CHAPTER ONE

WE ARE ALL CONNECTED

There is in our future a TV or Internet populism, in which the emotional response of a selected group of citizens can be presented and accepted as the Voice of the People.

Umberto Eco, 'Ur-Fascism'

In 1922, the surrealist Paul Klee invented the Twittering Machine. In the painting, a row of stick-figure birds clutches an axle, turned by a crank. Below the device where the voices squawk discordantly is a reddened pit. The Museum of Modern Art explains: 'the birds function as bait to lure victims to the pit over which the machine hovers.'[1] Somehow, the holy music of birdsong has been mechanized, deployed as a lure, for the purpose of human damnation.

I.

In the beginning was the knot. Before text, there was textiles.

From about five thousand years ago, the Inca civilization used quipus, coloured strands of knotted string, to store information, usually for accounting purposes. They were sometimes called 'talking knots', and they were read with practised motions of the hand, much as Braille is today. But every beginning is, to some extent, arbitrary. We could just as well start with cave painting.

The 'Chinese Horse' in Dordogne is more than twenty thousand years old. The image is spare. The animal has some objects protruding from it which might be spears or arrows. Hovering above is an abstract design which looks like a square pitchfork. Here, surely, is writing: marks on a surface intended to represent something for someone else. One could also begin with clay engravings, notches on bone or wood, hieroglyphs, or even – if you take a very narrow view of what writing is – the blessed alphabet.

To begin with knots is just to stress that writing is matter, and that the way the texture of our writing materials shapes and contours what can be written makes all the difference in the world.

II.

During the fifteenth century, sheep began to eat people. Thomas More wondered how animals 'that were wont to be so meke and tame, and so smal eaters' could have turned carnivore.[2] He blamed enclosures. The emerging agrarian capitalist class found that they could do better business rearing sheep to sell wool on the international markets, than if they allowed peasants to subsist on the land. Sheep ate; people starved.

In the nineteenth century, the Luddites exhorted against another paradox: the tyranny of machines over human beings. The Luddites were textile workers, who noticed the way the owners were using the machinery to undermine the bargaining position of workers and accelerate their exploitation. A proto-labour movement, they used the only disruptive tactic

available to them: they smashed the machines. But to little avail in the long run, as work was more and more automated and taken under managerial control. Machines operated the workers.

Something similar is happening to writing. At first, says historian Warren Chappell, writing and print were one and the same thing: 'They both begin with the leaving of footprints.'[3] As though writing were both the journey and the map, a record of where the mind has been. Printed matter, arguably the first authentically capitalist commodity, has been the dominant format of public writing almost since the invention of the movable-type printing press almost six hundred years ago. Without print capitalism and the 'imagined communities' it helped call into existence, modern nations would not exist.[4] The development of modern bureaucratic states would have been impeded. Most of what we call industrial civilization, and the scientific and technological developments it depends upon, would have come, if at all, far more slowly.

Now, though, like everything else, writing is being restructured around the format of the computer. Billions of people, above all in the world's richest countries, are writing more than ever before, on our phones, tablets, laptops and desktop computers. And we are not so much writing, as being written. This is not really about 'social media'. The term 'social media' is too widely used to be wished away, but we should at least put it in question. It is a form of shorthand propaganda.[5] All media, and all machines, are social. Machines are social before they are technological, as the historian Lewis Mumford wrote. Long before the advent of the digital platforms, the philosopher Gilbert Simondon explored the ways in which tools generate social relationships. A tool is, first, the medium of a relationship between a body and the world. It connects users in a set of relationships with one another and the world around them. Moreover, the conceptual schema from which tools are generated can be transferred to new contexts, thus generating new types of relationship. To talk about technologies is to talk about societies.

This is about a *social industry*. As an industry it is able, through the production and harvesting of data, to objectify and quantify social life in numerical form. As William Davies has argued, its unique innovation is to make social interactions visible and susceptible to data analytics and sentiment analysis.[6] This makes social life eminently susceptible to manipulation on the part of governments, parties and companies who buy data services. But more than that, it produces social life; it *programmes* it. This is what it means when we spend more hours tapping on the screen than talking to anyone face to face; that our social life is governed by algorithm and protocol. When Theodore Adorno wrote of the 'culture industry', arguing that culture was being universally commodified and homogenized, it was arguably an elitist simplification. Even the Hollywood production-line showed more variation than Adorno admitted. The social industry, by contrast, has gone much further, subjecting social life to an invariant written formula.

This is about the industrialization of writing. It is about the code (the writing) which shapes how we use it, the data (another form of writing) which we generate in doing so, and the way in which that data is used to shape (write) us.

III.

We are swimming in writing. Our lives have become, in the words of Shoshana Zuboff, an 'electronic text'.[7] More and more of reality is being brought under the surveillance of the chip.

While some platforms are about enabling industry to make its work processes more legible, more transparent and thus more manageable, data platforms like Google, Twitter and Facebook turn their attention to consumer markets. They intensify surveillance, rendering abruptly visible huge substrata of behaviour and wishes that had been occulted, and making price signals and market research look rather quaint by comparison. Google accumulates data by reading our emails, monitoring our searches, collecting images of our homes and towns on Street View and recording our locations on Google Maps. And, thanks to an agreement with Twitter, it also checks our tweets.

The nuance added by social industry's platforms is that they don't necessarily have to spy on us. They have created a machine for us to write to. The bait is that we are interacting with other people: our friends, professional colleagues, celebrities, politicians, royals, terrorists, porn actors – anyone we like. We are not interacting with them, however, but with the machine. We write to it, and it passes on the message for us, after keeping a record of the data.

The machine benefits from the 'network effect': the more people write to it, the more benefits it can offer, until it becomes a disadvantage not to be part of it. Part of what? The world's first ever public, live, collective, open-ended writing project. A virtual laboratory. An addiction machine, which deploys crude techniques of manipulation redolent of the 'Skinner Box' created by behaviourist B. F. Skinner to control the behaviour of pigeons and rats with rewards and punishments.[8] We are 'users', much as cocaine addicts are 'users'.

What is the incentive to engage in writing like this for hours each day? In a form of mass casualization, writers no longer expect to be paid or given employment contracts. What do the platforms offer us, in lieu of a wage? What gets us hooked? Approval, attention, retweets, shares, likes.

This is the Twittering Machine: not the infrastructure of fibre-optic cables, database servers, storage systems, software and code. It is the machinery of writers, and writing, and the feedback loop they inhabit. The Twittering Machine thrives on its celerity, informality and interactivity. The protocols of the Twitter platform, for example, centred on its 280-character limit on posting length, encourage people to post quickly and often. One study suggests that 92 per cent of all activity and engagement with tweets happens within the first hour of the post

being made. The feed has an extremely rapid turnover, so that anything which is posted will, unless it 'goes viral', tend to be quickly forgotten by most followers. The system of 'followers', '@ing' and threading encourages sprawling conversations to develop from initial tweets, favouring constant interaction. This is what people *like* about it, what makes it engaging: it is like texting, but in a public, collective context.

Meanwhile, hashtagging and 'trending topics' underline the extent to which all of these protocols are organized around the massification of individual voices – a phenomenon cheerfully described by users with the science fiction concept of the 'hive mind' – and hype. The regular sweet spot sought after is a brief period of ecstatic collective frenzy around any given topic. It doesn't particularly matter to the platforms what the frenzy is about: the point is to generate data, one of the most profitable raw materials yet discovered. As in the financial markets, volatility adds value. The more chaos, the better.

IV.

From print capitalism to platform capitalism, the apostles of 'big data' see in this story nothing but human progress. The triumph of data heralds the end of ideology, the end of theory and even the end of the scientific method, according to former editor-in-chief of *Wired*, Chris Anderson.[9]

From now on, they say, rather than conducting experiments or generating theories to understand our world, we can learn everything from mammoth data-sets. For those in need of a progressive-sounding pitch, the advantage of making markets massively more legible is that it spells an end to market mysticism. We no longer have to believe, as neo-liberal economist Friedrich Hayek did, that only markets left to their own devices could really know what people want.[10] Now the data platforms know us better than we know ourselves, and they can help companies shape and create markets in real time. A new technocratic order is augured, in which computers will enable corporations and states to anticipate, respond to and mould our desires.

This fantastical, dubious prospectus is only plausible to the extent that we are writing more than we ever have, and under these very novel conditions. Estimates of social platform usage vary wildly but, to take a middling example, one survey found that American teenagers were spending nine hours a day looking at a screen, interacting with all kinds of digital media, composing emails, sending tweets, gaming and viewing clips.[11] Older generations spend more of their time watching television, but they spend a similar amount of time gazing at screens – up to ten hours a day. Ten hours is more time than most people spend asleep. And the number of us checking our phones within five minutes of waking ranges from a fifth in France to two thirds in South Korea.[12]

Writing is not all we are doing. Much of the time is spent consuming video content, for

example, or purchasing quirky products. But even here, as we'll see, the logic of algorithms means that we have often, in a sense, written the content, collectively. This is what 'big data' allows: we are writing even when searching, scrolling, hovering, watching and clicking through. In the strange world of algorithm-driven products, videos, images and websites – everything from violent, eroticized, animated fantasies aimed at children on YouTube to 'Keep Calm and Rape' t-shirts – unconscious desires recorded in this way are written into the new universe of commodities.[13] This is the 'modern calculating machine' that Lacan spoke of: a machine 'far more dangerous than the atom bomb' because it can defeat any opponent by calculating, with sufficient data, the unconscious axioms that govern a person's behaviour.[14] We write to the machine, it collects and aggregates our desires and fantasies, segments them by market and demographic and sells them back to us as a commodity experience.

And insofar as we are writing more and more, it has become just another part of our screened existence. To talk about social media is to talk about the fact that our social lives are more and more mediated. Online proxies for friendship and affection – 'likes', and so on – significantly reduce the stakes of interacting, while also making interactions far more volatile.

V.

The social industry giants like to claim that there is nothing wrong with the tech that can't be fixed by the tech. No matter what the problem, there's a tool for that: their equivalent of 'one weird trick'.

Facebook and Google have invested in tools to detect 'fake news', while Reuters has developed its own proprietary algorithm for locating falsehoods. Google has funded a UK start-up, Factmata, to develop tools for automatically checking facts – such as, say, economic growth figures, or the numbers of immigrants arriving in the USA last year. Twitter uses tools created by IBM Watson to target cyberbullying, while a Google project, Conversation AI, promises to detect aggressive users with sophisticated AI technology. And as depression and suicide become more common, Facebook CEO Mark Zuckerberg announced new tools to combat depression, with Zuckerberg even claiming that AI could spot suicidal tendencies in a user before a friend would.

But the social industry giants are increasingly caught out by a growing number of defectors, who have expressed regret over the tools they helped create. Chamath Palihapitiya, a Canadian venture capitalist with philanthropic leanings, is a former Facebook executive with a guilty conscience. Tech capitalists, he says, have 'created tools that are ripping apart the social fabric of how society works'. He blames the 'short-term, dopamine-driven feedback loops' of social industry platforms for promoting 'misinformation, mistruth' and giving manipulators access to an invaluable tool.[15] It's so bad, he says, that his children 'aren't allowed to use that shit'.

You might be tempted to think that whatever dark side the social industry has is an

accidental by-product, like a spandrel. You would be wrong. Sean Parker, the Virginia-born billionaire hacker and inventor of the file-sharing site Napster, was an early investor in Facebook and the company's first president.[16] Now he's a 'conscientious objector'. Social media platforms, he explains, rely on a 'social validation feedback loop' to ensure that they monopolize as much of the user's time as possible. This is 'exactly the kind of thing that a hacker like myself would come up with, because you're exploiting a vulnerability in human psychology. The inventors, creators . . . understood this consciously. And we did it anyway.' The social industry has created an addiction machine, not as an accident, but as a logical means to return value to its venture capitalist investors.

It was another former Twitter adviser and Facebook executive, Antonio García Martínez, who explained the potential political ramifications of this.[17] García Martínez, the son of Cuban exiles who made his fortune on Wall Street, was a product manager for Facebook. Like Parker and Palihapitiya, he casts an unflattering light on his former employers. He stresses Facebook's ability to manipulate its users. In May 2017, it emerged, through leaked documents published in *The Australian*, that Facebook executives were discussing with advertisers how they could use their algorithms to identify and manipulate teenagers' moods. Stress, anxiety, feelings of failure were all picked up by Facebook's tools. According to García Martínez, the leaks were not only accurate but had political consequences. With enough data, Facebook could identify a demographic and hammer it with advertising: the 'click-through rate' never lies. But it could also, as a running joke in the company acknowledged, easily 'throw the election' by simply running a reminder to vote in key areas on election day.

This situation is completely without precedent, and it is now evolving so quickly that we can barely keep track of where we are. And the more technology evolves, the more that new layers of hardware and software are added, the harder it is to change. This is handing tech capitalists a unique source of power. As the Silicon Valley guru Jaron Lanier puts it, they don't have to persuade us when they can directly manipulate our experience of the world.[18] Technologists augment our senses with webcams, smartphones and constantly expanding quantities of digital memory. Because of this, a tiny group of engineers can 'shape the entire future of human experience with incredible speed'.

We are writing, and as we write, we are being written. More accurately, as a society we are becoming *hard-written*, so that we cannot press delete without gravely disrupting the system as a whole. But what sort of future are we writing ourselves into?

VI.

I n the birthing bloom of the web and instant messaging, we learned that we could all be authors, all published, all with our own public. No one with internet access need be excluded.

And the good news gospel was that this democratisation of writing would be good for democracy. Scripture, text, would save us. We could have a utopia of writing, a new way of life. Almost six hundred years of a stable print culture was ending, and it was going to turn the world upside down.

We would enjoy 'creative autonomy', freed from the monopolies of old media and their one-way traffic of meaning.[19] We would find new forms of political engagement instead of parties, connected by arborescent online networks. Multitudes would suddenly swarm and descend on the powerful, and then dissipate just as quickly, before they could be sanctioned. Anonymity would allow us to form new identities freed from the limits of our everyday lives, and escape surveillance. There were a host of so-called 'Twitter revolutions', misleadingly credited to the ability of educated social industry users to outflank senile dictatorships, and discredit the 'elderly rubbish' they spoke.

And then, somehow, this techno-utopianism returned in an inverted form. The benefits of anonymity became the basis for trolling, ritualized sadism, vicious misogyny, racism and alt-right subcultures. Creative autonomy became 'fake news' and a new form of infotainment. Multitudes became lynch mobs, often turning on themselves.[20] Dictators and other authoritarians learned how to use Twitter and master its seductive language games, as did the so-called Islamic State whose slick online media professionals affect mordant and hyper-aware tones. The United States elected the world's first 'Twitter president'. Cyber-idealism became cyber-cynicism.

And the silent behemoth lurking behind all this was the network of global corporations, public-relations firms, political parties, media companies, celebrity avatars and others responsible for most of the traffic and attention. They too, rather like the advanced cyborg in *Terminator 2*, have managed pitch-perfect emulation of human voices, insouciant, ironic and intimate. Legal persons according to US law, these corporations also have carefully produced personalities: they miss you, they love you, they just want to make you laugh: please come back.

Meanwhile publicity, taken to the level of a new art form for those with the resources to make the most of it, is a poisoned chalice for almost everyone else. If the social industry is an addiction machine, the addictive behaviour it is closest to is gambling: a rigged lottery. Every gambler trusts in a few abstract symbols – the dots on a dice, numerals, suits, red or black, the graphemes on a fruit machine – to tell them who they are. In most cases, the answer is brutal and swift: you are a loser and you are going home with nothing. The true gambler takes a perverse joy in anteing up, putting their whole being at stake. On social media, you scratch out a few words, a few symbols, and press 'send', rolling the dice. The internet will tell you who you are, and what your destiny is through arithmetic 'likes', 'shares' and 'comments'.

The interesting question is what it is that is so addictive. In principle, anyone can win big; in practice, not everyone is playing with the same odds. Our social industry accounts are set up like enterprises competing for eyeball attention. If we are all authors now, we write, not for

money, but for the satisfaction of being read. Going viral, or 'trending', is the equivalent of a windfall. But sometimes, 'winning' is the worst thing that can happen. The temperate climate of 'likes' and approval is apt to break, lightning-quick, into sudden storms of fury and disapproval. And if ordinary users are ill-equipped to make the best of 'going viral', they also have few resources to weather the storms of negative publicity, which can include anything from doxing – maliciously publishing private information – to 'revenge porn'. We may be treated as if we are micro-enterprises, but we are not corporations with public-relations budgets or social industry managers. Even wealthy celebrities can find themselves permanently damaged by tabloid attacks – so how is someone tweeting on the train, and during toilet breaks at work, supposed to cope with the internet's devolved form of tabloid scandal and bottom-feeding culture?

A 2015 study looked into the reasons why people who try to quit the social industry fail.[21] The survey data came from a group of people who had signed up to quit Facebook for just ninety-nine days. Many of these determined quitters couldn't even make the first few days. And many of those who successfully quit had access to another social networking site, like Twitter, so that they had simply displaced their addiction. Those who stayed away, however, were typically in a happier frame of mind, and less interested in controlling how other people thought of them, thus implying that social media addiction is partly a self-medication for depression and partly a way of curating a better self *in the eyes of others*. Indeed, these two factors may not be unrelated.

For those who are curating a self, social media notifications work as a form of clickbait.[22] Notifications light up the 'reward centres' of the brain, so that we *feel bad* if the metrics we accumulate on our different platforms don't express enough approval. The addictive aspect of this is similar to the effect of poker machines or smartphone games, recalling what cultural theorist Byung-Chul Han calls the 'gamification of capitalism'.[23] But it is not only addictive. Whatever we write has to be calibrated for social approval. Not only do we aim for conformity among our peers but, to an extent, we only pay attention to what our peers write insofar as it allows us to write something in reply, for the 'likes'. Perhaps this is what, among other things, gives rise to what is often derided as 'virtue-signalling', not to mention the ferocious rows, overreactions, wounded *amour propre* and grandstanding that often characterize social industry communities.

Yet, we are not Skinner's rats. Even Skinner's rats were not Skinner's rats:[24] the patterns of addictive behaviour displayed by rats in the 'Skinner Box' were only displayed by rats in isolation, outside of their normal sociable habitat. For human beings, addictions have subjective meaning, as does depression. Marcus Gilroy-Ware's study of social media suggests that what we encounter in our feeds is hedonic stimulation, various moods and sources of arousal – from outrage porn to food porn to porn – which enable us to manage our emotions.[25] In addition to that, however, it's also true that we can become attached to the

miseries of online life, a state of perpetual outrage and antagonism. There is a sense in which our online avatar resembles a 'virtual tooth' in the sense described by the German surrealist artist Hans Bellmer.[26] In the grip of a toothache, a common reflex is to make a fist so tight that the fingernails bite into the skin. This 'confuses' and 'bisects' the pain by creating a 'virtual centre of excitation', a virtual tooth that seems to draw blood and nervous energy away from the real centre of pain.

If we are in pain, this suggests, self-harming can be a way of displacing it so that it appears lessened – even though the pain hasn't really been reduced, and we still have a toothache. So if we get hooked on a machine that purports to tell us, among other things, how other people see us – or a version of ourselves, a delegated online image – that suggests something has already gone wrong in our relationships with others. The global rise in depression – currently the world's most widespread illness, having risen some 18 per cent since 2005 – is worsened for many people by the social industry.[27] There is a particularly strong correlation between depression and the use of Instagram among young people. But social industry platforms didn't invent depression; they exploited it. And to loosen their grip, one would have to explore what has gone wrong elsewhere.

VII.

I f the social industry is an attention economy, its payoffs distributed in the manner of a casino, winning can be the worst thing that happens to someone. As many users have found to their cost, not all publicity is good publicity.

In 2013, a forty-eight-year-old bricklayer from Hull in the north of England was found hanging, dead, in a cemetery. Steven Rudderham had been targeted by an anonymous group of vigilantes on Facebook who had decided that he was a paedophile.[28] For no good reason, someone had copied his profile image and made a banner with it, accusing him of being a 'dirty perv'. It took fifteen minutes for it to be shared hundreds of times; and three days of hate mail, and death and castration threats, for Rudderham to kill himself.

Only a few days previously, it emerged, Chad Lesko of Toledo, Ohio had been repeatedly assaulted by police and abused by local residents because they thought he was wanted for the rape of three girls and his young son.[29] The false accusation came from a dummy account set up by his ex-girlfriend. Ironically, Lesko had himself been abused by his father. Such mobbing, increasingly common on the social industry, is not always the result of conscious malice. Garnet Ford of Vancouver, and Triz Jefferies of Philadelphia, were both witch-hunted by social media because they were confused with wanted criminals.[30] Ford lost his job and Jefferies was hounded by a mob at his home.

These examples may be extreme, but they touch on a number of well-known problems exacerbated by the medium, from 'fake news', to trolling and bullying, to depression and

suicide. And they raise fundamental questions about how the social industry platforms work. Why, for example, were so many people disposed to believe the 'fake news', as it were? Why was no one able to stop the crowd in their tracks and point out the vindictive lunacy of their actions? What sort of satisfaction did the participants expect to get out of it other than the schadenfreude of watching someone go down, even to their death?

While the social industry is perceived as, and can be, a great leveller, it can also simply invert the usual hierarchies of authority and factual sourcing. Those who joined lynch mobs had nothing to authorize the beliefs they acted on other than someone's say so. The *more anonymous the accusations were, the more effective they were*. Anonymity detaches the accusation from the accuser and any circumstances, contexts, personal histories or relationships that might give anyone a chance to evaluate or investigate it. It allows the logic of collective outrage to take over. It no longer matters, beyond a certain point, whether the individual participants are 'really' outraged. The accusation is outraged on their behalf. It has a life of its own: a rolling, aimless, omnidirectional wrecking ball; a voice, seemingly, without a body; a harassment without a harasser; a virtual Witchfinder General. Standards of veracity are not only inverted, but detached from the traditional notion of the *person* as the source of testimonial truth.

A false accusation is a particular type of 'fake news'. It involves matters of justice, and summons people to take sides. And since most people have no idea what is happening, no one is in a position to mount a defence of the accused. This leaves observers with the choice of maintaining a worried silence, or ducking for cover within the mob thinking, 'there but for the grace of God . . . '. At least, in the latter case, you get some 'likes' for your trouble.

The social industry did not invent the lynch mob, or the show trial. The vigilantes were out looking for alleged paedophiles, rapists and murderers to torment long before the advent of Twitter. People took pleasure in believing untruths before they were able to get them sent directly to their smartphones. Office politics and homes are filled with a version of the whispering campaigns and bullying that we see online. To disarm the online lynch mobs, trolls and bullies would be to work out why these behaviours are so prevalent elsewhere.

What, then, has the social industry changed? It has certainly made it easier for the average person to disseminate falsehoods, for random bullies to swarm on targets and for anonymized misinformation to spread lightning-quick. Above all, however, the Twittering Machine has *collectivized* the problem in a new way.

VIII.

I n 2006, a thirteen-year-old boy named Mitchell Henderson killed himself.[31] In the days that followed, his family, friends and relatives congregated on his MySpace page, leaving virtual tributes to the dearly departed.

Within days, they were targeted by a group of trolls. The trolls were at first amused by the fact that Henderson had lost his iPod in the days before he died and began to post messages implying that his suicide was a frivolous, self-indulgent response to consumer frustration: 'first-world problems'. In one post, someone attached an image of the boy's actual gravestone with an iPod resting against it. But what really sent them spiralling into fits of hilarity was the bewildered outrage they could provoke in the unsuspecting family. The more upset the family got in response, the funnier it was.

Over a decade later, an eleven-year-old boy from Tennessee, Keaton Jones, made a heartbreaking video in which, crying, he described the bullying he was subject to in school.[32] His mother, Kimberley Jones, posted it on her personal Facebook page, and it swiftly went viral across various social industry platforms. Celebrities, from Justin Bieber to Snoop Dogg, joined in the wave of support for the child, and a stranger set up a crowdfunding appeal to raise money for Jones's family.

A degree of scepticism about the story would have been entirely warranted. There is already a long tradition of Upworthy[i]-style, emotive, 'compassionate' viral content, much of it manipulative where not downright fabricated. These videos tend to use sentiment to reinforce conventional morality. For example, a well-known viral video featuring a homeless man who spends money donated to him on food for others (rather than on the demon booze) was used to raise $130,000 in donations before it was debunked. Yet there was no such scepticism as far as Keaton Jones's story was concerned, and it seems to have been true.

Nonetheless, almost as fast as Jones was canonized, the tide turned. Social industry detectives had fished around on Kimberley Jones's Facebook account and found photographs of her, smiling, with the confederate flag, and posts where she spoke disobligingly about Colin Kaepernick's NFL protest against racism. Overtly racist comments were attributed to her, based on material found on a fake Instagram account. Rumours, never corroborated, emerged that Jones was bullied because he had used racist epithets in class. Tweets making this claim were retweeted hundreds of thousands of times. A parody account, 'Jeaton Kones', which portrayed Jones in stereotypical Southern 'white trash' colours, went viral.

Jones was, in the idiom of social industry users, 'milkshake-ducked'. He had become one of an ever-growing subpopulation of people who, having been adored by 'the internet' for five minutes, are abruptly hated because something unpleasant has been discovered or invented about them. But in this case, and not for the first time, the internet became far more ruthless and cynical with its questionable moral alibi than even the most sadistic school bully. As though there is already something potentially violent and punitive in idealizing someone; as though the whole point of such mawkish idealizations is that they have to fail – you set them up, the better to knock them down.

As this was unfolding, the latest in a string of cyberbullying-related child suicides took place in the United States. Ashawnty Davis, who, her parents say, was subject to bullying at school,

found that a smartphone video of herself fighting another girl from the same school had been uploaded to a social industry app, where it went viral.[33] Davis suffered tremendous anxiety over the video. Within two weeks, she was discovered in a closet, hanged. The discomfiting proximity of these events raises alarming thoughts. Would 'the internet' stop, would it even be able to stop, if it had driven Jones to commit suicide? If, rather than simply trolling a grieving family, online swarms had caused their grief in the first place?

A crucial difference between the Henderson story and the Jones story is that the trolls in the first case were marginal, subcultural, self-consciously amoral and easy to revile. In the second case, though trolls were certainly operating, their actions blended into those of millions of other social industry users driven by a mixture of sympathy, identification, emotional voyeurism, the sensation of being part of something important, ultimately souring into resentment, distrust and spite. The trolling was generalized.

One distinction, perhaps, is that trolls, unlike most users, are fully aware of, and exploit the cumulative impact of, hundreds of thousands of small, low-commitment actions, like a tweet or retweet. Most of those who participated in the mobbing of Jones spent at most a few minutes doing so. It was not a concerted campaign: they were just part of the swarm. They were minute decimal points in a 'trending topic'. Individually, their responsibility for the total situation was often homoeopathically slight, and thus this indulgence of their darker side, their more punitive, aggressive tendencies, was minor. Yet, incentivized and aggregated by the Twittering Machine, these petty acts of sadism became monstrous.

As the trolling slogan has it, 'None of us is as cruel as all of us.'

IX.

The risk, in appealing to such outré examples, is that it can legitimize a form of moral panic about the internet, and therefore dignify state censorship. This would be the traditional answer to the Oresteian Furies: domesticate them with the 'rule of law'.[34] It is predicated on upholding a traditional hierarchy of writing, at the top of which is a written constitution or sacred text from which written authority flows. What a society deems acceptable and unacceptable is anchored to an authoritative, venerable text. Of course, the rule of law has never been as good at restraining the Furies as liberals hoped. The McCarthyite witch-hunts of mid-twentieth-century America showed that political paranoia could easily be disseminated through the workings of the liberal state.[35]

What is happening now, however, is that the digitalization of capitalism is disturbing these old written hierarchies, so that the spectacles of witch-hunting and moral panic, and the rituals of punishment and humiliation, are being devolved and decentralized. The spectacle, which the French Situationist Guy Debord defined as the mediation of social reality through an image, is no longer organized by large, centralized bureaucracies.[36] Instead, it has been devolved

to advertising, entertainment and, of course, the social industry. This has birthed new ecologies of information, and new forms of the public sphere. It has changed the patterns of public outrage. The social industry hasn't destroyed the power of ancient written authority. What it has added is a unique synthesis of neighbourhood watch, a twenty-four-hour infotainment channel and a stock exchange. It combines the *panopticon effect* with hype, button-pushing, faddishness and the volatility of the financial markets.

However, the record of the liberal state in dealing with the social industry is poor, and there is a tendency for it to fuse with the logic of online outrage, rather than containing it. Cases of legal overreaction to statements made on the internet are well known. The debacle famously known in the UK as the #twitterjoketrial involved the state arresting, trying and convicting twenty-eight-year-old Paul Chambers for making a joke on Twitter.[37] He expressed his irritation with the local airport being closed by 'threatening', in clearly sarcastic tones, to blow it 'sky-high'. Chambers' conviction was quashed after a public campaign, but not before he lost his job. Less well known, but perhaps just as ridiculous, was the case of Azhar Ahmed, who, in a moment of anger about the war in Afghanistan, posted that 'all soldiers should die and go to hell'.[38] Rather than treating it as an emotional outburst to which he was entitled, the courts convicted him for 'sending a grossly offensive communication'.

Perhaps more telling are cases where police action was prompted by social media outrage. This is what happened to Bahar Mustafa, a student at Goldsmiths in southeast London.[39] As an elected officer in her student union, she had organized a meeting for ethnic-minority women and non-binary students. Conservative students, outraged that white men were asked not to attend, mounted a social media campaign to expose her 'reverse racism'. In the furore, she was accused of circulating a tweet with the ironic hashtag #killallwhitemen, as proof of this 'reverse racism'. Mustafa, though insistent that she had never actually sent such a tweet, was arrested. The Crown Prosecution Service, rather than treating this as a bit of internet trivia, tried to prosecute her, only withdrawing the case when it became clear it had little chance of success. But it fuelled an apocalyptic multimedia storm of fury, resulting in racist abuse directed at Mustafa and invitations to 'kill herself' or offer herself to 'gang rape'. These tweets did not result in prosecution. Nor do the vast majority of such posts. Instead, the law was fused to arbitrary patterns of outrage flaring up against individuals deemed to have breached thresholds of taste and propriety on the social industry. The Furies are often magnified by the rule of law, rather than being chastened by it.

This means improvised rituals of public shaming, breaking like a thunderstorm on the medium, can feed into official responses. And because the social industry has created a *panopticon effect*, with anyone being potentially observed at any time, any person can suddenly be isolated and selected for demonstrative punishment. Within online communities, this produces a strong pressure towards conformity with the values and mores of one's peers. But even peer conformity is no safeguard, because anyone can see into it. The potential audience

for anything posted on the internet is the entire internet. The only way to conform successfully on the internet is to be unutterably bland and platitudinous. And even if one's whole online life is spent sharing 'empowering' memes, 'uplifting' quotations and viral video clickbait, this is no guarantee against someone, somewhere finding your very existence a fitting target for abuse. Trolls programmatically search for 'exploitability' in their targets, where 'exploitability' means any vulnerability whatsoever, from grieving to posting while female or black. And trolling is a stylized exaggeration of ordinary behaviour, especially on the internet.[40]

Not everyone is programmatic in their commitment to exploiting and punishing vulnerabilities, but many still do so, knowingly or otherwise. And it is compounded by the human propensity to confuse the pleasures of aggression with virtue. The late writer, Mark Fisher, described the progressive version of this through the baroque metaphor of the 'Vampire Castle'.[41] In the Castle, Fisher wrote, well-meaning leftists accede to the pleasures of excommunication, of in-crowd conformity and of rubbing people's faces in their mistakes, in the name of 'calling out' some offence. Political faults, or even just *differences*, become exploitable characteristics. Since no one is pure, and since the condition of being in the social industry is that one reveals oneself constantly, then from a certain perspective our online existence is a list of exploitable traits.

And when a user's exploitable traits become the basis for a new round of collective outrage, they galvanize attention, add to the flow and volatility, and thus economic value, of the social industry platforms.

X.

'Language is mysterious', writes the religious scholar Karen Armstrong.[42] 'When a word is spoken, the ethereal is made flesh; speech requires incarnation – respiration, muscle control, tongue and teeth.'

Writing requires its own incarnation – hand–eye coordination, and some form of technology for making marks on a surface. We take a part of ourselves and turn it into physical inscriptions which outlive us. So that a future reader can breathe, in the words of Seamus Heaney, 'air from another life and time and place'. When we write, we give ourselves a second body.[43]

There is something miraculous about this, the existence of a 'scripturient' animal, barely a dot in the deep time of the planet's history. Early theories of writing could hardly resist seeing it as divine – 'God-breathed', as the Book of Timothy has it. The Sumerians regarded it as a gift from God, alongside woodwork and metalwork – a telling juxtaposition, as if writing was indeed just another craft, another textile, as in Inca civilization. The Egyptian word 'hieroglyph' literally translates as 'writing of the gods'.

The ancient Greeks exhibited an interesting distrust of writing, worrying that it would

break the link to sacred oral cultures and, by acting as a mnemonic device, encourage laziness and deceit. Yet they also considered scripture holy in that it retained a link to the voice. The religious historian David Frankfurter writes that the letters of their alphabet, insofar as they denoted sounds, were regarded by ancient Greeks as 'cosmic elements'.[44] Singing them could bring one to a state of perfection. So in addition to writing as mnemonic, accounting device and craft, here was writing as musical notation, divine poetry.

The relationship of writing to the voice has always been confused by historical myths. The Polish-American grammatologist I. J. Gelb was typical of his Cold War contemporaries in arguing that the purpose of writing was ultimately to represent speech, and therefore alphabets were the most advanced form of writing.[45] In the alphabet, each letter represents a sound, or a phonetic element. In other writing systems, elements might include logograms, where a whole word is represented by a single element; ideograms, where a concept is represented without any reference to the vocal sounds involved in saying it; or pictograms, where the written element resembles what it signifies. The assumption of the superiority of alphabets, a progress myth of modernity, is based on the fact that they allow an infinite number of infinitely complex statements to be written down.

Most of the writing we are surrounded by today does not represent speech. Like seismic writing, musical notation, electronic circuit diagrams and knitting patterns, today's computer programs and internet code and script – the *ur*-writing of contemporary civilization – mostly dispense with phonetic elements. What is more, our online writing is increasingly rebus-like, drawing on non-alphabetic elements – emojis, check marks, arrows, pointers, currency symbols, trademarks, road signs, and so on – to convey complex tonal information quickly. Indeed, one of the ironies of writing on the social industry is that it uses non-alphabetic notation in order to represent speech better. The parts of our speech that have to do with tone, pitch and embodiment, and which are conveyed in real time in face-to-face conversation, tend to be lost in alphabetic writing, or expressed only with considerable elaboration and care. The economy of emoticons and memes is about giving the voice a convenient embodiment.

XI.

In 1769 the Austro-Hungarian inventor Wolfgang von Kempelen developed the first model of his *Sprechmaschine* (speaking machine).

It was an attempt to produce a mechanical equivalent of the apparatus – lungs, vocal cords, lips, teeth – which produces the acoustically rich, subtle and varied set of sounds known as the human voice. The inventor struggled, through successive designs using a box, bellows, vibrating reed, stoppers and a leather bag, to make his machine speak. Each time, its idiot leathery mouth yammered, and nothing remotely human came out.

At last, the problem of reproducing speech efficiently was solved with the telephone. Speak

into a traditional telephone, and the sound waves hit a diaphragm, making it vibrate. The diaphragm presses on a small cup filled with fine carbon grains which, when pressed together, conduct a low-voltage electrical current. The more the diaphragm presses down, the more densely the grains are packed together, the more the electricity flows. Thus, by means of a mild electrical current, the voice could be separated from the body, uncannily reappearing halfway around the world.

In a way, it was a form of writing. The sound waves inscribed a pattern on the diaphragm and carbon particles, which converted the pattern into an electrical signal for transmission. But it left no permanent trace. The invention of a device which could be programmed with written instructions to carry out a series of logical operations – the computer – changed this, by changing the hierarchy of writing. When you write using an old typewriter, or pen and paper, you leave real, physical inscriptions on a surface. Even when mechanized, the shapes are imperfectly formed, and there are likely to be spelling errors and stray punctuation marks. When you write using a computer, spelling and punctuation errors are usually picked up, and the letters are formed as close to perfectly as possible. But the 'inscription' you see is the virtual, ideal representation of an entirely different system of writing being carried out on complex electronic circuitry, whirring discs, and so on.

Our entire experience with the computer, the smartphone and the tablet is designed to conceal the fact that what we're seeing is writing. According to the software developer Joel Spolsky, what we encounter is a series of 'leaky abstractions': 'a simplification of something much more complicated that is going on under the covers'.[46] So where we see a 'file', 'folder', 'window' or 'document', these are abstractions. They are simplified visual representations of electrical parts performing a series of logical operations according to written commands. When we see 'Notifications' and 'Feed', we are seeing the simplified visual representation of the operations of written software code. These abstractions are 'leaky' because, though they look and feel perfectly formed, the complex processes they represent can and do fail. As in *The Matrix*, the writing programmes an image for our consumption: we don't see the symbols, we see the steak coded by the symbols. The image is the lure. What it obscures is that all media – music, photography, sound, shapes, spaces, moving imagery – has already been translated into the language of written numerical data.

But it is when we begin to write to the Twittering Machine that a new and unexpected wrinkle is introduced into the situation, upending the traditional division between the voice and writing. The Twittering Machine is good at reproducing elements of speech usually lost in writing, in a computer-mediated written format. It is not just that nuances of pacing, tone, pitch and expression are conveyed with some labour-saving economy by means of emoji and other expedients. In ordinary conversation, the participants are all simultaneously present, and the discussion unfolds in real time, not with the usual lag of written correspondence or emails. Because of this, conversation is informal, loose in its use of conventions, and assumes a lot of

shared ground between the participants. The social industry aspires to the same celerity, informality, to give the impression of being a conversation. It gives voice to the voice.

However, what the Twittering Machine produces is in fact a new hybrid. The voice is indeed given a new, written embodiment, but it is massified. It becomes uncannily detached from any individual. It acquires a life of its own: immense, impressive, playful, polyphonic, chaotic, demotic, at times dread-inspiring. The holy music of birdsong becomes, not a chorus, but a cyborg roar.

XII.

It is ironic, given this massification, that so much social media talk is obsessed with individual liberation. What the social industry does is *fragment* individuals in new ways – you are so many enterprises, accounts, projects – and routinely reaggregate the pieces as a new, transient collective: call it a swarm, for the purposes of marketing.

The flipside of supposed individual liberation is the idea of a 'new narcissism', of selfie-stick, of navel-gazing status update. In truth, there is always narcissism, and it is hardly a sin. And if writing is about giving yourself a second body, then it is in some ways nothing but sublimated narcissism. However, the 'Skinner Box' structure posits, as its ideal subject, an extremely *fragile* narcissist, someone who must constantly feed on approval cookies, or lapse into depression.

The Twittering Machine invites users to constitute new, inventive identities for themselves, but it does so on a competitive, entrepreneurial basis. It can be empowering for those who have been traditionally marginalized and oppressed, but it also makes the production and maintenance of these identities imperative, exhausting and time-consuming. Social media platforms engage the self as a permanent and ongoing response to stimuli. One is never really able to withhold or delay a response; everything has to happen in this timeline, right now, before it is forgotten.

To inhabit the social industry is to be in a state of constant distractedness, a junkie fixation on keeping in touch with it, knowing where it is and how to get it. But it is also to loop what the psychoanalyst Louis Ormont calls 'the observing ego' into an elaborate panopticon so that *self-surveillance* is redoubled many times over. This is central to the productive side of the social industry.[47] Indeed, in a sense it is nothing but production – of endless writing – more efficient in its way than a sweatshop. Jonathan Beller, the film theorist, has argued that with the internet, 'looking is labouring'.[48] It is more precise to say that looking and being looked at is an irresistible inducement to labour.

What is it that we're labouring on? The birth pangs of a new nation. If print capitalism invented the nation, for many people the platform of their choice is also their country, their imagined community. Education systems, newspapers and television stations still defer to the

national state. But when sociologists describe the proliferation of 'lifeworlds' online, it goes without saying that their porous outlines have little to do with national boundaries.

So if a new type of country is being born, what sort of country is it? And why does it seem so continuously primed for explosion?

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i A 'viral' content website, specializing in 'uplifting' and 'inspirational' videos and stories.