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The rise of data and the death of politics

Tech pioneers in the US are advocating a new data-based approach to governance – 'algorithmic regulation'. But if technology provides the answers to society's problems, what happens to governments?

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On 24 August 1965 Gloria Placente, a 34-year-old resident of Queens, New York, was driving to Orchard Beach in the Bronx. Clad in shorts and sunglasses, the housewife was looking forward to quiet time at the beach. But the moment she crossed the Willis Avenue bridge in her Chevrolet Corvair, Placente was surrounded by a dozen patrolmen. There were also 125 reporters, eager to witness the launch of New York police department's Operation Corral – an acronym for Computer Oriented Retrieval of Auto Larcenists.

Fifteen months earlier, Placente had driven through a red light and neglected to answer the summons, an offence that Corral was going to punish with a heavy dose of techno-Kafkaesque. It worked as follows: a police car stationed at one end of the bridge radioed the licence plates of oncoming cars to a teletypist miles away, who fed them to a Univac 490 computer, an expensive $500,000 toy ($3.5m in today's dollars) on loan from the Sperry Rand Corporation. The computer checked the numbers against a database of 110,000 cars that were either stolen or belonged to known offenders. In case of a match the teletypist would alert a second patrol car at the bridge's other exit. It took, on average, just seven seconds.

Compared with the impressive police gear of today – automatic number plate recognition, CCTV cameras, GPS trackers – Operation Corral looks quaint. And the possibilities for control will only expand. European officials have considered requiring all cars entering the European market to feature a built-in mechanism that allows the police to stop vehicles remotely. Speaking earlier this year, Jim Farley, a senior Ford executive, acknowledged that "we know everyone who breaks the law, we know when you're doing it. We have GPS in your car, so we know what you're doing. By the way, we don't supply that data to anyone." That last bit didn't sound very reassuring and Farley retracted his remarks.

As both cars and roads get "smart," they promise nearly perfect, real-time law enforcement. Instead of waiting for drivers to break the law, authorities can simply prevent the crime. Thus, a 50-mile stretch of the A14 between Felixstowe and Rugby is to be equipped with numerous

sensors that would monitor traffic by sending signals to and from mobile phones in moving vehicles. The telecoms watchdog Ofcom envisions that such smart roads connected to a centrally controlled traffic system could automatically impose variable speed limits to smooth the flow of traffic but also direct the cars "along diverted routes to avoid the congestion and even [manage] their speed".

Other gadgets – from smartphones to smart glasses – promise even more security and safety. In April, Apple patented technology that deploys sensors inside the smartphone to analyse if the car is moving and if the person using the phone is driving; if both conditions are met, it simply blocks the phone's texting feature. Intel and Ford are working on Project Mobil – a face recognition system that, should it fail to recognise the face of the driver, would not only prevent the car being started but also send the picture to the car's owner (bad news for teenagers).

The car is emblematic of transformations in many other domains, from smart environments for "ambient assisted living" where carpets and walls detect that someone has fallen, to various masterplans for the smart city, where municipal services dispatch resources only to those areas that need them. Thanks to sensors and internet connectivity, the most banal everyday objects have acquired tremendous power to regulate behaviour. Even public toilets are ripe for sensor-based optimisation: the Safeguard Germ Alarm, a smart soap dispenser developed by Procter & Gamble and used in some public WCs in the Philippines, has sensors monitoring the doors of each stall. Once you leave the stall, the alarm starts ringing – and can only be stopped by a push of the soap-dispensing button.

In this context, Google's latest plan to push its Android operating system on to smart watches, smart cars, smart thermostats and, one suspects, smart everything, looks rather ominous. In the near future, Google will be the middleman standing between you and your fridge, you and your car, you and your rubbish bin, allowing the National Security Agency to satisfy its data addiction in bulk and via a single window.

This "smartification" of everyday life follows a familiar pattern: there's primary data – a list of what's in your smart fridge and your bin – and metadata – a log of how often you open either of these things or when they communicate with one another. Both produce interesting insights: cue smart mattresses – one recent model promises to track respiration and heart rates and how much you move during the night – and smart utensils that provide nutritional advice.

In addition to making our lives more efficient, this smart world also presents us with an exciting political choice. If so much of our everyday behaviour is already captured, analysed and nudged, why stick with unempirical approaches to regulation? Why rely on laws when one has sensors and feedback mechanisms? If policy interventions are to be – to use the buzzwords of the day – "evidence-based" and "results-oriented," technology is here to help.

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This new type of governance has a name: algorithmic regulation. In as much as Silicon Valley has a political programme, this is it. Tim O'Reilly, an influential technology publisher, venture capitalist and ideas man (he is to blame for popularising the term "web 2.0") has been its most enthusiastic promoter. In a recent essay that lays out his reasoning, O'Reilly makes an intriguing case for the virtues of algorithmic regulation – a case that deserves close scrutiny both for what it promises policymakers and the simplistic assumptions it makes about politics, democracy and power.

To see algorithmic regulation at work, look no further than the spam filter in your email. Instead of confining itself to a narrow definition of spam, the email filter has its users teach it. Even Google can't write rules to cover all the ingenious innovations of professional spammers. What it can do, though, is teach the system what makes a good rule and spot when it's time to find another rule for finding a good rule – and so on. An algorithm can do this, but it's the constant real-time feedback from its users that allows the system to counter threats never envisioned by its designers. And it's not just spam: your bank uses similar methods to spot credit-card fraud.

In his essay, O'Reilly draws broader philosophical lessons from such technologies, arguing that they work because they rely on "a deep understanding of the desired outcome" (spam is bad!) and periodically check if the algorithms are actually working as expected (are too many legitimate emails ending up marked as spam?).

O'Reilly presents such technologies as novel and unique – we are living through a digital revolution after all – but the principle behind "algorithmic regulation" would be familiar to the founders of cybernetics – a discipline that, even in its name (it means "the science of governance") hints at its great regulatory ambitions. This principle, which allows the system to maintain its stability by constantly learning and adapting itself to the changing circumstances, is what the British psychiatrist Ross Ashby, one of the founding fathers of cybernetics, called "ultrastability".

To illustrate it, Ashby designed the homeostat. This clever device consisted of four interconnected RAF bomb control units – mysterious looking black boxes with lots of knobs and switches – that were sensitive to voltage fluctuations. If one unit stopped working properly – say, because of an unexpected external disturbance – the other three would rewire and regroup themselves, compensating for its malfunction and keeping the system's overall output stable.

Ashby's homeostat achieved "ultrastability" by always monitoring its internal state and cleverly redeploying its spare resources.

Like the spam filter, it didn't have to specify all the possible disturbances – only the conditions for how and when it must be updated and redesigned. This is no trivial departure from how the usual technical systems, with their rigid, if-then rules, operate: suddenly, there's no need to develop procedures for governing every contingency, for – or so one hopes – algorithms and

real-time, immediate feedback can do a better job than inflexible rules out of touch with reality.

Algorithmic regulation could certainly make the administration of existing laws more efficient. If it can fight credit-card fraud, why not tax fraud? Italian bureaucrats have experimented with the *redditometro,* or income meter, a tool for comparing people's spending patterns – recorded thanks to an arcane Italian law – with their declared income, so that authorities know when you spend more than you earn. Spain has expressed interest in a similar tool.

Such systems, however, are toothless against the real culprits of tax evasion – the super-rich families who profit from various offshoring schemes or simply write outrageous tax exemptions into the law. Algorithmic regulation is perfect for enforcing the austerity agenda while leaving those responsible for the fiscal crisis off the hook. To understand whether such systems are working as expected, we need to modify O'Reilly's question: for whom are they working? If it's just the tax-evading plutocrats, the global financial institutions interested in balanced national budgets and the companies developing income-tracking software, then it's hardly a democratic success.

With his belief that algorithmic regulation is based on "a deep understanding of the desired outcome", O'Reilly cunningly disconnects the means of doing politics from its ends. But the how of politics is as important as the what of politics – in fact, the former often shapes the latter. Everybody agrees that education, health, and security are all "desired outcomes", but how do we achieve them? In the past, when we faced the stark political choice of delivering them through the market or the state, the lines of the ideological debate were clear. Today, when the presumed choice is between the digital and the analog or between the dynamic feedback and the static law, that ideological clarity is gone – as if the very choice of how to achieve those "desired outcomes" was apolitical and didn't force us to choose between different and often incompatible visions of communal living.

By assuming that the utopian world of infinite feedback loops is so efficient that it transcends politics, the proponents of algorithmic regulation fall into the same trap as the technocrats of the past. Yes, these systems are terrifyingly efficient – in the same way that Singapore is terrifyingly efficient (O'Reilly, unsurprisingly, praises Singapore for its embrace of algorithmic regulation). And while Singapore's leaders might believe that they, too, have transcended politics, it doesn't mean that their regime cannot be assessed outside the linguistic swamp of efficiency and innovation – by using political, not economic benchmarks.

As Silicon Valley keeps corrupting our language with its endless glorification of disruption and efficiency – concepts at odds with the vocabulary of democracy – our ability to question the "how" of politics is weakened. Silicon Valley's default answer to the how of politics is what I call solutionism: problems are to be dealt with via apps, sensors, and feedback loops – all provided by startups. Earlier this year Google's Eric Schmidt even promised that startups would provide the solution to the problem of economic inequality: the latter, it seems, can also

be "disrupted". And where the innovators and the disruptors lead, the bureaucrats follow.

The intelligence services embraced solutionism before other government agencies. Thus, they reduced the topic of terrorism from a subject that had some connection to history and foreign policy to an informational problem of identifying emerging terrorist threats via constant surveillance. They urged citizens to accept that instability is part of the game, that its root causes are neither traceable nor reparable, that the threat can only be pre-empted by out-innovating and out-surveilling the enemy with better communications.

Speaking in Athens last November, the Italian philosopher Giorgio Agamben discussed an epochal transformation in the idea of government, "whereby the traditional hierarchical relation between causes and effects is inverted, so that, instead of governing the causes - a difficult and expensive undertaking - governments simply try to govern the effects".

For Agamben, this shift is emblematic of modernity. It also explains why the liberalisation of the economy can co-exist with the growing proliferation of control - by means of soap dispensers and remotely managed cars - into everyday life. "If government aims for the effects and not the causes, it will be obliged to extend and multiply control. Causes demand to be known, while effects can only be checked and controlled." Algorithmic regulation is an enactment of this political programme in technological form.

The true politics of algorithmic regulation become visible once its logic is applied to the social nets of the welfare state. There are no calls to dismantle them, but citizens are nonetheless encouraged to take responsibility for their own health. Consider how Fred Wilson, an influential US venture capitalist, frames the subject. "Health... is the opposite side of healthcare," he said at a conference in Paris last December. "It's what keeps you out of the healthcare system in the first place." Thus, we are invited to start using self-tracking apps and data-sharing platforms and monitor our vital indicators, symptoms and discrepancies on our own.

This goes nicely with recent policy proposals to save troubled public services by encouraging healthier lifestyles. Consider a 2013 report by Westminster council and the Local Government Information Unit, a thinktank, calling for the linking of housing and council benefits to claimants' visits to the gym - with the help of smartcards. They might not be needed: many smartphones are already tracking how many steps we take every day (Google Now, the company's virtual assistant, keeps score of such data automatically and periodically presents it to users, nudging them to walk more).

The numerous possibilities that tracking devices offer to health and insurance industries are not lost on O'Reilly. "You know the way that advertising turned out to be the native business model for the internet?" he wondered at a recent conference. "I think that insurance is going to be the native business model for the internet of things." Things do seem to be heading that way: in June, Microsoft struck a deal with American Family Insurance, the eighth-largest home insurer in the US, in which both companies will fund startups that want to put sensors into

smart homes and smart cars for the purposes of "proactive protection".

An insurance company would gladly subsidise the costs of installing yet another sensor in your house – as long as it can automatically alert the fire department or make front porch lights flash in case your smoke detector goes off. For now, accepting such tracking systems is framed as an extra benefit that can save us some money. But when do we reach a point where not using them is seen as a deviation – or, worse, an act of concealment – that ought to be punished with higher premiums?

Or consider a May 2014 report from 2020health, another thinktank, proposing to extend tax rebates to Britons who give up smoking, stay slim or drink less. "We propose 'payment by results', a financial reward for people who become active partners in their health, whereby if you, for example, keep your blood sugar levels down, quit smoking, keep weight off, [or] take on more self-care, there will be a tax rebate or an end-of-year bonus," they state. Smart gadgets are the natural allies of such schemes: they document the results and can even help achieve them – by constantly nagging us to do what's expected.

The unstated assumption of most such reports is that the unhealthy are not only a burden to society but that they deserve to be punished (fiscally for now) for failing to be responsible. For what else could possibly explain their health problems but their personal failings? It's certainly not the power of food companies or class-based differences or various political and economic injustices. One can wear a dozen powerful sensors, own a smart mattress and even do a close daily reading of one's poop – as some self-tracking aficionados are wont to do – but those injustices would still be nowhere to be seen, for they are not the kind of stuff that can be measured with a sensor. The devil doesn't wear data. Social injustices are much harder to track than the everyday lives of the individuals whose lives they affect.

In shifting the focus of regulation from reining in institutional and corporate malfeasance to perpetual electronic guidance of individuals, algorithmic regulation offers us a good-old technocratic utopia of politics without politics. Disagreement and conflict, under this model, are seen as unfortunate byproducts of the analog era – to be solved through data collection – and not as inevitable results of economic or ideological conflicts.

However, a politics without politics does not mean a politics without control or administration. As O'Reilly writes in his essay: "New technologies make it possible to reduce the amount of regulation while actually increasing the amount of oversight and production of desirable outcomes." Thus, it's a mistake to think that Silicon Valley wants to rid us of government institutions. Its dream state is not the small government of libertarians – a small state, after all, needs neither fancy gadgets nor massive servers to process the data – but the data-obsessed and data-obese state of behavioural economists.

The nudging state is enamoured of feedback technology, for its key founding principle is that while we behave irrationally, our irrationality can be corrected – if only the environment acts upon us, nudging us towards the right option. Unsurprisingly, one of the three lonely

references at the end of O'Reilly's essay is to a 2012 speech entitled "Regulation: Looking Backward, Looking Forward" by Cass Sunstein, the prominent American legal scholar who is the chief theorist of the nudging state.

And while the nudgers have already captured the state by making behavioural psychology the favourite idiom of government bureaucracy -Daniel Kahneman is in, Machiavelli is out – the algorithmic regulation lobby advances in more clandestine ways. They create innocuous non-profit organisations like Code for America which then co-opt the state – under the guise of encouraging talented hackers to tackle civic problems.

Such initiatives aim to reprogramme the state and make it feedback-friendly, crowding out other means of doing politics. For all those tracking apps, algorithms and sensors to work, databases need interoperability – which is what such pseudo-humanitarian organisations, with their ardent belief in open data, demand. And when the government is too slow to move at Silicon Valley's speed, they simply move inside the government. Thus, Jennifer Pahlka, the founder of Code for America and a protege of O'Reilly, became the deputy chief technology officer of the US government – while pursuing a one-year "innovation fellowship" from the White House.

Cash-strapped governments welcome such colonisation by technologists – especially if it helps to identify and clean up datasets that can be profitably sold to companies who need such data for advertising purposes. Recent clashes over the sale of student and health data in the UK are just a precursor of battles to come: after all state assets have been privatised, data is the next target. For O'Reilly, open data is "a key enabler of the measurement revolution".

This "measurement revolution" seeks to quantify the efficiency of various social programmes, as if the rationale behind the social nets that some of them provide was to achieve perfection of delivery. The actual rationale, of course, was to enable a fulfilling life by suppressing certain anxieties, so that citizens can pursue their life projects relatively undisturbed. This vision did spawn a vast bureaucratic apparatus and the critics of the welfare state from the left – most prominently Michel Foucault – were right to question its disciplining inclinations. Nonetheless, neither perfection nor efficiency were the "desired outcome" of this system. Thus, to compare the welfare state with the algorithmic state on those grounds is misleading.

But we can compare their respective visions for human fulfilment – and the role they assign to markets and the state. Silicon Valley's offer is clear: thanks to ubiquitous feedback loops, we can all become entrepreneurs and take care of our own affairs! As Brian Chesky, the chief executive of Airbnb, told the *Atlantic* last year, "What happens when everybody is a brand? When everybody has a reputation? Every person can become an entrepreneur."

Under this vision, we will all code (for America!) in the morning, drive Uber cars in the afternoon, and rent out our kitchens as restaurants – courtesy of Airbnb – in the evening. As O'Reilly writes of Uber and similar companies, "these services ask every passenger to rate their driver (and drivers to rate their passenger). Drivers who provide poor service are eliminated.

Reputation does a better job of ensuring a superb customer experience than any amount of government regulation."

The state behind the "sharing economy" does not wither away; it might be needed to ensure that the reputation accumulated on Uber, Airbnb and other platforms of the "sharing economy" is fully liquid and transferable, creating a world where our every social interaction is recorded and assessed, erasing whatever differences exist between social domains. Someone, somewhere will eventually rate you as a passenger, a house guest, a student, a patient, a customer. Whether this ranking infrastructure will be decentralised, provided by a giant like Google or rest with the state is not yet clear but the overarching objective is: to make reputation into a feedback-friendly social net that could protect the truly responsible citizens from the vicissitudes of deregulation.

Admiring the reputation models of Uber and Airbnb, O'Reilly wants governments to be "adopting them where there are no demonstrable ill effects". But what counts as an "ill effect" and how to demonstrate it is a key question that belongs to the how of politics that algorithmic regulation wants to suppress. It's easy to demonstrate "ill effects" if the goal of regulation is efficiency but what if it is something else? Surely, there are some benefits – fewer visits to the psychoanalyst, perhaps – in not having your every social interaction ranked?

The imperative to evaluate and demonstrate "results" and "effects" already presupposes that the goal of policy is the optimisation of efficiency. However, as long as democracy is irreducible to a formula, its composite values will always lose this battle: they are much harder to quantify.

For Silicon Valley, though, the reputation-obsessed algorithmic state of the sharing economy is the new welfare state. If you are honest and hardworking, your online reputation would reflect this, producing a highly personalised social net. It is "ultrastable" in Ashby's sense: while the welfare state assumes the existence of specific social evils it tries to fight, the algorithmic state makes no such assumptions. The future threats can remain fully unknowable and fully addressable – on the individual level.

Silicon Valley, of course, is not alone in touting such ultrastable individual solutions. Nassim Taleb, in his best-selling 2012 book *Antifragile*, makes a similar, if more philosophical, plea for maximising our individual resourcefulness and resilience: don't get one job but many, don't take on debt, count on your own expertise. It's all about resilience, risk-taking and, as Taleb puts it, "having skin in the game". As Julian Reid and Brad Evans write in their new book, *Resilient Life: The Art of Living Dangerously*, this growing cult of resilience masks a tacit acknowledgement that no collective project could even aspire to tame the proliferating threats to human existence – we can only hope to equip ourselves to tackle them individually. "When policy-makers engage in the discourse of resilience," write Reid and Evans, "they do so in terms which aim explicitly at preventing humans from conceiving of danger as a phenomenon from which they might seek freedom and even, in contrast, as that to which they must now

expose themselves."

What, then, is the progressive alternative? "The enemy of my enemy is my friend" doesn't work here: just because Silicon Valley is attacking the welfare state doesn't mean that progressives should defend it to the very last bullet (or tweet). First, even leftist governments have limited space for fiscal manoeuvres, as the kind of discretionary spending required to modernise the welfare state would never be approved by the global financial markets. And it's the ratings agencies and bond markets – not the voters – who are in charge today.

Second, the leftist critique of the welfare state has become only more relevant today when the exact borderlines between welfare and security are so blurry. When Google's Android powers so much of our everyday life, the government's temptation to govern us through remotely controlled cars and alarm-operated soap dispensers will be all too great. This will expand government's hold over areas of life previously free from regulation.

With so much data, the government's favourite argument in fighting terror – if only the citizens knew as much as we do, they too would impose all these legal exceptions – easily extends to other domains, from health to climate change. Consider a recent academic paper that used Google search data to study obesity patterns in the US, finding significant correlation between search keywords and body mass index levels. "Results suggest great promise of the idea of obesity monitoring through real-time Google Trends data", note the authors, which would be "particularly attractive for government health institutions and private businesses such as insurance companies."

If Google senses a flu epidemic somewhere, it's hard to challenge its hunch – we simply lack the infrastructure to process so much data at this scale. Google can be proven wrong after the fact – as has recently been the case with its flu trends data, which was shown to overestimate the number of infections, possibly because of its failure to account for the intense media coverage of flu – but so is the case with most terrorist alerts. It's the immediate, real-time nature of computer systems that makes them perfect allies of an infinitely expanding and pre-emption–obsessed state.

Perhaps, the case of Gloria Placente and her failed trip to the beach was not just a historical oddity but an early omen of how real-time computing, combined with ubiquitous communication technologies, would transform the state. One of the few people to have heeded that omen was a little-known American advertising executive called Robert MacBride, who pushed the logic behind Operation Corral to its ultimate conclusions in his unjustly neglected 1967 book, *The Automated State*.

At the time, America was debating the merits of establishing a national data centre to aggregate various national statistics and make it available to government agencies. MacBride attacked his contemporaries' inability to see how the state would exploit the metadata accrued as everything was being computerised. Instead of "a large scale, up-to-date Austro-Hungarian empire", modern computer systems would produce "a bureaucracy of almost celestial

capacity" that can "discern and define relationships in a manner which no human bureaucracy could ever hope to do".

"Whether one bowls on a Sunday or visits a library instead is [of] no consequence since no one checks those things," he wrote. Not so when computer systems can aggregate data from different domains and spot correlations. "Our individual behaviour in buying and selling an automobile, a house, or a security, in paying our debts and acquiring new ones, and in earning money and being paid, will be noted meticulously and studied exhaustively," warned MacBride. Thus, a citizen will soon discover that "his choice of magazine subscriptions... can be found to indicate accurately the probability of his maintaining his property or his interest in the education of his children." This sounds eerily similar to the recent case of a hapless father who found that his daughter was pregnant from a coupon that Target, a retailer, sent to their house. Target's hunch was based on its analysis of products – for example, unscented lotion – usually bought by other pregnant women.

For MacBride the conclusion was obvious. "Political rights won't be violated but will resemble those of a small stockholder in a giant enterprise," he wrote. "The mark of sophistication and savoir-faire in this future will be the grace and flexibility with which one accepts one's role and makes the most of what it offers." In other words, since we are all entrepreneurs first – and citizens second, we might as well make the most of it.

What, then, is to be done? Technophobia is no solution. Progressives need technologies that would stick with the spirit, if not the institutional form, of the welfare state, preserving its commitment to creating ideal conditions for human flourishing. Even some ultrastability is welcome. Stability was a laudable goal of the welfare state before it had encountered a trap: in specifying the exact protections that the state was to offer against the excesses of capitalism, it could not easily deflect new, previously unspecified forms of exploitation.

How do we build welfarism that is both decentralised and ultrastable? A form of guaranteed basic income – whereby some welfare services are replaced by direct cash transfers to citizens – fits the two criteria.

Creating the right conditions for the emergence of political communities around causes and issues they deem relevant would be another good step. Full compliance with the principle of ultrastability dictates that such issues cannot be anticipated or dictated from above – by political parties or trade unions – and must be left unspecified.

What can be specified is the kind of communications infrastructure needed to abet this cause: it should be free to use, hard to track, and open to new, subversive uses. Silicon Valley's existing infrastructure is great for fulfilling the needs of the state, not of self-organising citizens. It can, of course, be redeployed for activist causes – and it often is – but there's no reason to accept the status quo as either ideal or inevitable.

Why, after all, appropriate what should belong to the people in the first place? While many of

the creators of the internet bemoan how low their creature has fallen, their anger is misdirected. The fault is not with that amorphous entity but, first of all, with the absence of robust technology policy on the left – a policy that can counter the pro-innovation, pro-disruption, pro-privatisation agenda of Silicon Valley. In its absence, all these emerging political communities will operate with their wings clipped. Whether the next Occupy Wall Street would be able to occupy anything in a truly smart city remains to be seen: most likely, they would be out-censored and out-droned.

To his credit, MacBride understood all of this in 1967. "Given the resources of modern technology and planning techniques," he warned, "it is really no great trick to transform even a country like ours into a smoothly running corporation where every detail of life is a mechanical function to be taken care of." MacBride's fear is O'Reilly's master plan: the government, he writes, ought to be modelled on the "lean startup" approach of Silicon Valley, which is "using data to constantly revise and tune its approach to the market". It's this very approach that Facebook has recently deployed to maximise user engagement on the site: if showing users more happy stories does the trick, so be it.

Algorithmic regulation, whatever its immediate benefits, will give us a political regime where technology corporations and government bureaucrats call all the shots. The Polish science fiction writer Stanislaw Lem, in a pointed critique of cybernetics published, as it happens, roughly at the same time as *The Automated State*, put it best: "Society cannot give up the burden of having to decide about its own fate by sacrificing this freedom for the sake of the cybernetic regulator."

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