Abstract and Control: Twenty Years of Google

The third in a series of articles in Google's twentieth-anniversary year

The story of Google is a telling case study in the analysis of contemporary society, reorganised as it has been by the mutations of cybernetic capitalism. The company's history has been one of deep enthralment with technology, typically cast in naive 'how-cool-is-that' terms-it is a story peppered with geeky tropes and various vacuous watchwords like 'innovation', 'entrepreneurial' and, of course, lots and lots of 'growth'. In addition to its remarkable ability to extract wealth and accumulate power, Google has, from the beginning, had extraordinary ambition. This was evident back in 1998 when the co-founders formulated the fledgling company's mission statement: to 'organize the world's information and make it universally accessible and useful'. Rooted in the cultural assumptions of utilitarian engineering and a cybernetic remix of the capitalist dream of infinite expansion, the imperial informatics of this mission statement exhibit a totalising control fantasy that is as ambitious as it is ignorant.

In addition to being the twenty-year anniversary of Google, 2018 is also the 200-year anniversary of Mary Shelley's *Frankenstein; or, The Modern Prometheus*. In this book, arguably the founding text of science fiction, Shelley vividly captured the hubris of modernity in the tragic figure of Victor Frankenstein. This connection is significant for the saga of Google, as the tech titan exemplifies hubris in its modern form, weaving a combination of overweening pride, arrogance and ignorance. The company sometimes takes this so far as to make even the older notion of hubris relevant: excessive pride insulting to the gods and resulting in disaster, the consequence of a fatal character flaw.

Such extreme hubris is neatly captured in Google's devotion of enormous resources to the dubious project of attempting to create artificial intelligence (AI). This project seeks to produce a computing machine capable of thought: to manufacture subjectivity, to program a soul, which is to say the vital force that transforms matter into something capable of thought, feeling and experience. It is, in short, an attempt to become as a god capable of breathing life into inorganic matter, thus paralleling the grim obsession of Frankenstein. If this were possible in the first place—and it is a fairly big 'if'—and if Google somehow proved to be successful in its quest, it would be the holder of the intellectual-property rights to its creation, hence reinventing slavery in producing an intelligent being fundamentally the *private property* of the corporation-as-god.

Of course, Google, and the other corporate and military pursuers of AI, are far more abstracted in their pursuit of the god-like ability to create life than Frankenstein's sewing together of dead flesh. Indeed, they are bent on creating the ultimate Cartesian subject: a mind without a body. The fact that AI would exist Timothy Erik Ström

within the circuits of a computer would make it a fundamentally different form of being from humans. All aspects of human intelligence are formed by the ultimate embodiment of our minds, a process that begins before birth in our mothers' wombs. We are formed, constituted, in the social relationships between generations. The decades we spend in our extended childhood in the social womb—the care and support given by a community—make us the kind of complex creatures we are. A computer in a laboratory would have a totally different 'embodiment', leading to an utterly alien form of intelligence.

The cybernetic flattening of the manifest differences between people and machines is evident when Google's co-founders casually remark that in the future a search function 'will be included in people's brains'. As Larry Page said: 'Eventually you'll have the implant, where if you think about a fact, it will just tell you the answer'. Putting aside the philosophical issues inherent in this problematic Cartesian cybernetics, this ambition again exemplifies the hubris of the techno-sciences. This fantasy can be seen as another effort to transform the corporation into an omniscient provider of all the answers that one needs in life. If this were possible-an even bigger 'if' this time—it is fair to assume that embedding a cybernetic commodity produced by an advertising-surveillance company into a human thought-organ would utterly transform the kind of creature we are in ways that, it is easy to imagine, could lead to a kind of neuro-tech totalitarianism. It provides a decidedly unmetaphorical example of how cybernetic capitalism seeks to embed itself within people's life-worlds in order to encourage consumerism, conformity and control. The implant is a vivid illustration of this, but perhaps the tech titans do not need to pierce the skin-smartphones, which are usually kept within a metre of one's body, twentyfour hours a day, are already a hugely effective link to the overarching apparatus of cybernetic capitalism.

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Google's hubris extends into the ancient alchemical quest for immortality. Through its biotech research-and-development arm, Calico—an acronym for 'California Life Company'—it sets its sights on combatting ageing, associated diseases and, ultimately, death. Spanning the fields of medicine, pharmaceuticals, molecular biology, genetic engineering and computational biology, Calico seeks to create technological interventions to remake the human condition. One of Google's prominent employees, its 'director of engineering' Ray Kurzweil, has repeatedly made the public claim that he will be one of the first people to live forever. He is convinced that medical technology is increasingly extending lifespans and that we will very soon be able to 'outrun our own deaths'.

Amazingly, the tech titans go a step further, looking not only to create life but to build a kind of god. This will take the form of the 'technological singularity', whereby AI, accelerating exponentially with a chainreaction feedback loop of infinite selfimprovement, will lead to the emergence of a superintelligence that will totally surpass humanity. Many proponents of this theory imagine that the super-intelligent computing machine will reorganise all of society and nature after its cybernetic image, redeeming humanity from its fallen state and lifting us into a disembodied realm of limitless control and total mastery. Google even funds the 'Singularity University', a Silicon Valley thinktankbusiness incubator that seeks to encourage this god-building enterprise.

As Shelley acutely captured it 200 years ago, the hubris that Google exhibits—and that bleeds across much of cybernetics and the techno-sciences, and the various administrators, engineers and capitalists who feed on it—is a constitutive element in capitalist modernity itself. Frankenstein's words echo down to us today: 'Life and Death appeared to me ideal bounds, which I should first break through... A new species would bless me as its creator and source; many happy and excellent natures would owe their being to me'. Google's ambitions reveal an astounding overestimation of its powers and capabilities, as well as a worrying loss of contact with human reality in all of its gritty messiness, which is of deep concern considering the political power that the company wields. Much of this can be interpreted as an extremely well-funded control fantasy; indeed, it likely says as much about the fear and limitations of cybernetic capitalists as it does about any actual future.

Google and democracy

The subtitle of Shelley's novel—*The Modern Prometheus* —sets the book's tone as a mythic warning, an exploration of an emerging desire to break boundaries and to push the limits of nature through science, to reorganise the world in ways that we imagine better suit our schemes. The book explored this modern hubris through the narrative of Frankenstein's experiment, which began in a dorm room in total secrecy, with Frankenstein gripped by an obsession with newfound powers of creation and control. Once his creation springs to life, Frankenstein fails to extend compassion to it; he flees the scene screaming, and he hides his dark secret until it is too late.

The profoundly antidemocratic structure of the Google empire is highly significant for our historical moment.

Two centuries later, it is not the lone maverick scientist working in secrecy but, rather, the well-resourced institutions of official science that are the typical locus of scientific work. Since the Second World War, research and development, especially in the techno-sciences, has been the preserve of enormous corporations working closely with universities and the military. Vast intellectual energy is spent developing systems of abstract control, largely to foster unneeded consumption. As with Frankenstein's creature, Google began as a dorm-room experiment. Since then, it has expanded to become a global institution and a major R&D player, but much of its research is conducted under cover of various forms of secrecy. Here intellectual-property rights, competition, public relations, military funding and 'national security' come together in such a way as to enable elite-led and elite-serving technological development.

The profoundly anti-democratic structure of the Google empire is highly significant for our historical moment. In the previous instalment in this series of articles I noted how most of the company's decision-making power is controlled by the three white male billionaires at the top of the monopolistic company's apex. The total lack of democracy within Google does not stop its elites from publicly exalting the virtues of democracy in their selfproclaimed company philosophy. Under the heading 'Democracy on the web works', they write:

Google search works because it relies on the millions of individuals posting links on websites to help determine which other sites offer content of value. We assess the importance of every web page using more than 200 signals and a variety of techniques, including our patented PageRank[™] algorithm, which analyzes which sites have been 'voted' to be the best sources of information by other pages across the web. As the web gets bigger, this approach actually improves, as each new site is another point of information and another vote to be counted. $\leftarrow \leftarrow \leftarrow$

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In this, Google equates hyperlinks with votes and votes with democracy, thereby morphing 'rule by the people' into a highly abstracted and formalised form of online popularity. This is closer to a highly abstracted fashion index than a political system for social self-determination. Indeed, there is virtually nothing of the rich history of democracy left in the way that Google uses or explains it. At first, all that seems to be on offer is a trademarked link-analysis algorithm owned by a multinational corporation.

Beneath this lies another, more powerful ideological view of democracy. The idea that corporate globalisation furthers the spread of democracy draws on the dubious assertion that freedom, free markets and democracy are synonymous. This suspicious collapsing of concepts is bound up with the arguments made by mainstream economists that the 'free market' will somehow allow avarice to be transmuted into the best possible society for everyone, everywhere, always. In a world of spiralling inequalities, the manifest failure of this dismal argument is readily apparent, although the priests of profit continue to claim that it is reality that is wrong, not their model. Meanwhile, social power continues to concentrate at the apex of cybernetic capitalism at the expense of most of the world's inhabitants.

Nevertheless, Google's elite are very fond of claiming that they and technology more broadly—are a basic force for democratisation. In the corporation's quasi-official management text *How Google Works*, the company's top executives claim that the 'Internet Century' has brought 'global growth within anyone's reach'; that: 'We have the democratization of just about everything—information, connectivity, computing, manufacturing, distribution, [and] talent'. Sundar Pichai, Google's CEO after its reshuffle into the conglomerate holding company Alphabet, claims that Google believes 'in leveling the playing field for everyone. The Internet is one of the world's most powerful equalizers, and we see it as our job to make it available to as many people as possible'. He goes on:

For us, technology is not about the devices or the products we build. Those aren't the end-goals. Technology is a democratizing force, empowering people through information. Google is an information company. It was when it was founded, and it is today. And it's what people do with that information that amazes and inspires me every day.

It is certainly true that the uneven spread of the web around the world has made access to instant communication and wide-ranging information available to anyone with the equipment, funds and skills to access it. Yet, contrary to the assumption among the cyber-capitalists, simply having access to a communication network does not equal democracy. As I detailed in the previous instalment in this series, Google is an advertising company, which is to say that it works to manipulate people's practices, trying to align them with the interests of commercial organisations and systematically promoting consumerism. It is a new techno twist in an old story of advertisers seeking to produce desires. In the 1960s Raymond Williams noted: 'Advertising is the consequence of a social failure to find means of public information and decision over a wide range of everyday economic life. This failure, of course, is not abstract. It is the result of allowing control of the means of production and distribution to remain in minority hands'. In the half-century since Williams made this analysis, since the rise of the 'free market' and its solidification into new forms of monopoly capital, the consequences of this failure have only become more apparent and ownership far more concentrated. The systematic prioritisation of advertising, consumerism and commercial interests comes at the direct expense of meaningful forms of political and economic democracy. At the same time as the internet has expanded into everyday life, other profoundly antidemocratic phenomena have run in parallel with it. Over the last few decades politics has been characterised by a huge increase in focus groups, polling, lobbying, spin doctors and public relations, as well as increasingly abstract and predatory financial practices and deep militarisation of society, which serve to project radical new forms of control onto the organisation of society. This has emerged simultaneously with a growing and generalised resentment against the decaying system, with increasingly toxic results.

The abject failure of the internet to have revitalised democracy does not prevent cyber-capitalists from touting the coming of an electronic agora or democratic utopia. An example of this is Google's pronouncement that on 'the world stage, the most significant impact of the spread of communication technologies will be the way they help reallocate the concentration of power away from states and institutions and transfer it to individuals'. In claims like this, cyber-capitalists unequivocally equate corporate power with people power, thus privatising what was once the public good.

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The discourse of digital democracy often refers to Thomas Jefferson, who seems to be the historical hero of choice for cyber-capitalism's 'democratic' impulse. Jefferson championed the rights of American artisans, farmers and frontier businessmen for self-determination, which his liberal ideology led him to believe required widespread ownership of private property. He also argued that black people were not worthy of inclusion in the social contract because, while they were undeniably human, they were property, and whenever the 'rights of man' conflicted with the rights of property the latter had to prevail.

'Information is the currency of democracy.' This quote, often spuriously attributed to Jefferson, has been widely influential in cyber-capitalist discourse. It is curious because of its central monetary metaphor, 'currency', which serves to interpret democracy in the terms of the market. It is also curious to note that the notion 'information' referred to something far less abstract when Jefferson is said to have uttered it in comparison to what it refers to now, after the rise of cybernetic and information-processing computing machines. Having purged democracy of such concepts as 'social justice' or 'selfdetermination', cyber-capitalists appear to equate it with technological transmissions in an unregulated global market.

As well as this cyber-market version of democracy there is another version of 'democracy' in play in how Google understands and promotes the term, one that essentially means 'subordinate to US foreign policy'. In a best-selling book called The New Digital Age, Google's top executives tell readers they want to promote democracy in a number of 'problem areas' around the world, conjuring up an eerily familiar list of countries, including Afghanistan, China, Cuba, Iran, Iraq, North Korea, Russia, Somalia, Syria, Venezuela and Yemen. That Google's executives cite the same list of naughty countries as the Pentagon is unsurprising when one considers that Google has become a top military contractor. The tech titan has enormous Pentagon, Homeland Security and police contracts, promoting itself to top US war-makers as an innovative can-do problem-solver ready to take on the world's biggest challenges, such as global terrorism. Thus The New Digital Age proposes 'public-private partnerships' with companies like Google to help prevent the 'radicalization of youth':

Technology companies are uniquely positioned to lead this effort internationally. Many of the most prominent ones have all the values of a democratic society with none of the baggage of being a government—they can go where governments can't, speak to people off the diplomatic radar and operate in the neutral, universal language of technology. Moreover... [the tech industry] has perhaps the best understanding of how to distract young people... These companies may not understand the nuances of radicalization or the differences between specific populations in key theaters like Yemen, Iraq and Somalia, but they do understand young people and the toys they like to play with. Only once we have their attention can we hope to win their hearts and minds.

So, rather than considering systemic problems—such as gaping inequality, environmental degradation, colonial legacies, US military aggression or the lack of any meaningful form of democracy—the Google elite believe that technologically enhanced consumerism will cure the world's ills, especially when backed up by cybernetic war machines. They seem to be suggesting that people in 'key theaters' should not be concerned with the drones that buzz overhead but rather focus on the

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commodities that plug them into Google's circuits of surveillance-fuelled accumulation. 'Democracy' will be sure to follow.

Google CEO from 2001 to 2015 Eric Schmidt has defended the company's practices, saying: 'I am very proud of the structure that we set up. We did it based on the incentives that the governments offered us to operate [...] It's called capitalism. We are proudly capitalistic. I'm not confused about this'. And Schmidt is correct: Google's executive were incentivised by governments to create a world-spanning capitalaccumulating apparatus. In an op-ed published in The Guardian, Schmidt justifies these practices using the classic neoliberal line that too much corporate tax results in 'less innovation, less growth and less job creation'. Schmidt claims that 'politicians-not companies—set the rules' but also claims : 'The average American doesn't realize how much of the laws are written by lobbyists'. And, sure enough, according to voluntary disclosures, Google spends a huge amount on lobbying the US government. In 2012 it spent over \$18 million on lobbying, the second highest amount spent by a company, topped only by General Electric. This lobbying effort was partly motivated by the Federal Trade Commission proposal that anti-trust action be pursued against Google, which allegedly had abused its monopoly. In 2014 it spent more on lobbying than any other corporation in the United States, employing 122 full-time lobbyists in Washington-split half Democrat, half Republican—all housed in a building larger than the White House. These lobbyists, ninety-eight of whom have previously held government jobs, lobby on a diverse array of issues, including intellectual-property enforcement, homeland security and the Trans-Pacific Partnership. In 2012 the corporation hired twenty-five lobbying companies to act on its behalf, and gave the third-largest contribution to Obama's 2012 re-election campaign. All of these practices have continued and intensified, with Google breaking its own enormous spending record in the second quarter of 2018, forking out more on lobbying than ever before. This corrosive, corrupting practice is spread across capitalism more generally, with other tech titans Amazon and Facebook also breaking their own spending records in this quarter. In all cases, the ability to extract wealth translates directly to the ability to project the power of a particular corporation onto the formal political practices.

Many of these facts point to the rapid rotation of the 'revolving door': the rulership of a group of people who move in circular fashion from government positions as regulators and legislators to work for corporations in the areas they formally regulated and legislated, and vice $\leftarrow \leftarrow \leftarrow$

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versa. Much of the global power elite is enmeshed in a veritable clockwork of revolving doors, all greased by cash and moving to keep the circuits of accumulation and control spinning. One study of Google's relationship with the Obama regime found that representatives from the firm attended White House meetings more than once a week on average after Obama's election until late 2015, with a total of 427 visits, including twenty-one audiences with the president himself. They also found almost 250 cases of people moving from positions within Google to positions within the federal government, and vice versa. Seven of these even completed a full revolving-door circuit, going from one to the other and back again. The vertical integration Google has achieved with the US government can be regarded as a 'true publicprivate partnership', with the study concluding: 'Google doesn't just lobby the White House for favors, but collaborates with officials, effectively serving as a sort of corporate extension of government operations in the digital era'.

At the same time as the internet has expanded into everyday life, a number of other profoundly antidemocratic phenomena have run in parallel with it.

In addition to lobbying and revolving doors, Google engages in a number of other tactics to increase its ability to project power. These include throwing lavish parties, supporting political campaigns, providing training to journalists, and bankrolling 'coin-operated' academics so that they can produce nominally independent research that validates the cyber-capitalist firm's practices. Such academics can be found with the Law and Economic Centre at George Madison University, an institution with a long history of advocating for corporate interests. Its list of corporate donors is extensive, including representatives of big pharma (Pfizer), big oil (ExxonMobil), big finance (Visa), big tobacco (Altria), big war (Raytheon) and big business in general (the US Chamber of Commerce).

Google also finances sympathetic research from various thinktanks, advocacy groups and nonprofits that aggressively pursue pro-big-business agendas while casting them as public-interest projects. In the United States corporations are not required to publicly disclose their funding of advocacy groups, but Google has chosen to release some detail of the non-profits it funds. It financially supports almost 100 organisations from across an extremely limited section of the ideological spectrum: from neoliberal groups, such as the Progressive Policy Institute and the Competitive Enterprise Institute, to neoconservative groups, such as the American Conservative Union and the Cato Institute. Google claims that its political funding is 'balanced'—a dubious claim at the best of times—but this claim becomes utterly unsustainable when one considers an issue like global warming. There are not 'two proportional sides' to this debate, and by directly funding numerous climate-change-denial groups, such as the Heritage Foundation, Google is actively contributing to the toxic propaganda that is helping to usher in the Sixth Mass Extinction. No amount of green-washing changes this.

Conclusion

The world that Google is helping to bring about is a world of spiraling inequality, where those at the techno-finance apex acquire dizzying levels of riches at the expense of ordinary people everywhere. This financial concentration is paralleled by a grotesque concentration of social power in the hands of an elite whose connection with the reality they profit from is deeply questionable. It is a world that is enormously both bureaucratic, with an array of global administrators pushing standardisations and upholding intellectual-property rights to ensure the effective extraction of profits, and a dangerous one, where the 'rights' of corporations are defended, extended and enforced by spooks, police and military powers. It is an unstable world, driven by the ruinous capitalist doctrine of infinite growth within finite nature, including finite human nature, resulting in people's short attention spans and fractured consciousness, and the toxification and collapse of ecosystems. It is a world of abstract information, disembodied communication, endless consumption, and altogether a world that is just so damn convenient. Rather than starting from the deeply flawed assumptions of abstraction and control that have characterised modern hubris, it would be better to begin below and consider what kind of world we want to create and what kind of beings we want to become. This is a political, ethical and imaginative exercise that necessarily involves far more than any technocratic elite. It may well be that much could be redeemed of these cybernetic technologies if they were reworked at human scale according to the bottom-up logic of an embodied democracy. This is not the place to explore the various ways in which localisation, common ownership, worker self-organisation and a dramatic reduction in consumption levels could lead to a different world. Suffice to say, any serious thinking about alternative worlds must consider the question of technology and the way it is produced, practised and organised. What is sorely lacking today is any means by which to democratically evaluate and shape the technological reconstitution of nature and the kinds of societies we create.

Weaving through much larger structures of technological abstraction and control, Google is a powerful thread helping to stitch together this globalising monster. With its bright brand image and optimism, it is a 'human face' grafted onto the inhuman apparatus of cybernetic capitalism. In the Greek epics, hubris would often see a hero overstep the boundaries of human limitations, provoking the gods and triggering the hero's downfall. In an age of collapsing ecosystems and shattered social relations, where the rate of toxins tends to increase and the rate of profit to fall, it is tempting to imagine the wrath of the gods in nature itself, to imagine it in the storms and droughts, wildfires and rising seas. Rather than creating intelligent machines and immortal billionaires, perhaps we might still heed Mary Shelley's cautionary tale. With his dying breath, Victor Frankenstein uttered a warning against hubris into the frozen Arctic air. We could interpret this as a warning that the quest for ultimate control may well lead to the utterly uncontrollable.