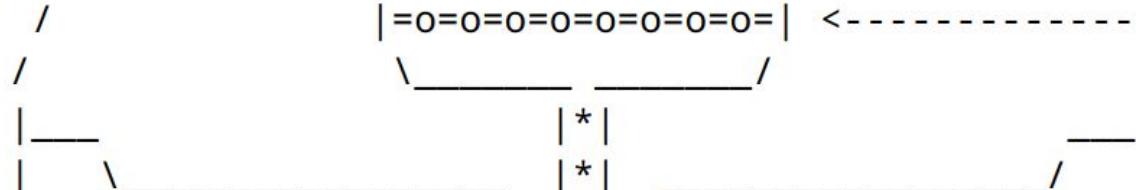


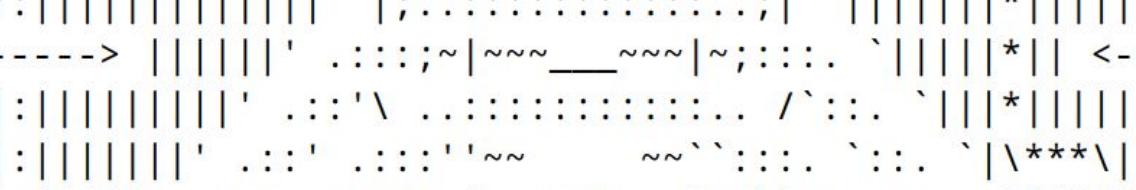
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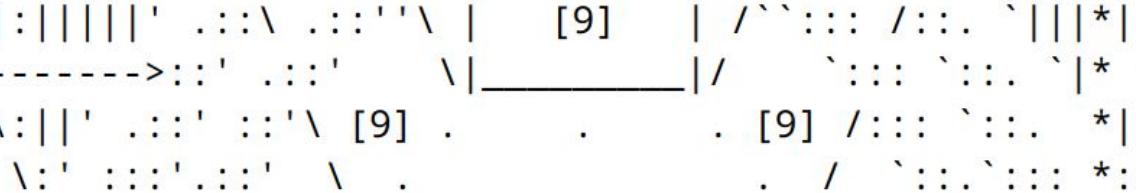
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<A HREF="100cc/index.html">
```

[4]----->  [4]
[5]
[6]

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[11]

Creative Coding & Creative Computing Frameworks

Week 6: Events and GUI

This week introduces students to more complicated forms of interaction exploring different kinds of events and GUI components.

Hour 1:

Code-along exercise exploring p5.js events

Hours 2 & 3 (lecturers swap rooms between hours)

Room One: 1 hour - Theory + Q&A

Room Two: 1 hour - Code along exercise using GUI elements in p5.js

Hour four:

Can make the more advanced 'events' examples work

In the GUI example Can you set the sky to change colour with the day and night?

```
graph TD; Root[1] --- L1(( )); Root --- R1(( )); L1 --- L2(( )); L1 --- R2(( )); L2 --- L3(( )); L2 --- R3(( ));
```

A binary search tree diagram with root node [1]. The root has two children. The left child has two children, and the right child has two children. Each node is represented by a square bracket containing its value.



Resources

This weeks worksheet (all exercises)

Online: <https://acidic-salamander-f97.notion.site/Week-6-Inputs-Interaction-6c55e191bbf84ef99864b754cf5b25d2>

PDF: <https://github.com/IrtizaNasar/CCI-Diploma22-CreativeCoding/raw/main/week6-gui/week6-worksheet.pdf>

Further resources

Weekly code examples on Git:

<https://github.com/IrtizaNasar/CCI-Diploma22-CreativeCoding>

Cheat sheet (added to each week):

Online: <https://acidic-salamander-f97.notion.site/Creative-Coding-Cheat-Sheet-936001b2c19e4a3fa94b4e8a46bdad55>

Hour 1: Events

Follow the Part A exercise in the worksheet

This exercise introduces concepts and examples of events and their use within p5.js.

```
<script>

let stayPut = true;
let time = 1;
let checkTime = "";

while(stayPut){
    checkTime = "hour "+time;
    if(checkTime=="hour 1"){
        console.log(checkTime);
    }else if(checkTime=="hour 2"){
        console.log(checkTime);
    }else if(checkTime=="hour 3"){
        console.log(checkTime+" -> Swap Rooms!!");
        stayPut = false;
    }
    time++;
}

</script>
```

Hours 2 & 3 (lecturers swap rooms between hours)

Room One:

Refresher of theories and histories

Room Two:

Introduced to the technical exercise and play with code.

Hour 2 & 3: GUI Elements

Follow the Part B exercise in the worksheet

This exercise works with GUI Elements.

p5*JS

Creative Coding & Creative Computing Frameworks

Week 6: Theories and Histories: Events and the GUI

Where is the edge of the GUI, what is the event?

This week we will try to understand how the thought that went into designing human-computer interaction through a screen displaying a graphic user interface delivered – over about half a century – an extremely powerful mechanism for capitalism; and what the key frames are for the debate of that phenomenon in the present, their strengths and weaknesses.

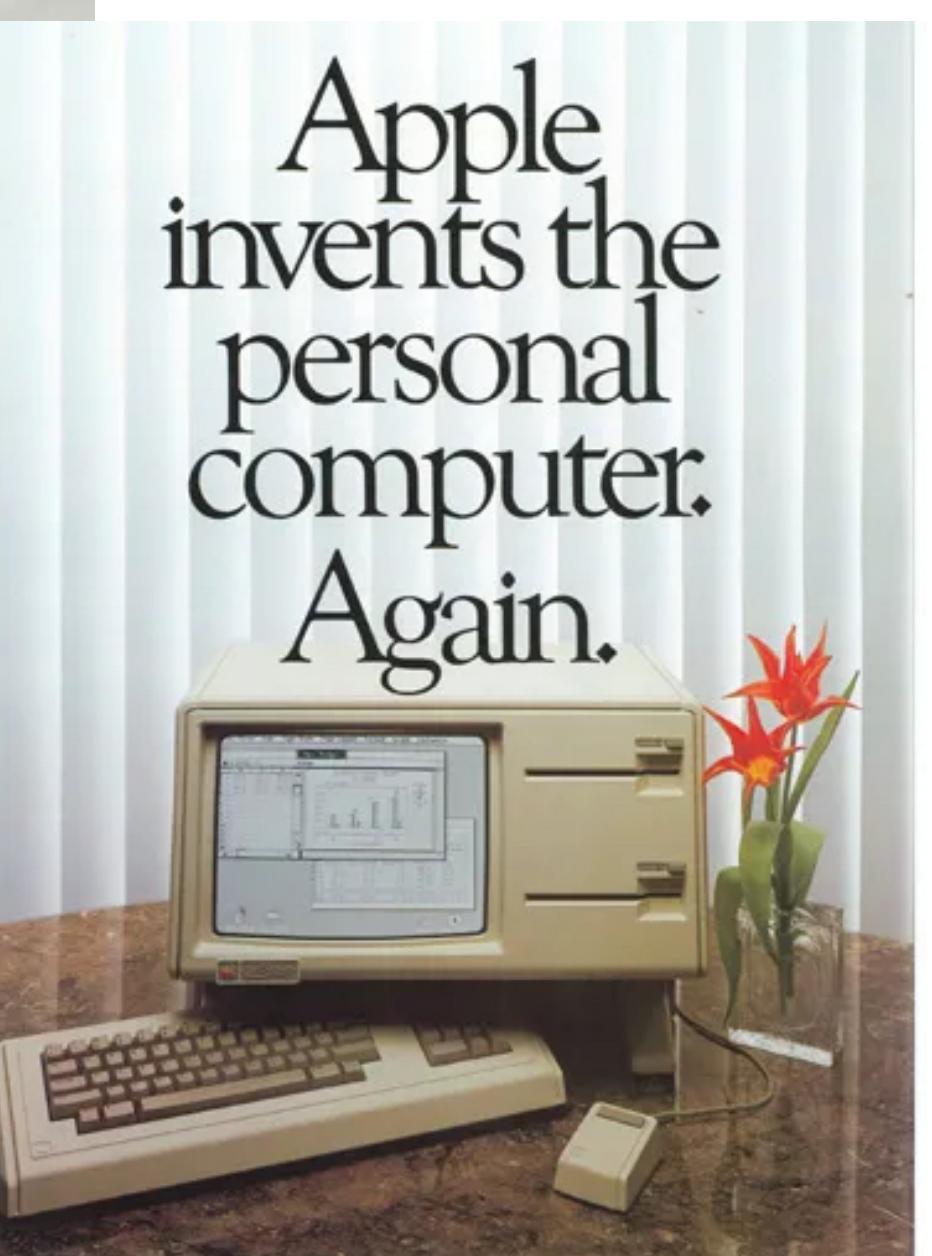
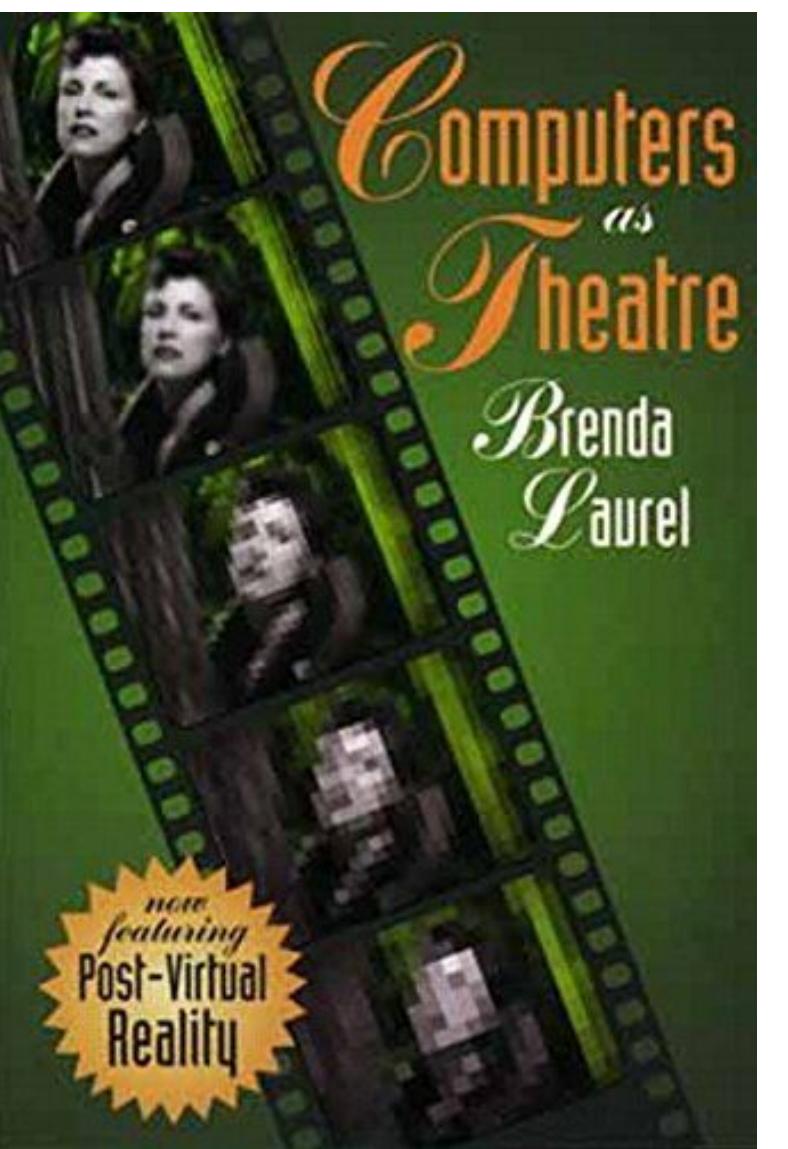
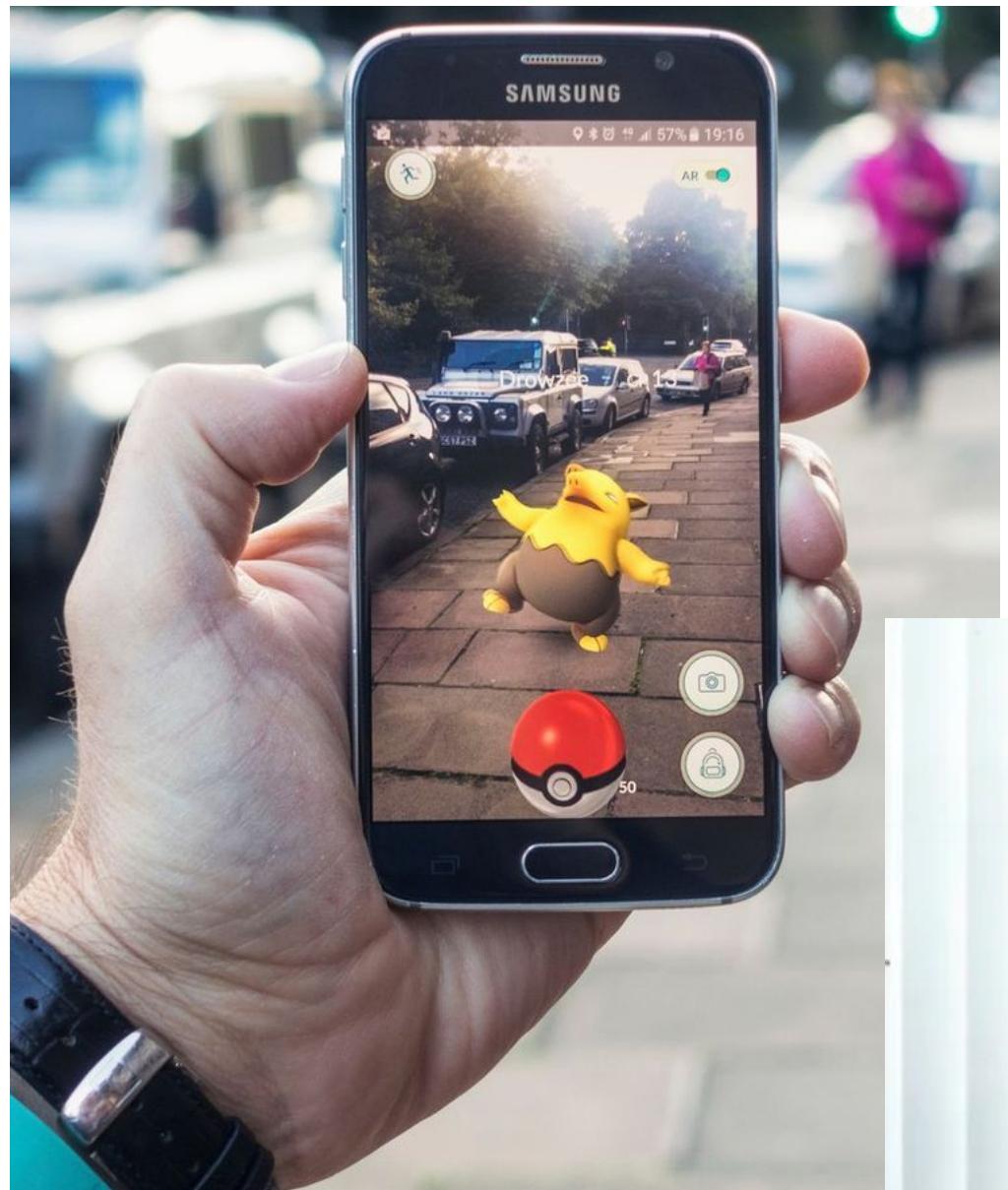
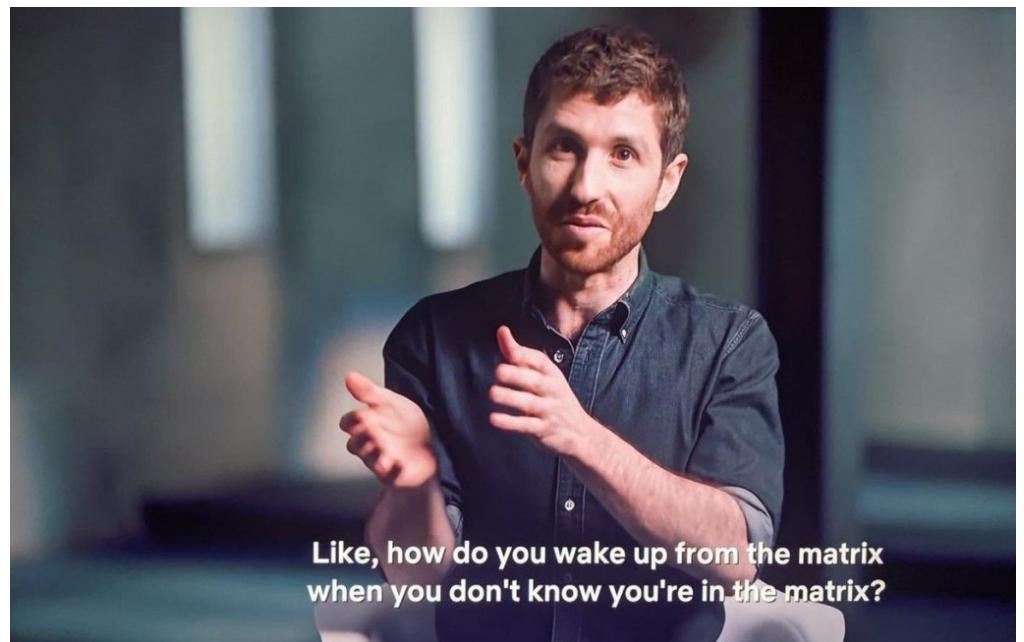
We might give ourselves a reminder that, in the computer and digital arena, the imperative to find a 'business case' has always been complicated. It is a place of intersecting forces and interests: network technologies' use in everyday life belies an early (and ongoing) history steeped in the economy and mindset of the state, military and corporate forms. Their capacity to serve democratic power has always been compromised by this reality; their appearance as one thing usually some kind of shroud, mask, or illusory surface, for their reality as another. This gives us rich material to think about the 'work of representation', and even, following early interaction design theorist, Brenda Laurel, the work of time-based art forms such as drama and dance.

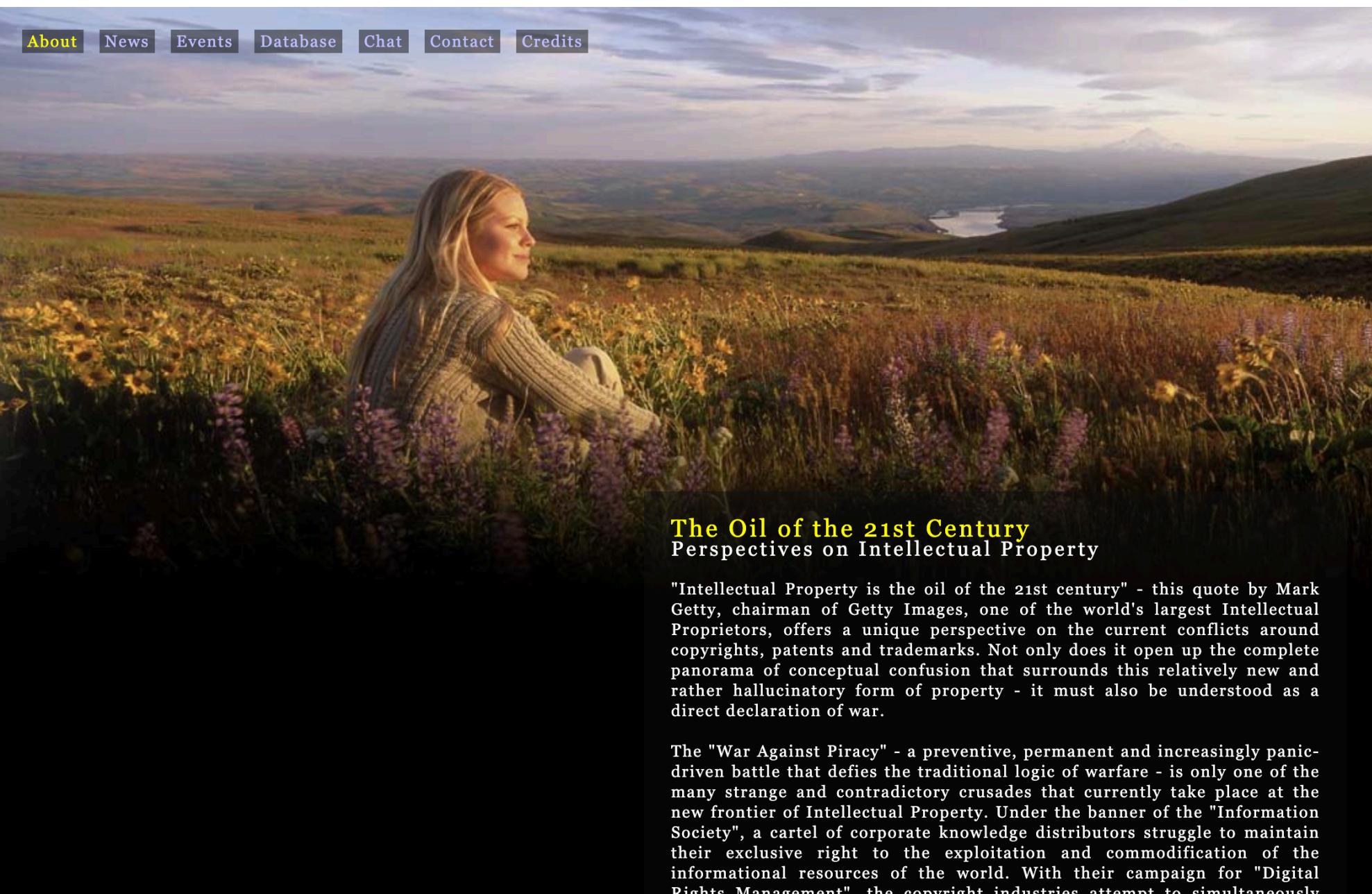
Image top left: Tristan Harris, technology 'ethicist' and ex-Google employee, faces reality while speaking to camera for Netflix

Image top right: Seminal book on interaction design, Brenda Laurel's *Computers as Theatre* (1991)

Image bottom left: Pokemon Go, which Zuboff argues was instrumental in the notion of 'footfall' for physical commercial destinations

Image bottom right: Apple advertisement for early landmark GUI based personal computers





Week 6: Theories and Histories: Events and the GUI

The ineffable object of computer interaction design

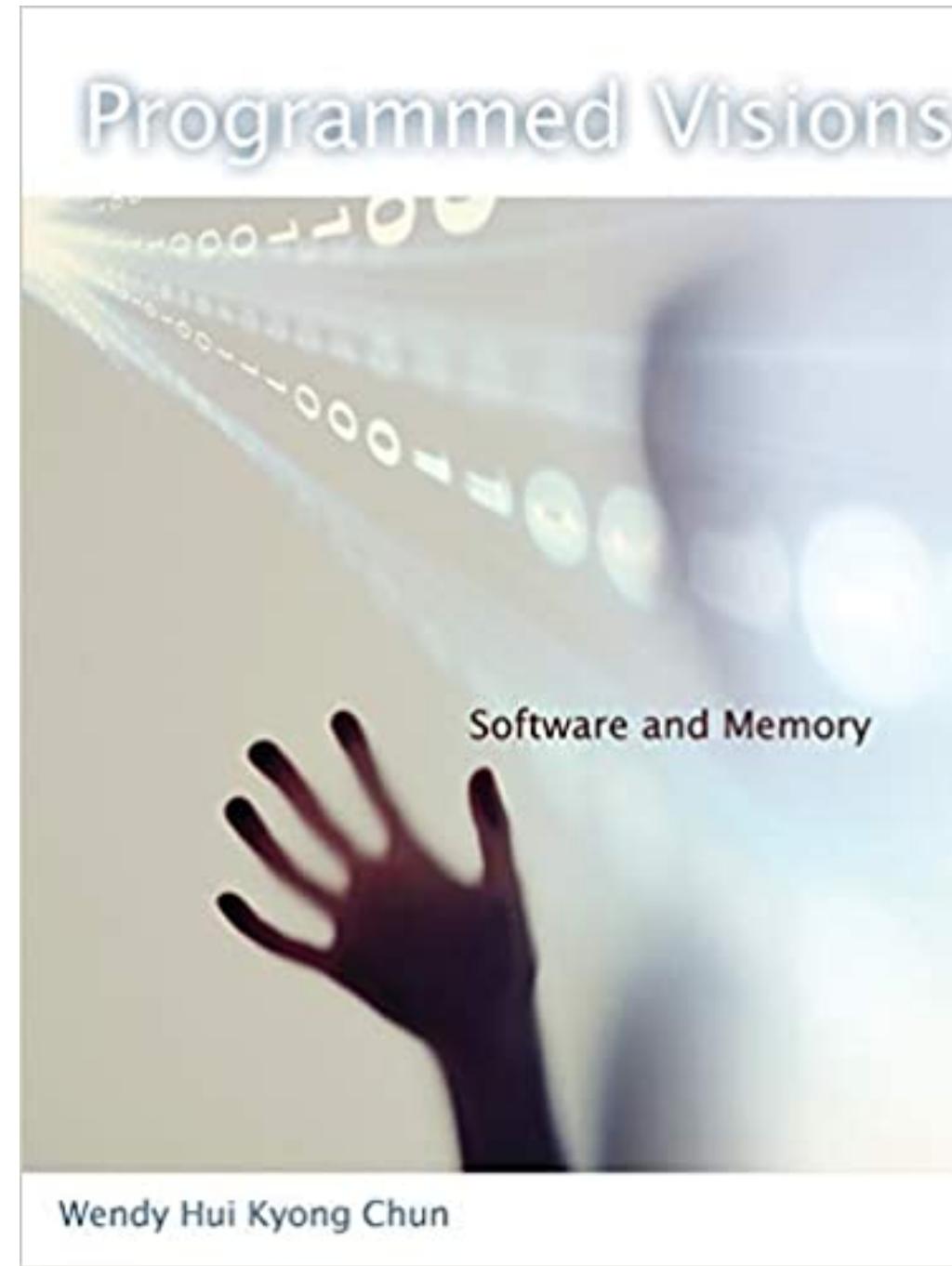
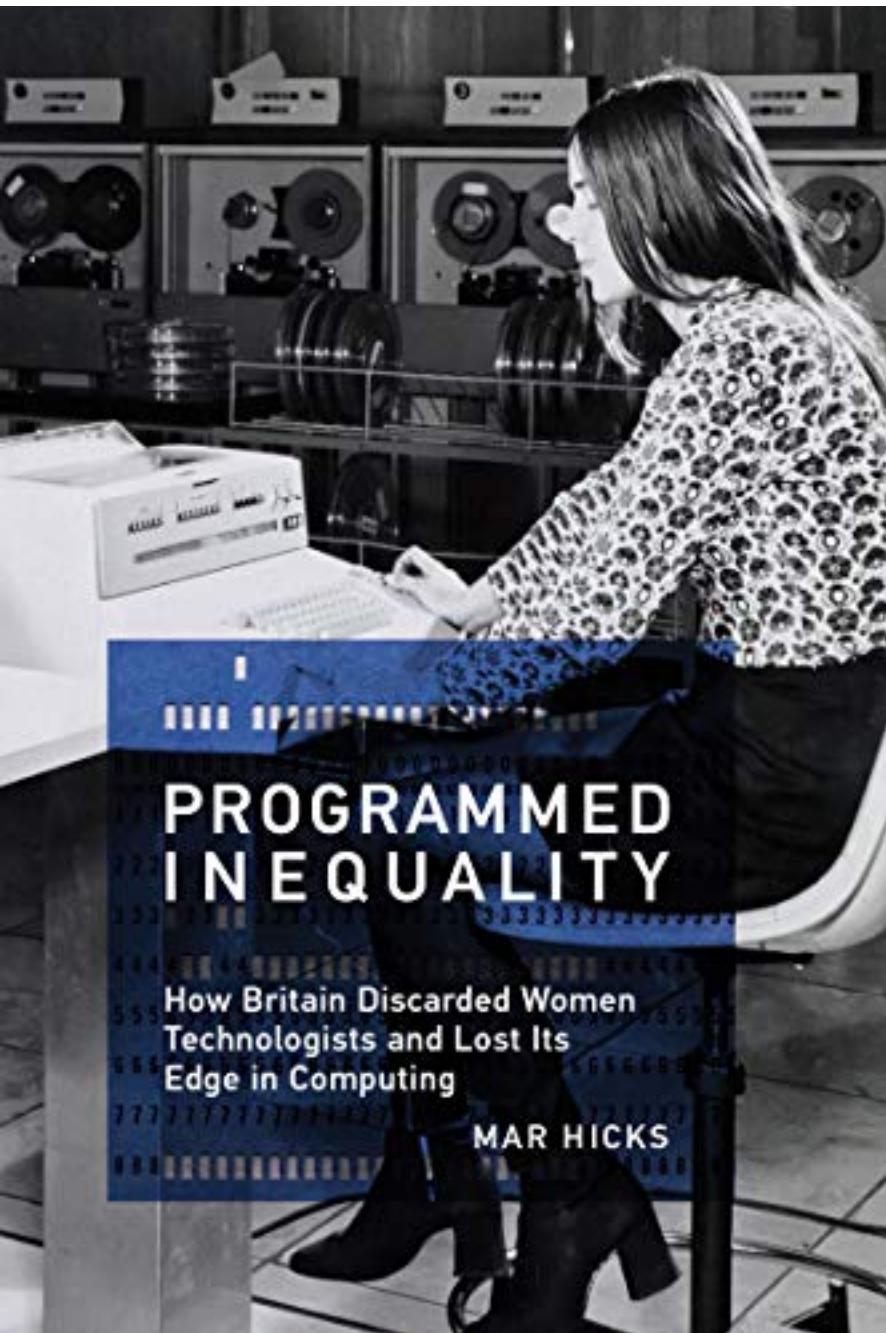
In week 2, together with Mar Hicks' text on the gendered recomposition of labour in British computing, we looked at Wendy Chun's book *Programmed Visions*, in which she describes the strange interzone from which software emerged, quite unexpectedly:

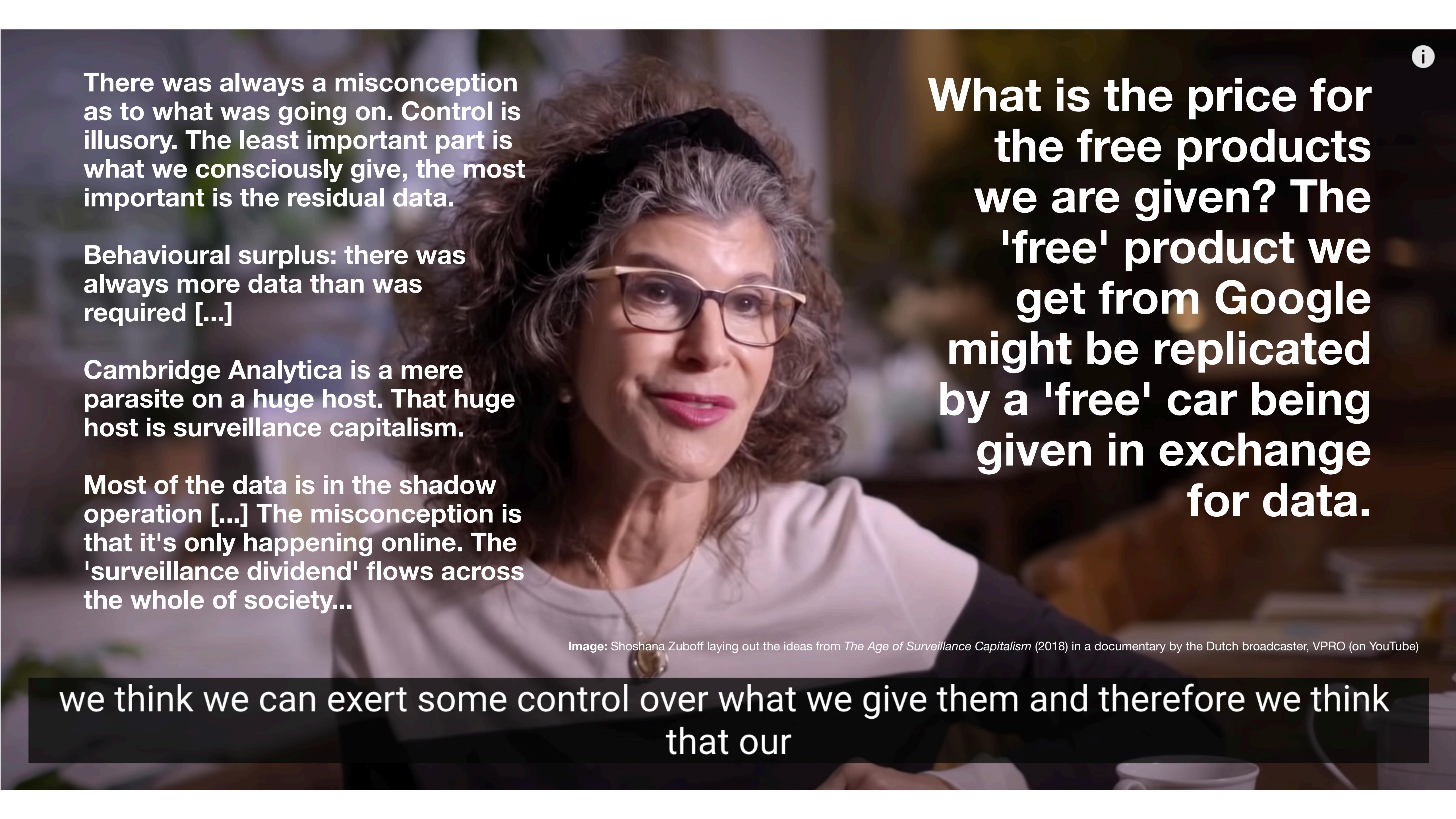
"At first, software encompassed everything that was not hardware, such as services. [...] J. Chuan Chu, one of the hardware engineers for the ENIAC, the first working electronic digital computer, called software the 'daughter' of Frankenstein (hardware being the son). Software, as a service, was initially priced in terms of labor cost per instruction. Herbert D. Benington remarks that attendees at the 1956 symposium on advanced programming methods for digital computers were horrified that his Lincoln Laboratory Group [...] could do no better than \$50 per instruction. In that address Benington also stresses the growing importance of software: 'our colleagues who build computers,' he notes, 'have come to realize that a computer is not useful until it has been programmed.' As this statement reveals, the word program, at that time, was predominantly a verb, not a noun.

Legal battles over software copyrights and patents make clear the stakes of this transformation of software from a service, priced per instruction, to a thing."

A similar set of movements, and lucky accidents, occurs with data (and before it, 'IP'), each of them being heralded as "the new oil", demanding processing, refining, storage.

Image top: The Oil of the 21st Century conference website from 2008, when Intellectual Property still claimed the digital 'oil' mantle
Image bottom left: Mar Hicks, *Programmed Inequality* (2017)
Image bottom right: Wendy Hui Kyong Chun, *Programmed Visions* (2011)



A medium shot of Shoshana Zuboff, a woman with curly brown hair and glasses, wearing a light-colored top. She is looking slightly to her left with a thoughtful expression.

There was always a misconception as to what was going on. Control is illusory. The least important part is what we consciously give, the most important is the residual data.

Behavioural surplus: there was always more data than was required [...]

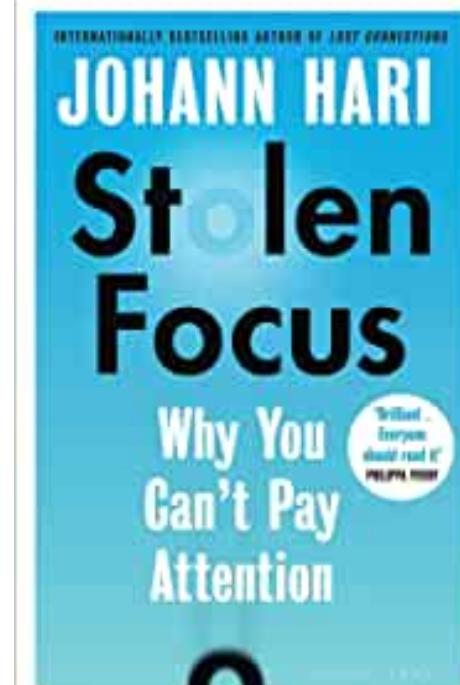
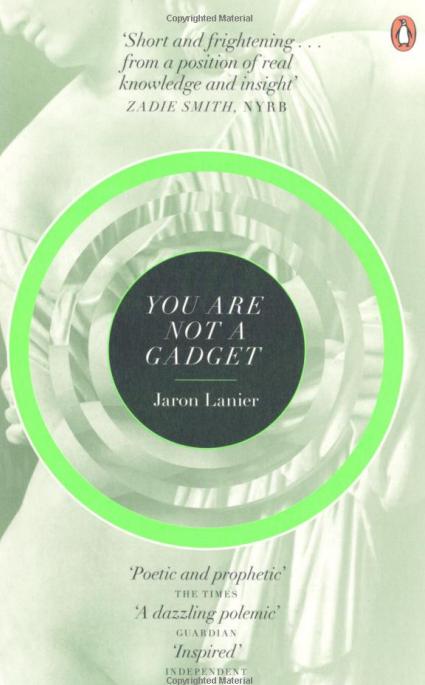
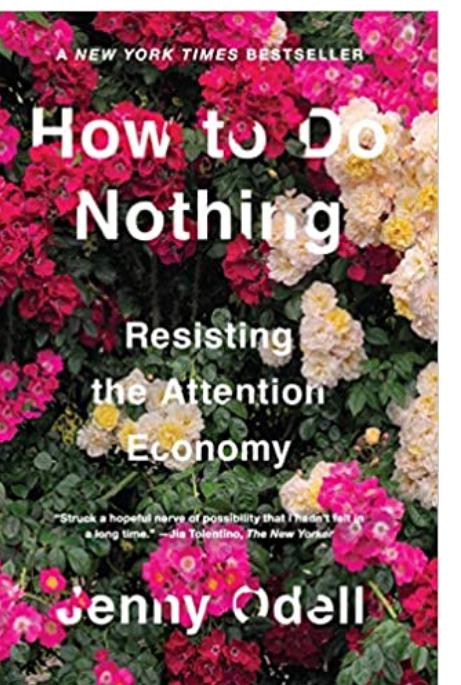
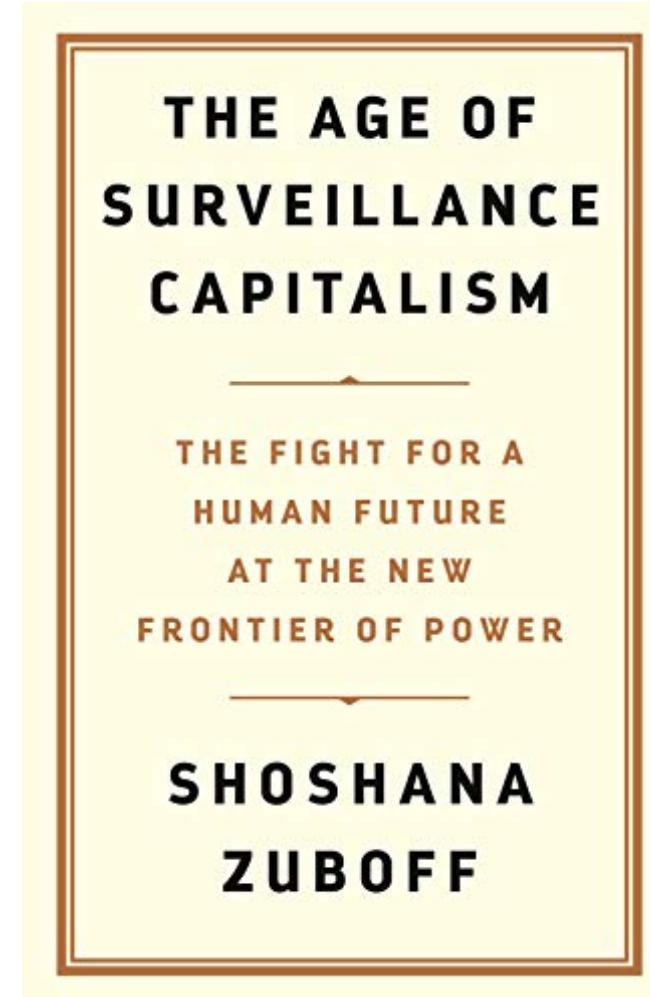
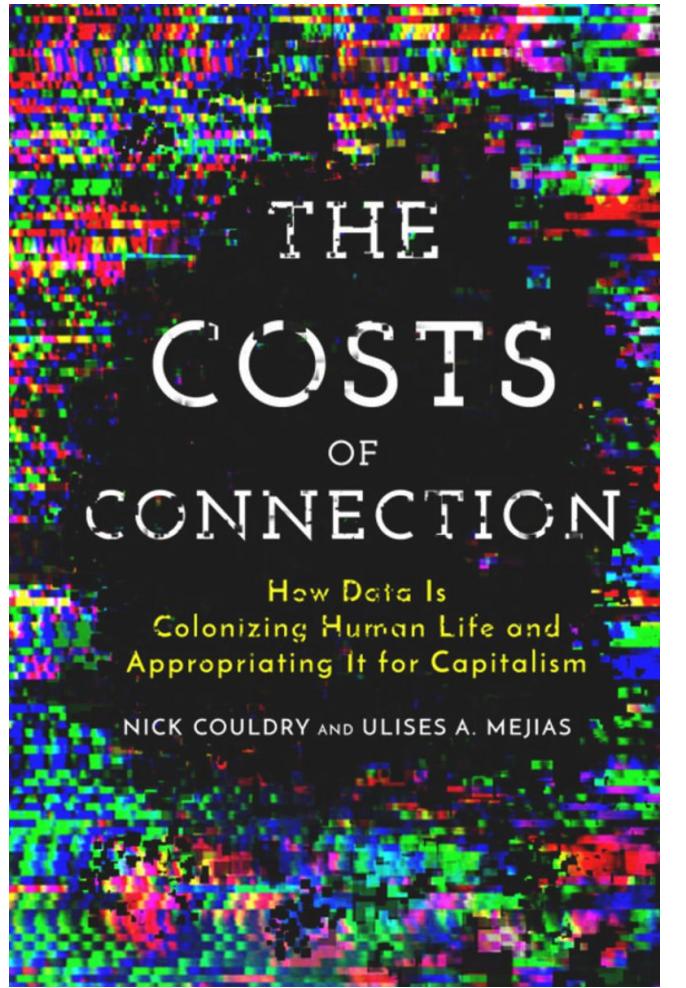
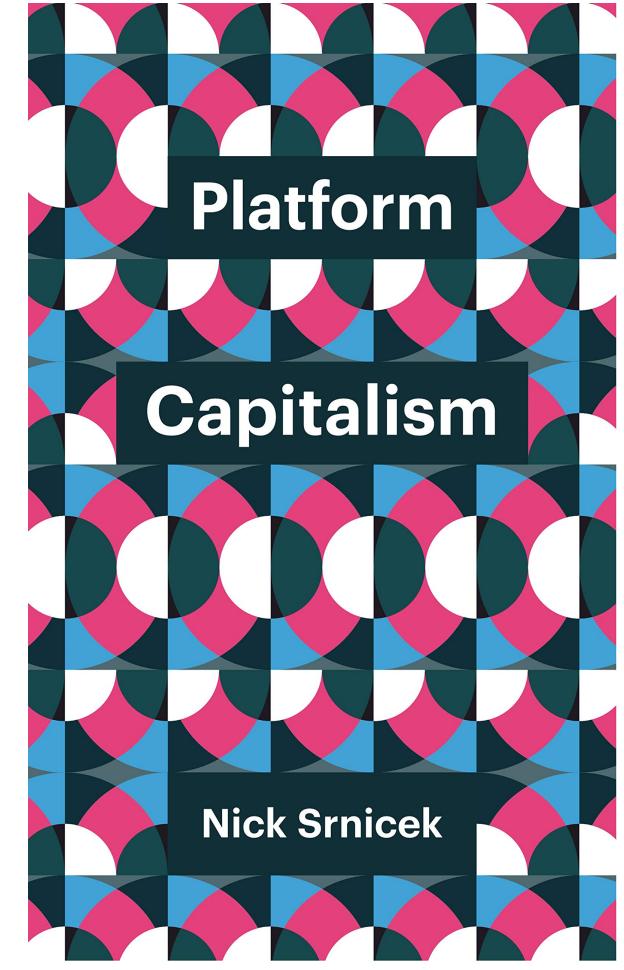
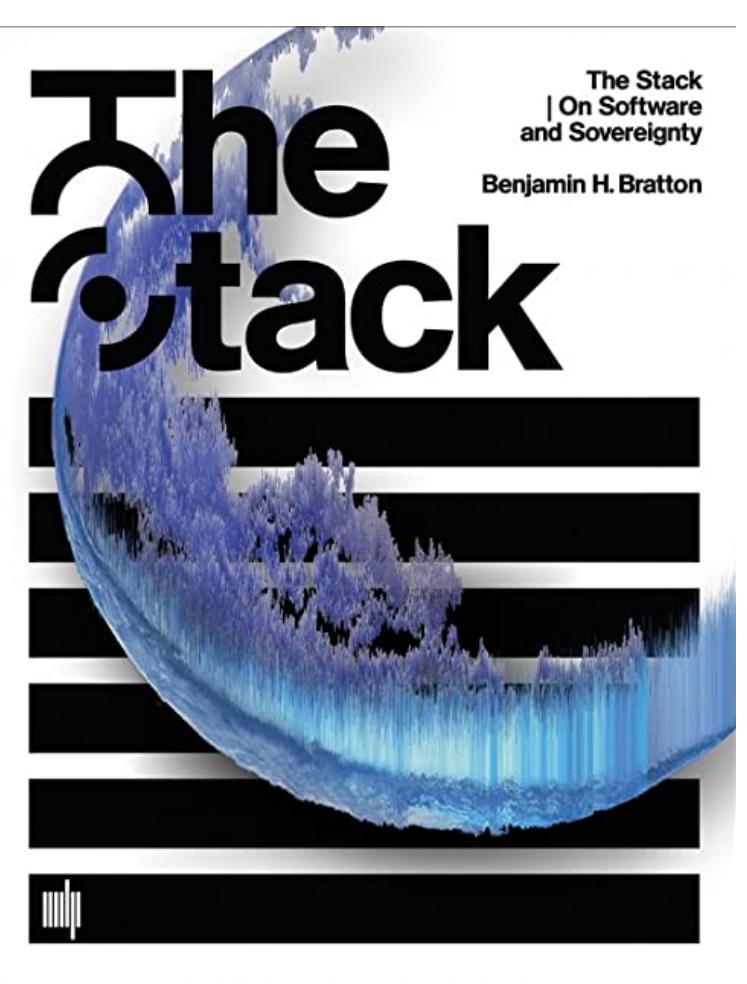
Cambridge Analytica is a mere parasite on a huge host. That huge host is surveillance capitalism.

Most of the data is in the shadow operation [...] The misconception is that it's only happening online. The 'surveillance dividend' flows across the whole of society...

What is the price for the free products we are given? The 'free' product we get from Google might be replicated by a 'free' car being given in exchange for data.

Image: Shoshana Zuboff laying out the ideas from *The Age of Surveillance Capitalism* (2018) in a documentary by the Dutch broadcaster, VPRO (on YouTube)

we think we can exert some control over what we give them and therefore we think that our



Week 6: Theories and Histories: Events and the GUI

Common frames and themes

A rush of books on platform capitalism shows us there is a rough consensus as follows:

- The instinctual human desire to communicate, share and express oneself has been monetised by a few large multinational corporates
- These 'big five' – Alphabet (Google), Amazon, Apple, Meta (Facebook), Microsoft – are unaccountable to states and their laws, out of the reach of democratic challenge, and predate on the resources of the world in a process of aggressive vertical integration
- Over time, the charges that have been incurred, both individually and collectively, have turned out to dwarf the gains users might have made by using their (often free) services
- Their practices now present, not only a mortal threat to erstwhile well-functioning democratic processes, but also an incursion into the sacred private realms of the human being, her experiences, and the interiority of the psyche
- The early promise of the 'utopian' phase of the Web has been polluted, now pointing in the direction of a downward spiral with no end (other than planetary life itself)
- As such, there is something sui generis – or special, unique – about the data economy that demands new frames of analysis, vis a vis those older ones in place to understand capitalism

Image: A selection of books on the rise of platform capitalism with greater and lesser emphases on underlying material conditions and histories. Benjamin Bratton, *The Stack* (2015), Nick Srnicek, *Platform Capitalism* (2016), Nick Couldry and Ulises A. Mejias, *The Costs of Connection* (2019), Shoshana Zuboff, *The Age of Surveillance Capitalism* (2018), Jenny Odell, *How To Do Nothing* (2019), Jaron Lanier, *You Are Not a Gadget* (2010), Johann Hari, *Stolen Focus* (2022)



Week 6: Theories and Histories: Events and the GUI

Frames of data-capture

The critical debates around data-capture and platform/surveillance capitalism are difficult to disentangle, as they make crucial observations but have a tendency to generate a number of universal categories that themselves should be subject to critical interrogation and historicisation. Important examples are:

- privacy
- the human / the child / the family
- normal, free behaviour & activity
- nature / the natural
- crisis / apocalypse
- violence, control, suffering, health
- history, its phases and periodisations

We must keep this problematic in mind as we approach the debate's terms, if we are not to create a whole new set of reifications, and be diverted again from understanding the place of this crisis of 'freedom' in a larger, and especially planetary, frame.

Image: Facebook-CEO baddy chasing and capturing the 'nature' of our unknown drives, behaviours, habits

InRealLife

A Film by Beeban Kidron



SKY ATLANTIC AND BFI PRESENT
A CROSS STREET FILMS AND STUDIO LAMBERT PRODUCTION
InRealLife
Executive Producers STEPHEN LAMBERT JO CRAWLEY
LIZZIE FRANCKE CHRIS WILSON
Editor ADRIENNE HARRIS
Production Design FREYA SAMPSON BEEBAN KIDRON
Directed by BEEBAN KIDRON

SKY ATLANTIC © 2013 Sky UK Limited / British Film Institute 2013

/IRLFilm @InRealLifeFilm www.InRealLifeFilm.com dogwoof



Image left to right: Beeban Kidron, *InRealLife* (2013), Jamin and Kiowa Winans, *Childhood 2.0* (2020), Karim Amer, Jehane Noujaim, *The Great Hack* (2019), Jeff Orlowski, *The Social Dilemma* (2020)

Moral panics, their subjects and tropes

Who feature in the popular treatment of surveillance capital's fearful projections? Whose faces do we see, whose plight has triggered our collective alarm?

- It is difficult to say otherwise than that this is the (predominantly white and bourgeois) child of the Western heteronormative family
- Documentaries track a loss of illusion, shock and horror as to the real-world applications of 'innocent' and purportedly neutral instruments and technologies, but demonstrate underlying blind spots of who – which groups and demographic categories – were always already capitalism and the spectacle's victims
- Recursive feedback loops between negative social phenomenon, and the spectacular/attention value of that negative phenomenon in new content economies are getting tighter and tighter, and it may be that the only product of note we should take seriously, being manufactured by streamers, are forms of fear and paranoia that drive us deeper into their arms; deeper into alienation and solitude

The Missing Cryptoqueen

Home Podcast Listen Along with Olivia & Alex Bowen



A screenshot of a Radio 4 website for the 'Forum Internum' series. The title 'Forum Internum' is at the top, followed by 'Home Episodes'. Below is a portrait of a woman with a network of glowing blue lines and nodes overlaid on her. A 'Listen now' button is present. The episode title 'Freedom of Thought' is shown with 'Episode 1 of 3'. A brief description reads: 'Series exploring the right to freedom of thought in the digital age and protecting the forum internum – our private, mental space – from the incursions of new technology.' It also says 'Available now' and '28 minutes'. A 'Show more' link is at the bottom.

Week 6: Theories and Histories: Events and the GUI

What cuts across these melancholic tales of loss and danger

- The outright attack on the social bond, trust, collectivity
- The erosion of structures of collective organisation and defence, which might present a bulwark against the 'predatory' forms
- The insecurity of the private, bounded self
- Endless illustrations of the lengths that individuals (and their psyches) will go to to 'make it' in a market suffused from top to bottom with possibilities for subterfuge, fakery, illusions
- A flight, ever further, into systems that may securitise, both, vis a vis market forces and the trust deficit (NFTs, Blockchain, etc.), although this has been counter-balanced by a rise in unionising too

Image: recent podcasts and programmes highlighting the threats to the psyche and trust-based human communication in a spectacularised, networked capitalism with threadbare verification mechanisms

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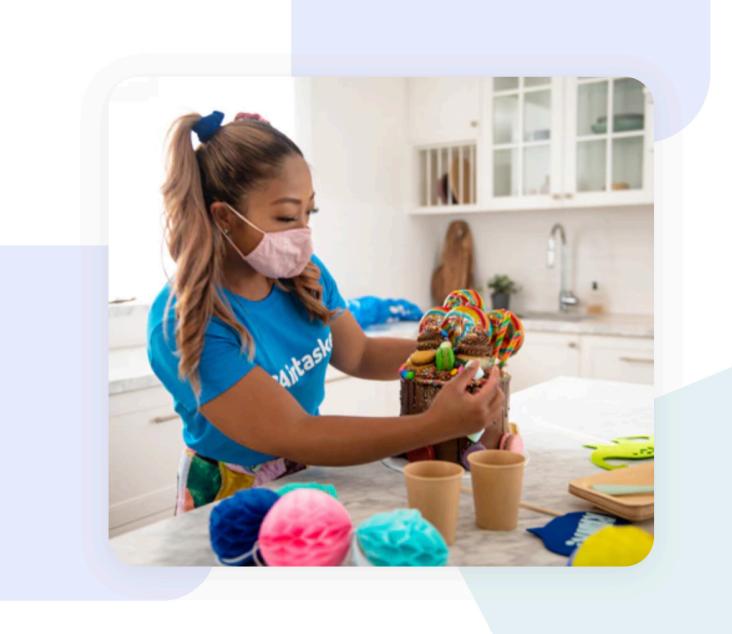


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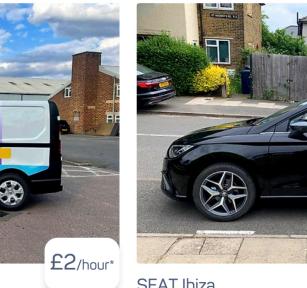
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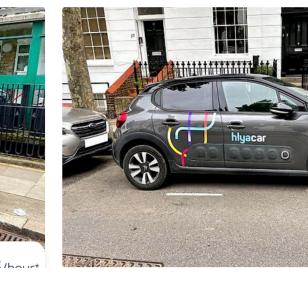
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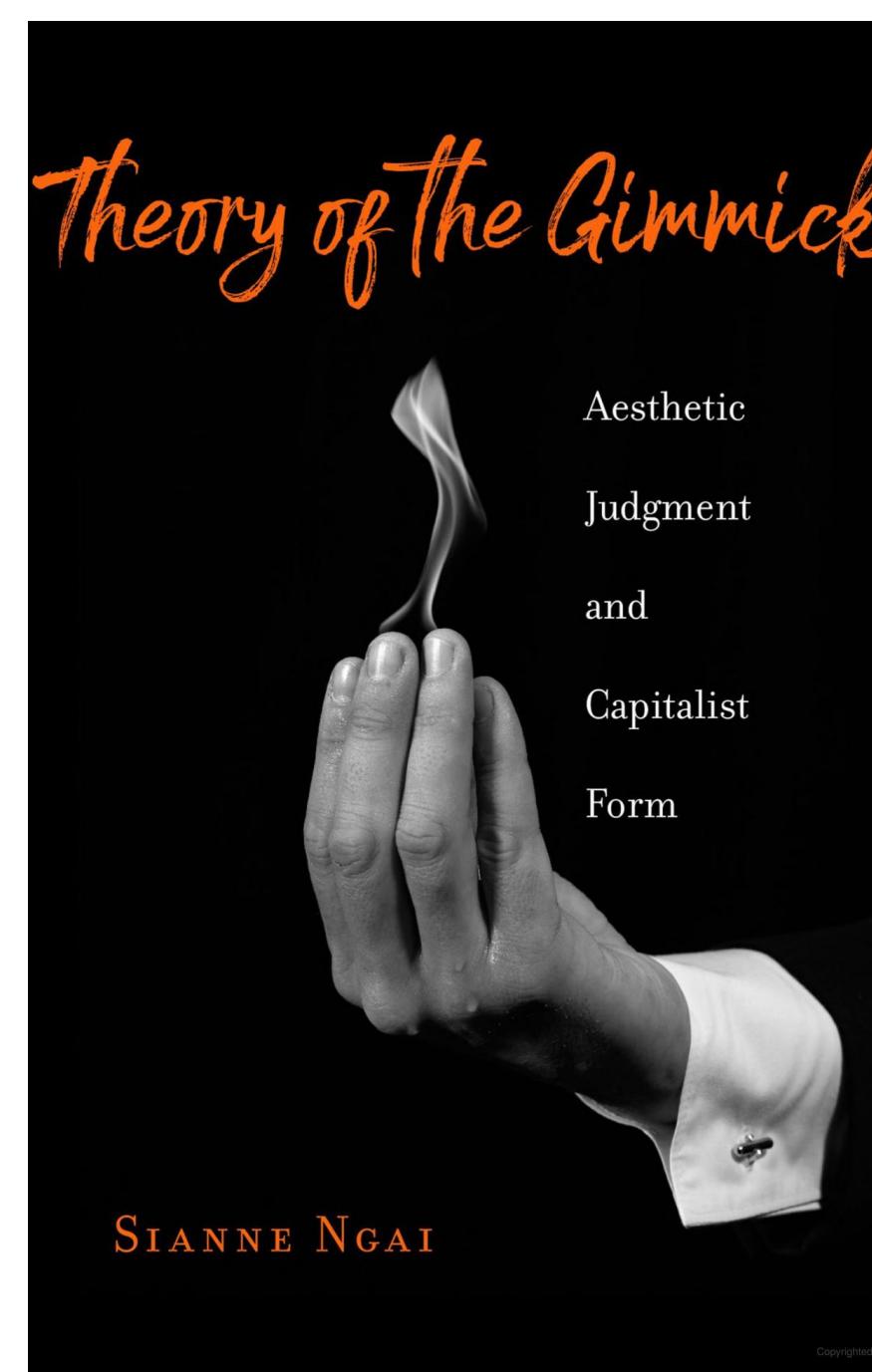
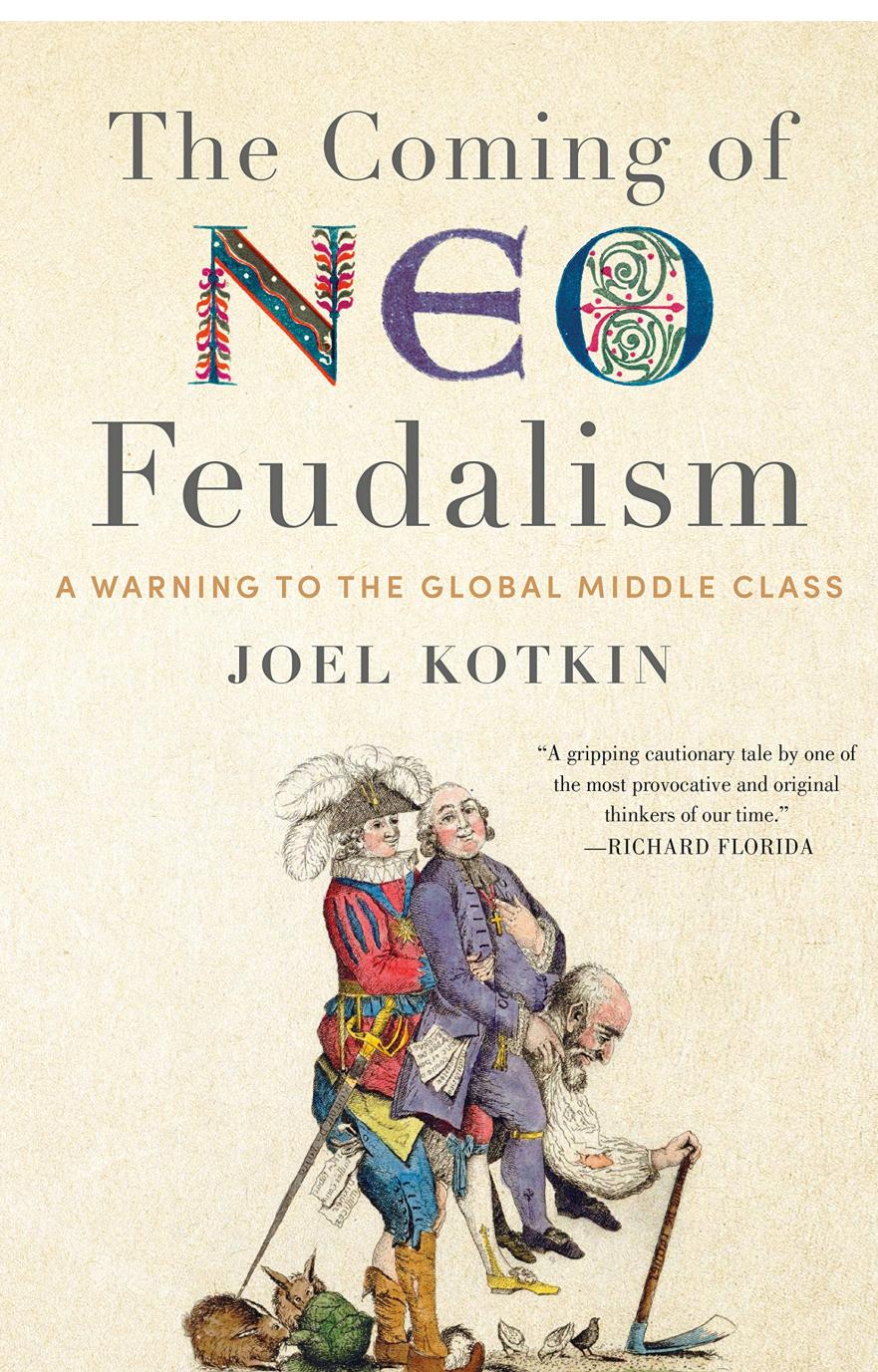
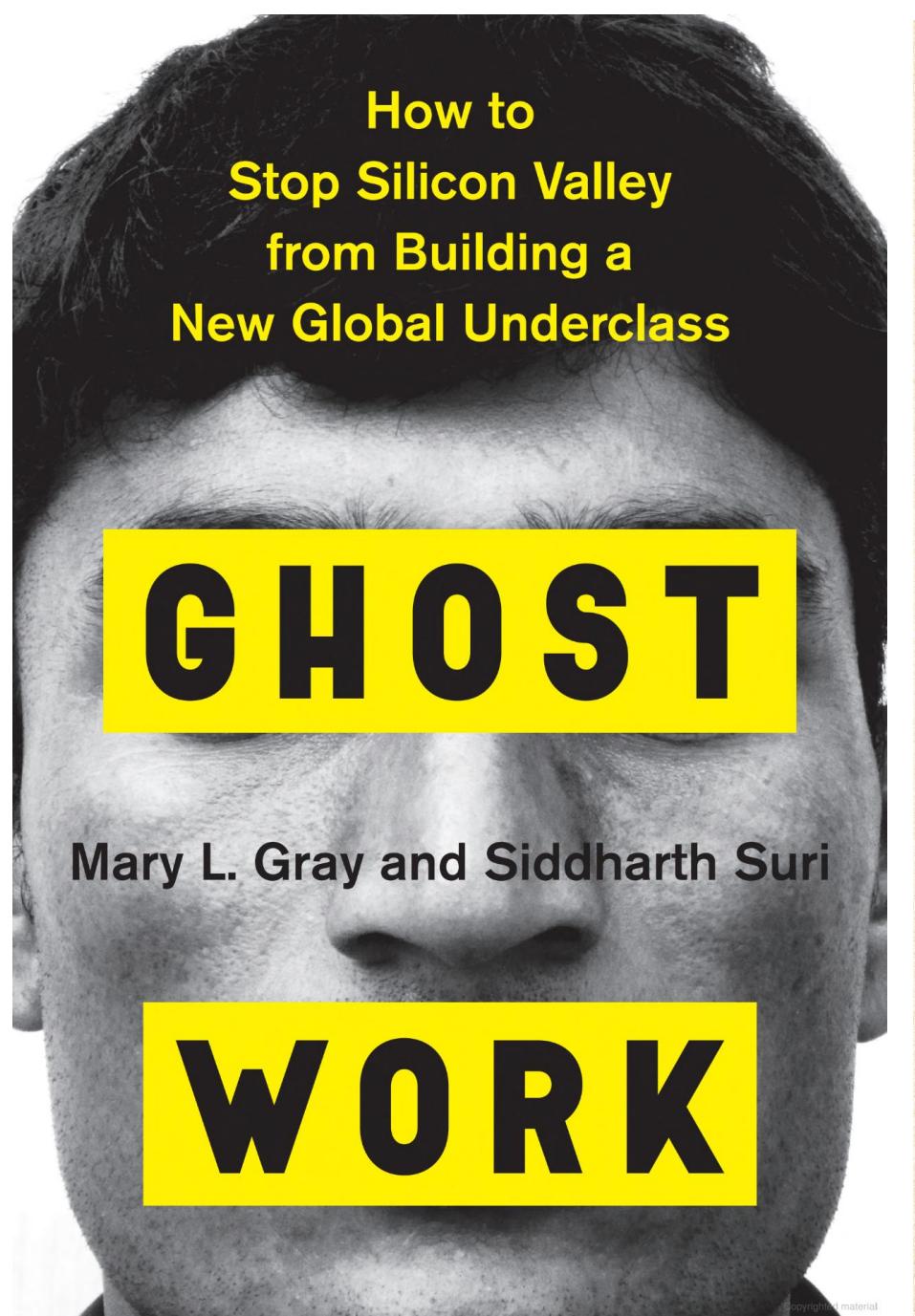
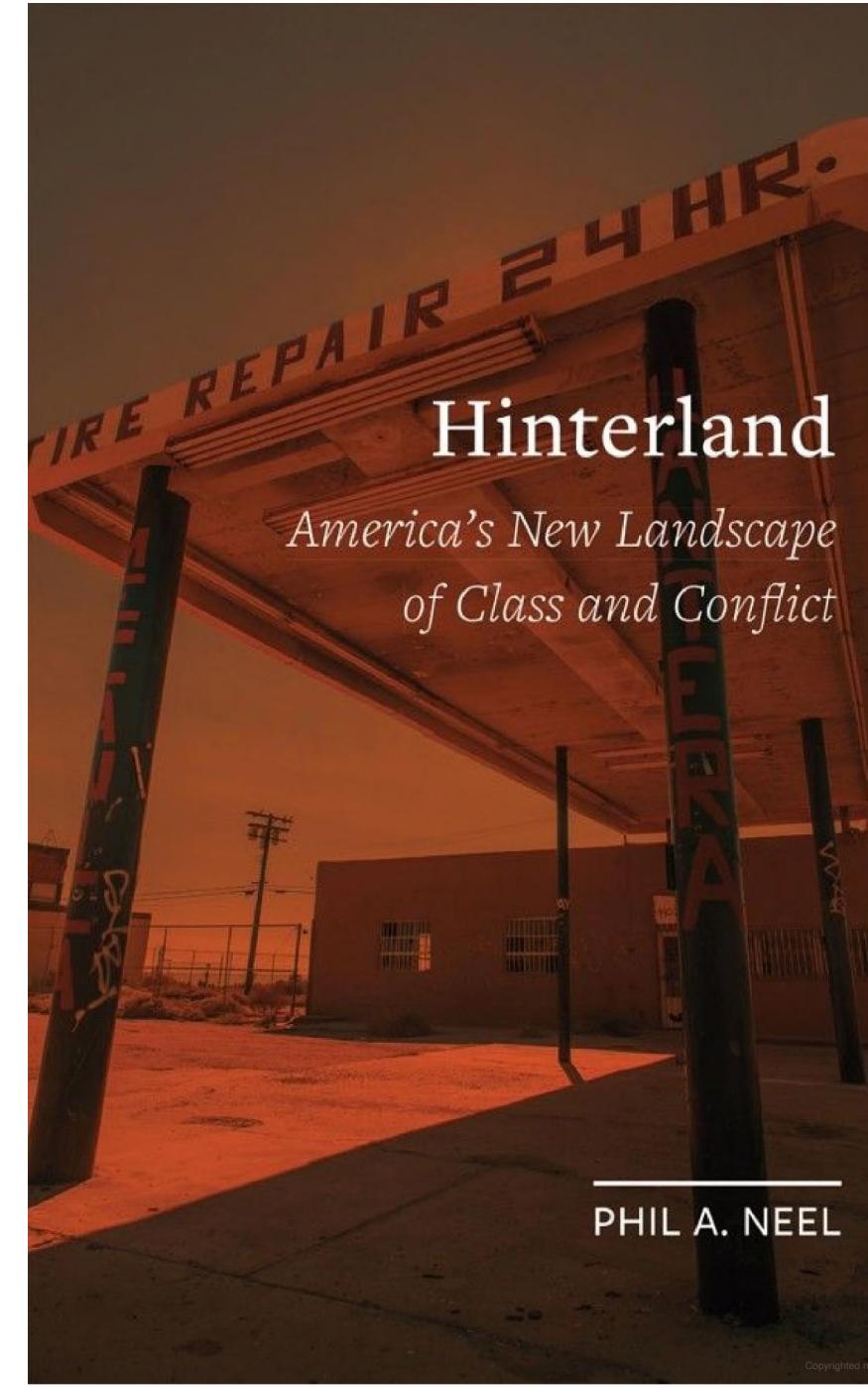
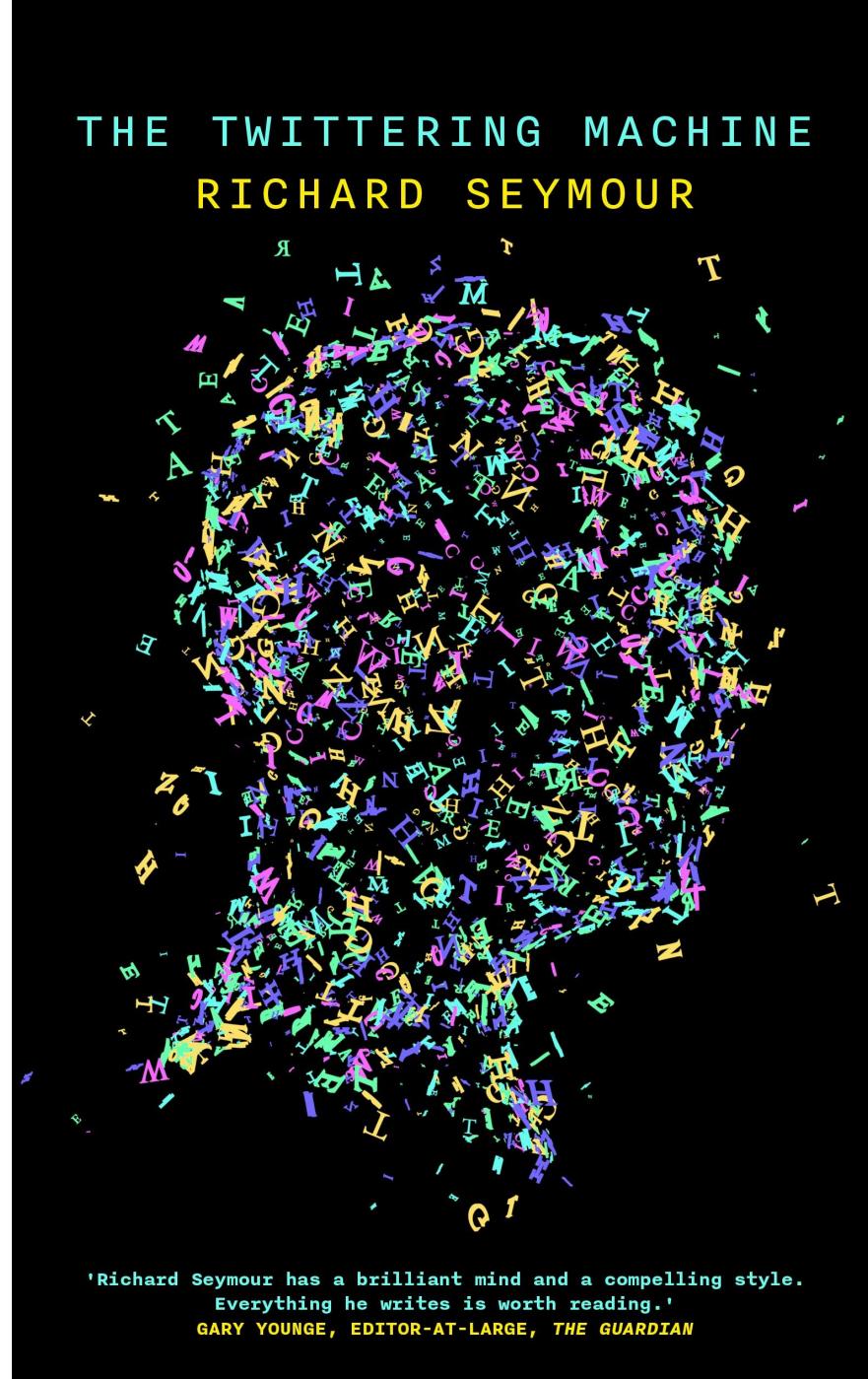
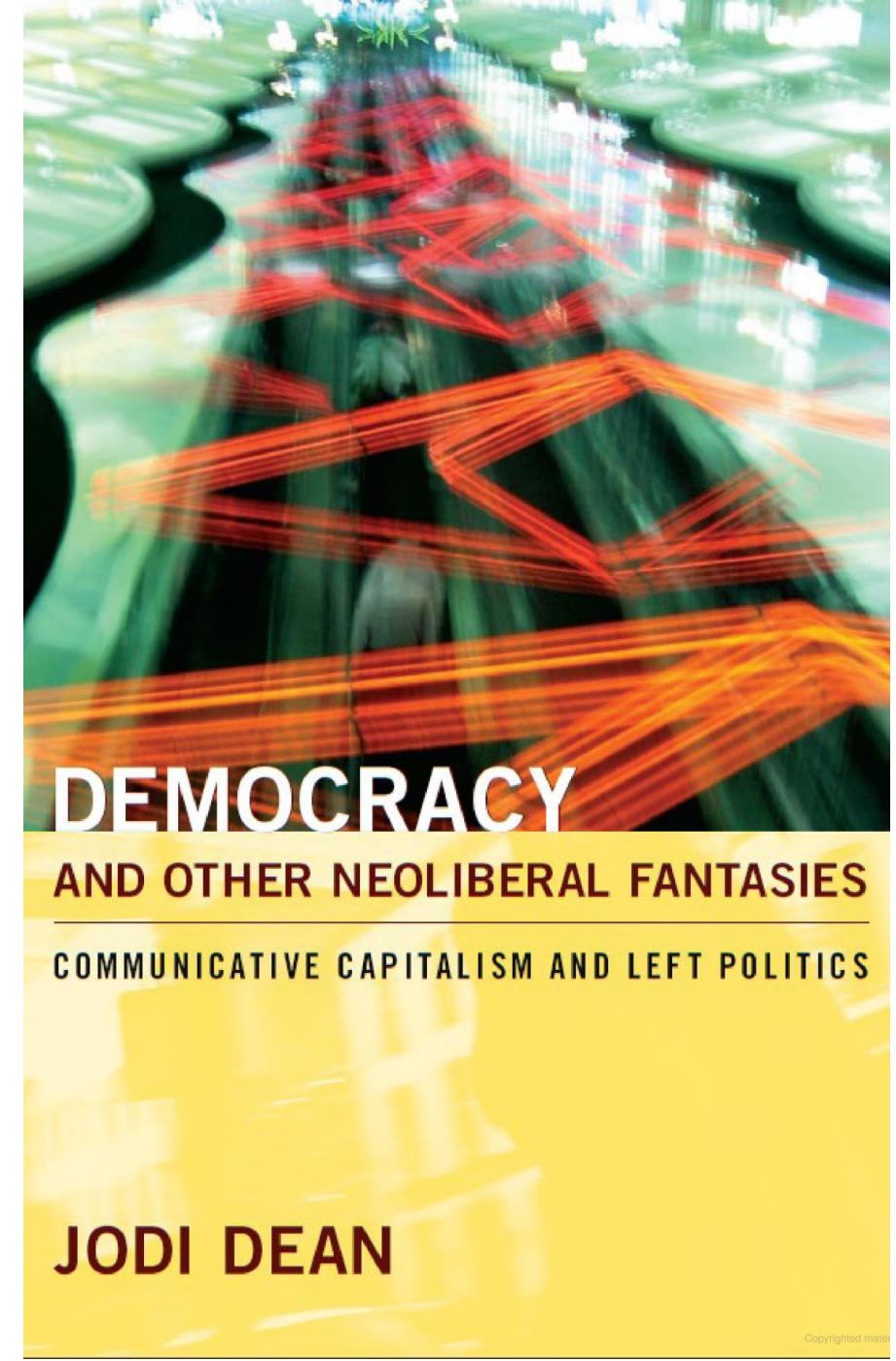
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Week 6: Theories and Histories: Events and the GUI

Platform capitalism mediates and reorganises the relationship between capital, labour and resources

- 'Web 2.0''s harnessing of free and cheap inputs extends far further than capturing behavioural and private data
- Assets that corporates in the past had a responsibility to take care of and maintain can now be the responsibility of labourers themselves (their cars, apartments, beautiful bodies and faces)
- These labourers also don't need to be granted the costly privileges of secure contracts, healthcare, parental leave, as they are classed as freelancers and/or voluntarily expressive
- This is where the thin film of the user interface extends its reach into new realms, fusing the software models of resource productivity with those of enthusiasm-based environments, such as TikTok and Instagram



Week 5: Theories and Histories: Events and the GUI

Materialising the analysis

What we see in various books running alongside the notable texts on surveillance and platform capitalism is the emergence of certain key themes, which deepen its premises.

- 1) The effects of the 'event' that occurs in the browser or software GUI (can) move through the whole of society
- 2) Far from being uncomplicatedly the victim of these new forms, the structures of liberal market democracy and national sovereignty act as their enabler, through legislatures, state support/prohibition, etc.
- 3) The vertical infrastructures of the platform have consequences running deep into geography, creating an entire new landscape of fortification, health and illness, wealth and poverty. Philip Neel and others call the most immiserated of those the 'hinterlands' of the new capitalism (often deindustrialised sites where workers are expected to live and exist in readiness for labour, with no social infrastructure)
- 4) The GUI captures data, but it also captures bodies, cars, houses, time, and space; and it does so through a set of forms that are, ultimately, those of the 'gimmick' (artifice, illusion)

Image: Jodi Dean, *Democracy and Other Neoliberal Fantasies* (2009), Richard Seymour, *Twittering Machine* (2019), Philip Neel, *Hinterland* (2018), Mary L. Gray and Siddharth Suri, *Ghost Work* (2019), Joel Kotkin, *Neo-feudalism* (2020), Sianne Ngai, *Theory of the Gimmick* (2021)

```
<script>

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let checkTime = "";

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    if(checkTime=="hour 1"){
        console.log(checkTime);
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        console.log(checkTime);
    }else if(checkTime=="hour 3"){
        console.log(checkTime+" -> Swap Rooms!!");
        stayPut = false;
    }
    time++;
}

</script>
```

Hour 4

1. Can you make the more advanced 'events' examples work?
2. In the GUI example, can you set the sky to change colour with the day and night?

END